

Financial System *and* Economic Development - *Pakistan*

Volume II: Financial Markets



Shakil Faruqi

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Shakil Faruqi, PhD



Lahore School of Economics

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Acronyms

ADB	Asian Development Bank
ADBP	Agriculture Development Bank of Pakistan
ADs	Authorized Dealers
ATMs	Automatic Teller Machines
CAMELS	Capital Adequacy, Asset Quality, Management Soundness, Earnings & Profitability, Liquidity, Sensitivity to Market Risk
CDC	Central Depository Company
CDNS	Central Directorate of National Savings
CDR	Cash Deposit Ratio
CIRC	Corporate and Industrial Restructuring Corporation
CRR	Cash Reserve Requirement
CRWA	Capital to Risk-weighted Assets
DFIs	Development Finance Institutions
ED&L	External Debt & Liabilities
ICP	Investment Corporation of Pakistan
ISE	Islamabad Stock Exchange
FEs	Foreign Exchange Circulars
FECs	Foreign Exchange Companies
FWBL	First Women Bank Limited
GoP	Government of Pakistan
HBFC	House Building Finance Corporation
HBL	Habib Bank Limited
HFCs	Housing Finance Companies
IMF	International Monetary Fund
KSE	Karachi Stock Exchange
LCs	Letter of Credits
LIBOR	London Inter-bank Offered Rate
LSE	Lahore Stock Exchange
MCB	Muslim Commercial Bank
MFI	Microfinance Institutions
MoF	Ministry of Finance
MSDP	Microfinance Sector Development Program
MTBs	Market Treasury Bills
NAV	Net Asset Value

NBFIs	Non-bank Financial Institutions
NCBs	Nationalized Commercial Banks
NCCPL	National Clearing Company of Pakistan Limited
NCSS	National Clearing Settlement System
NDA	Net Domestic Assets
NGOs	Non-profit Government Organizations
NIFT	National Institutional Facilitation Technology
NIM	Net Interest Margin
NIT	National Investment Trust
NPLs	Non-performing Loans
NSS	National Savings Schemes
OMOs	Open Market Operations
PACRA	Pakistan Credit Rating Agency
PBA	Pakistan Banks Association
PDs	Primary Dealers
PIBs	Pakistan Investment Bonds
PICIC	Pakistan Industrial Credit and Investment Corporation
PPAF	Pakistan Poverty Alleviation Fund
PRGF	Poverty Reduction and Growth Facility
PSCBs	Public Sector Commercial Banks
PTCs	Participation Terms Certificates
RDFC	Regional Development Finance Corporation
RFGD	Resident Foreign Currency Deposits
RTGS	Real Time Gross Settlement System
SBFC	Small Business Finance Corporation
SBP	State Bank of Pakistan
SECP	Securities and Exchange Commission of Pakistan
SLR	Statutory Liquidity Requirement/Ratio
SME	Small and Medium Enterprises
SWIFT	Society for Worldwide Inter-bank Financial Telecom
T-bills	Treasury Bills
TFCs	Term Finance Certificates
UBL	United Bank Limited
WTO	World Trade Organization

.... *about this Book*

This study in two volumes is being published in its *full text* for circulation in Pakistan only. An abridged edition is under preparation for international publication. This edition is primarily intended as a reference, a text book for graduate level studies in banking, financial system and financial markets at academic institutions. It may also be helpful to professionals engaged in their pursuits concerning banking, financial markets or some niche of fast developing financial services industry in Pakistan. The main objective of this book is to enhance *learning* of what a financial system is, how it operates, and how these operations impact on the economy. The impact is to be seen in terms of how leading sectors in a developing country like Pakistan are affected by operations of financial system where banking system and financial markets are in various stages of development. We also have to contend with the issue how performance of financial system affects well being of various segments of society, though this is not strictly a part of analytical framework of financial system.

Both volumes of this book are being separately printed given the size of manuscript but their Contents are attached. **Volume I** concerns with topics on *Banking and Financial System* as listed in the Contents with focus on financial system structure, its components, mainly the banking system, their operations, interlinks with economy of Pakistan, reforms and their impact, challenges of soundness solvency and stability of financial system. Main topics in this volume, **Volume II**, concern *Financial Markets* as shown in Contents as outlined below.

At the outset let me clarify that this study is not to be perceived as an advisory brief for policy makers or regulatory authorities on how to manage financial system replete with prescriptions and proposals, though it may be helpful to them in their endeavours. There is no dearth of advisory reports in Pakistan but there is no text book on applied aspects. This study is a qualitative assessment of financial system of Pakistan with an academic orientation which requires adequate coverage of theoretical and conceptual framework, their elucidation and explanation in a limited manner, together with analysis of operations of financial system and its mechanisms. This analysis is based on time series data spanning a full decade of financial reforms and transition in its final stages. It is a vast canvass and difficult to cover to full satisfaction of all types of audience.

Once this is accomplished, we could then dwell upon management of financial system involving mechanisms and levers of control ensconced in financial regime and regulatory framework that governs operations of financial system. This is a tall order because explanations of underlying analytical aspects, technocracy of financial system analysis, and its evaluation are fairly complicated but it has been attempted here. This study, therefore, is both an academic and applied endeavour, devoted to enhance learning of principles and practices concerning financial system, its operations, their interface and impact on the economy.

Let me also say that this study is a *solo effort* and can not be compared with similar studies or reports prepared by leading institutions, domestic or foreign. Their reports are product of a number of competent and experienced professionals dedicated to the task at hand with privileged access to information, data, views, impressions, and hands-on experience of those engaged in operations of financial system. All sorts of data and analysis is available to institutional groups at their finger tips, literally, or is made available as a priority task of those responsible. Their parent institutions hold enough command to ensure that financial institutions and those concerned submit requisite information and analysis in rather obliging manner.

The same is the case when foreign institutions are involved, where domestic institutions have to furnish details of operations as per their requirements while preparing a report on client countries. For such reports prepared by foreign institution-based group, costs, funding or accessibility is not a constraint. Clearly, the *soloist*, and institutional groups live and work in two different environments; two different worlds of their own. I should know it; because I have lived through both and traversed both. There could not be any contrast, so compelling one. Yet, it is the power of ideas and *learning process* that makes the difference.

About Volume II

Volume II of the text book is on *Financial Markets*. It is aimed at graduate students and those outside academia who are not familiar with financial markets of Pakistan in a substantive manner. Often, they are knowledgeable in general about currency markets or stock markets and what these markets do, but there is a vague understanding of what these markets are and much of it is anecdotal. There is no text book on financial markets of Pakistan that may illuminate how these markets function, except for reports of State Bank of Pakistan (SBP) which provide a condensed coverage of these topics in its annual reports, but their focus is not financial markets as such. Much of coverage in these reports is rather cryptic given the exigencies of SBP reporting on monetary management, banking and financial

system. These reports of SBP are aimed at fairly sophisticated audience, a relatively small group of professionals, analysts, advisors and policy makers, more concerned with issues of monetary management, policy regime and actions, their impact on the economy through operations of banking and financial system at large while coping with economic and financial trends as they unfold. This group of professionals does not need any grinding in basics of banking and financial system including financial markets, as much as students need who are just embarking on their endeavours.

For this reason we must start with fundamentals involving clarification of basic concepts such as money, interest rate, prices, and their interplay as they impact on financial market. Most of these basic concepts are covered in chapters of **Volume I** and are not repeated here. Aside basics, operational interlinks among various markets are quite sophisticated and their interplay in applied setting is not easy to follow. That is why much conversations of securities market professionals is beyond comprehension of many. Once basics are understood one could then proceed to unravel 'mysteries' of interventions of a central bank like SBP as part of its monetary management. This could be unnerving to those not familiar with the jargon or the topics.

There are two learning objectives that need to be addressed. One is to provide an understanding of the *structure* of financial markets in Pakistan, both short term and long term, together with an understanding of their evolution during reform period, culminating into a structure that currently prevails. This analysis is accompanied by a review of financial market growth trends over the decade of 2000's, the post-reform era in Pakistan.

The second objective is to provide an analysis of *why financial markets behave the way they do*. Much of it is in response to economic and financial trends and environment, domestically and abroad, as well as interventions of the central bank, both as monetary authority and regulatory authority. These interventions are largely provoked by stabilization needs of the economy, where markets are a side concern, and are largely focused the outcome over the short term. In part, this is because there is not much a central bank can do, or for that matter any one, when markets are in a free fall. But when markets are soaring, there is no need for intervention, beyond advice to contain 'irrational exuberance', an expression widely known and frequently referred to, coined by Alan Greenspan, former chairman of US Federal Reserve Board. The 'exuberance' did not remain contained. US securities markets eventually nosedived in 2008; that was equally irrational to many; but all that is now history; or is it?

Acknowledgments

This text book on applied financial system has been under preparation for several years in bits and pieces, starting during my assignment at State bank of Pakistan as Advisor to Governor in early 2000s, and subsequently at Lahore School of Economics since 2004 on assignment as Professor of Financial System. At Lahore School of Economics when I started teaching courses on banking and financial system and financial markets, I realized how essential it is to develop and impart an understanding of leading elements of banking and financial system and financial markets among students, something frequently taken for granted by those immersed in monitoring, analyzing and of financial system. In contrast, preparing a report on financial system with focus on current developments is lot easier for those involved; including myself, since I have been doing those during my long tenure at the World Bank.

I am thankful to the support of Lahore School of Economics for providing me an institutional setting and an academic environment to undertake this type of work. Dr Shahid Chaudhry, Rector of Lahore School, has been very supportive of this effort throughout. I prepared working drafts in between containing several pieces of my writing on various topics which were precursor of system wide review presented here. Some of this early material was written while I shuttled back and forth between USA and Pakistan, with updates and several revisions later on. Much of the book was written subsequently during my stay with Lahore School of Economics. Most revision and updating was done after data for fiscal year 2010 came on line at web site of State Bank of Pakistan. Without this data, this study would not have been possible. I have also learned and benefited from various reports of SBP. I must acknowledge all this with a word of gratitude.

When I look back to discern what propelled me to do this text book, I find that early impetus came from those who went through training programs that I designed and conducted while at the World Bank in the business of banking and financial system in a number of countries, mainly Russia and Central Asian States. I also designed and conducted policy level seminars in the field on comparative experiences of financial reforms of Latin American and East Asia countries. Those discussions are still reverberating in my mind, because issues of financial system

are enduring. In those days of early 1990s the issue was how to replace directed financial regime with a market based regime. Now the battle is stability of financial system. The issues are enduring because financial crisis keep erupting for similar causes with similar consequences that are quite familiar by now; financial institutions still indulge in unsustainable lending and overexposure; and financial markets seem to have a mind of their own. Just observe the turmoil caused in the US in mid-2011 concerning budget deficit; the failure to come up with a credible long term structural program to deal with it; and the consequent free fall of financial markets around the globe. True, banking systems and financial markets follow a paradigm that diverges from country to country in degrees of its advancement and diversification, but not in its fundamentals.

That being the impetus behind this effort, during my assignment at SBP the trainee officers at State Bank of Pakistan and subsequently the students at Lahore School of Economic kept me on my toes, pushing the envelop of applied research on financial system of Pakistan. I owe them a recognition though unbeknownst to most of them at that time.

I circulated the trial printing draft to colleagues at Lahore School of Economics and to my friends for their review and comments. Among them I am thankful Dr Sohail Zafar, Dean of Business Faculty at Lahore School of Economics for his painstaking effort as reader and reviewer of the manuscript. I have benefited from his comments and editorials. Those have been incorporated here.

During preparation of the book from draft stages through release for final printing, Hira Akram provided research assistance since last year. This work included assistance with text draft and data processing, a trial printing in March 2011, and thereafter several revisions that never seem to come to an end. I am thankful for her support and wish her the best in her career as she is now more knowledgeable about this subject than many are in her group.

I am grateful to my wife, Shaheen, who endured my long absences and my being absorbed into this undertaking which appeared to her endless, almost. Finally, this book is done. I can not thank her enough for her understanding, patience and support that made it possible to continue with this book.

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July 2011

گاہ مری نگاہ تیز ، چیر گئی دل وجود
گاہ الجھ کے رہ گئی ، مرے توہمات میں
اقبال

*often, my sharp insight, pierced thru
... ..heart (mysteries) of my existence*

*often, got entangled in (the web of)
... .. my (own) superstitions*

Iqbal

Chapter 1: Financial Markets - *Leading Concerns, Core Functions and Structure*

Thematics

Preliminaries

Leading Concerns, Perspectives, Antecedents
Reforms: From Repressive to Market-based Regime
Securities Markets: Bulls and Bears; Booms and Bust
Markets – the Applied Realm; Market Imperfections,
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Financial Markets – Structure

Classification of Markets
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by type of trading; primary, secondary
Short Term Financial Markets- Money Markets
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Primary and Secondary Markets

Financial Markets - Core Function

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Comparison with System of Indirect Finance
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Financial Markets and the Economy

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Chapter 1: Financial Markets

Section 1: Preliminaries

This Study - Antecedents and Perspectives

1. Almost everyone would like to seek answers to the following if they are dabbling in securities markets. What are securities markets in generic terms, and in Pakistan? What is their structure in Pakistan as it prevails now and what are its dimensions? How securities markets operate in real world setting; what securities markets accomplish through their operations; how these operations impact on various segments of economy? What is financial regime; how it regulates market operations, and how effective it is? What is the state of financial system infrastructure supportive of market operations? How significant are these market operations and how good has been the performance thus far in whatever these markets do? What is the prognosis of securities markets and how it can be improved? Finally, how securities market compare with those in comparator countries.
2. This is a tall order for anyone to come to grips with all these essentials. But this is the line of inquiry that has driven this study. This has been strived for in **Volume II**. There are shortcomings in the coverage of these topics, and as the author, I am aware of most of them. How far this effort has succeeded, that is left to the readers to determine.
3. Given this line of inquiry, it is essential to place these elements in their proper *perspectives* that define the scope and nature of effort undertaken in this book. This has been done in Chapter 1 of **Volume I** of this book, together with an outline of selected references of an extensive set of studies that have been done before and exist out there. Those perspectives were shaped over many years of my involvement with financial system reviews and operations. Often times this operational involvement was intensive and central to the field work; often times tangential as part of the group work and occasionally from sidelines. These experiences and perceptions need not be repeated here again, except for an observation that those perceptions were acquired during a lifetime involvement with field work including financial system studies, during my tenure at World Bank spread over many countries during the decades of 1980s and 1990s.

4. Later on, these experiences were supplemented by field training in banking and financial system in several countries that I conducted while at the World Bank. Simultaneously, my involvement with financial system evaluations and reviews, or seminars on financial system experiences of various countries shaped these perspectives. These have been brought to bear upon this study, though in a limited manner. Thereafter, I took up an assignment with State Bank of Pakistan as Advisor to the Governor; mainly training SBP's officers in the business of central banking during three years, 2000-03. I am keenly aware that these perceptions, experiences, field studies and proceedings of seminars on financial system; all are now dated. Much water has flown under the bridge since then; but somehow resonance of those perceptions is found in current times in the financial system of Pakistan; securities market included.

5. These perspectives were enriched in substantial manner by a vast body of literature cited in *Reference* which is not easy to wade through. A selective set of studies annotated in Chapter 1 of **Volume I** will suffice to gain an appreciation of complexity of the task. This complexity had a strong impact on the design of analysis pursued here concerning leading elements of inquiry identified above. To deal with issues highlighted in opening para, we need to dwell on *evolutionary process* of financial markets, instead of simply concentrating on these markets as they are in current times. If we wish to figure out how these markets ended up being what they are in current times, an understanding of evolutionary path followed is needed, together with focus on the underlying forces that energize and drive these markets. This is why a decade long review is useful.

6. Most studies get caught into up-down syndrome of current trends in which market participants are interested from their perspectives of seeking capital gains on portfolios they hold. This is just fine on its own. But if one were to try to understand what makes these markets tick they way they do, the focus on current trends alone is inadequate. Hence, a panoramic view of historical processes is presented here. But the purpose is not to invoke demons of the past, or recite chronology of events as they unfolded for their own sake, rather to impart an understanding how these markets evolved, what were the *initial conditions* governing their evolution; how structure of markets came into being as it prevails now.

7. Once this is accomplished, the next task is to analyze what were trends in the operations of leading components of financial markets, once repressive financial regime of nationalization era was disbanded. More importantly we need to identify what vestiges of that era are still lingering on; and they are. Parallel to this analysis, we need to figure out how markets have developed

into a system more integrated with global financial markets than before; did this happen because markets were dragged into it; or was it the outcome of fundamental conditions that required this orientation? Above all, we have to analyze how markets have performed in an open and market-based financial policy regime and incentives framework; and how good has been this performance in a comparative setting over a long period. That provides ultimate test of how well domestic markets have performed over the past years, not just during a few chosen years.

8. This historical context can not be perfunctorily dismissed by the phrase 'it is history'; that is, it is not relevant. Far from it; historical processes have shaped these markets into what they are not only in Pakistan and other developing countries, but also in advanced countries. It has taken nearly one century for their markets to develop; here we are talking about a decade and half in Pakistan. The stock market crash of 1930 occurred nearly 80 years ago; but each time a market crisis has erupted during over the past couple of decades, the ghosts have awakened at least in the minds of those adversely affected. History can not be summarily dismissed; if nothing else, then the popular dictum that those who do not learn from it are doomed to tread over the same path and repeat the same sordid outcome which occurred earlier.

Financial Markets and Financial System

9. We begin with comments on where and how financial markets fit as a *system of direct finance* into financial system of Pakistan. As it is, currently, financial system of Pakistan is dominated by banking system. Same is the case in many developing countries with varying degrees of differences. This is not so in advanced financial systems. Their financial market, i.e., their system of direct finance is larger and more varied than *indirect system of finance*, i.e., financial intermediation, concerning operations of banking and quasi-banking institutions. This distinction often gets blurred between the two groups owing to overlapping modes of their operations.

10. The depth of financial markets stands out as the cardinal difference between developing and advanced financial systems. This has been discussed in the companion volume of this book, Volume I, in the context of financial deepening. Those dimensions have to be enlarged, because their implications are far reaching. Primarily, it means that largest part of resources mobilized by financial system get transferred through financial

intermediation, namely banking system. Financial markets are relegated a secondary role in this process. The result of this bifurcation is that money markets end up being a mechanism for government borrowing, while SBP ends up struggling with stability concerns, and cope as best as it can, with IMF's standby stipulations and conditionalities so widely lamented.

11. Money markets operations are key to monetary management almost everywhere which confers considerable leverage upon a central bank over operations of financial markets, backed up by massive amounts of financial resources that only a central bank can muster. These resources are much larger than those at the disposal of securities and exchange commissions in many countries, including Pakistan. There is regulatory overlap, but central bank ends up calling the shots when chips are down; and gets blamed if things go wrong.

12. Financial markets pivot around nominal parameters; not their counterpart inflation adjusted *real value* parameters. All operational values are in nominal terms like interest rates, price levels, premia, gains or losses, profits and returns. This is the realm of nominal values. This is not to suggest that real interest rates or real values do not impact market behavior. But the entire analysis of financial system is in nominal terms no matter what time span is chosen. It is only when economic considerations override, we may slide into realm of real variables, not otherwise. For a more exhaustive discussion on this topic see Chapter 3 in Volume I

The Time Frame

13. This analysis can be done only with reference to a specific time slice over the short run, because it has to be linked with policies and actions of the central bank at monetary management and stabilization efforts in the backdrop of monetary and economic trends and recent developments which continuously vary over time. In the following chapters, mostly in Chapter 5, we have outlined trends of monetary management but not in detail because the purpose is not to review or evaluate monetary management of SBP; or its calibration of various instruments of control and their implementation. Instead, the focus is on how monetary management impacts on financial markets. Monetary management has to be treated as a major topic on its own turf together with concerns of stability. This is not easy because monetary policy changes are always in response to short term changes in economic and financial trends. This is discussed in paras 16 and 17 below.

14. A long term review of the type undertaken here poses a dilemma in that what routinely is called long term, is actually a string of short term periods; a continuum of uneven time slices, stitched together over a longer period. Whatever transpires over a given number of short time slices eventually become trends of long period; but the underlying perspectives are vitally different, so are the responses of stakeholders of financial market, their actions and outcome. Short term prognosis may call for a set of actions relevant to immediate needs with an eye on short term outcome, but a long term prognosis may call for a different approach and hence a different sets of actions, whose impact may be different from those emerging from short term perspectives. Averaging these trends over a long period is not meaningful because it simply glosses over developments of short term financial markets which evoke monetary control and stabilization efforts in the first place.

15. The end fiscal year data used here represents stock position of a given market instrument on that day lodged with the originators, traders or investors. This position may be different from holdings during the fiscal year given revolving maturities of money market instruments. Therefore, drawing conclusions on the snapshot of a single day's *stock values* of portfolios outstanding, say, the last day of fiscal year, may be misleading, if portfolio holdings are clustered around a few securities at that time of the year. An alternative would be weighted averages over a quarter of year; but that would require a great deal of searching and recasting vast amounts of financial market data; an exercise way beyond this endeavor.

16. As stated above, we have briefly discussed major trends of monetary management but not in detail because it simply is not meaningful in a decade long review of this type. A decade is a lifetime for financial markets. Similarly, monetary management is in response to short term exigencies as they emerge, no tin response to what long term trends are. The impact of monetary management on financial markets is gauged within a short term slice of the time period. But short term evaluation is not very helpful for long term reviews because monetary management has to be seen in the context of issues and concerns for economic and financial stability, which is the main concern and more relevant for short span of time. Such short term analysis and evaluation must be done with reference to stabilization needs in the back-drop of recent economic trends which significantly vary from one quarter to another. It has to be linked with efforts and actions of a central bank at monetary management and stabilization.

17. Thus far, this task has been accomplished by SBP quite successfully. Over the past couple of decades, turbulent as they have been for financial system, SBP has garnered valuable experience straddling both regimes that

governed operations of financial system; namely the directed regime in earlier days; subsequently during the market based regime in the reform period and post reform era. Monetary management in open economy with free floating interest rates and exchange rates is no longer a mystery that it used to be, difficult though may be. It is no longer so difficult to unravel short term economic and financial trends and design requisite response needed to grapple with their exigencies as countermeasures, to the extent they can be implemented within narrowed degrees of freedom imposed by uncertainties and requirements of market based financial system. At the same time, SBP can not be a lone warrior; it can not succeed alone at economic management unless fiscal management and governance issues are substantively engaged and are largely in line with what SBP is trying to accomplish; recently promulgated autonomy of SBP notwithstanding.

... .. In Pakistan, historically

18. We need to clarify our *perspectives* on financial market development in Pakistan. Often reviewers get carried away without realizing where they are coming from. They want to see Pakistani financial markets behave the way they do in mature economies of advanced countries, or in leading developing countries, and are disappointed if it does not. That is unrealistic, because it is barely a decade and a half ago, no longer, that market-based financial markets in Pakistan came into being, emerging as they did from shadows of nationalized financial and economic system. In nationalized era, every vestige of market, as commonly understood by the term *market*, was suppressed, if not rooted out whatever existed then, or whatever was built from scratch since independence. There were no financial markets to speak of at that time in Pakistan; no currency of its own; and no central bank to do monetary management. Only some rudiments were left around in the wake of chaos of partition, mainly massive outflows of financial assets to India.

19. A great deal has transpired since then, which profoundly affected and still does the way financial markets behave. Principally, markets respond to changes in the economic and financial environment to begin with; but their conduct is also inexorably shaped by socio-political and economic events that impact the society at large. Financial market or any market for that matter can not be divorced from these factors This Volume II does not delve into these elements because it is difficult enough to analyze and cope with financial and economic dimensions applicable to functioning of financial

markets, much less deal with those socio-political factors that have shaped the way economic and financial system has behaved over time. These societal elements are simply enumerated as needed.

20. For a historical perspective on these issues, one has to begin with the start of reforms in early 1990s through middle of this decade. The need is to bring into focus how financial markets originated and subsequently evolved into what they are in current times. What type of financial and economic regime they confronted at their inception and thereafter, and what were critical elements of their operations. There have been several upheavals in between that shook the foundations of financial system as encapsulated in *The Game of Roulette*, Chapter 4 in **Volume I** of this book. After financial and economic reforms came to a tail end in late 1990s, financial markets have re-emerged from mould of the past and have been reshaped in a sort of metamorphosis of their structure, modes of operations, regulatory regime and participation. All this is barely a decade old.

21. Besides, the past decade has been a turbulent one. It has shaken the civil society to the core, and has thrown chunks of it into chaos. The nuclear detonations in July 1998 had as much of a bang on economic and financial situation in Pakistan as otherwise they did in a literal sense. Suddenly, economic and financial fortunes of Pakistan crumbled following sanctions and worldwide reaction against detonations. Inflows of foreign funds dried up, and government compounded the crisis with its panicky reaction, including a freeze of foreign currency deposits which dealt a mortal blow to the fragile trust from which Pakistan has not yet fully recovered.

22. Then came 9/11 events that impacted Pakistan in a lasting fashion, with the start of Afghan war which is not over yet, drawing Pakistan in this conflict with an assortment of enemies of the state. It has degenerated into open warfare, as devastating in its impact on the outlook and mind-set of public as any that history books can throw at us. And *here we are*; trying to analyze financial markets in a clinical fashion, preferably in terms of percentage shares of GDP; all within the confines of an antiseptic glass house, shielded from chaotic circumstances the country is going through. It is rather simplistic if not naïve to pretend that all this turbulence is occurring elsewhere, in some other country, not in Pakistan, replete with suspicion of conspiracies, some real, most imagined.

23. In contrast, financial markets in advanced countries took a century or longer to develop, and the route they traversed was also as crisis prone as in anywhere, struggling to develop institutionalized mechanism central to

financial market development. It has been a long struggle; the post WWII history of financial markets confirms that. Short of it is that it is too early to pass a judgment on the path taken by financial markets in Pakistan under a market-based financial regime, a viable private corporate sector, free floating prices both in goods markets and factors markets, an open balance of payments and capital accounts, liberalized and relatively open exchange rate and interest rate regimes. There has not been much time for renewed market ethos to take root inside the structures that are being analyzed. It is easier to pass value judgments on the process, but it is too early to tell.

24. Clearly, a review of applied realm spanning a decade of long term can not indulge in policy recommendations. Those are elicited from short term reviews. The purpose of such a long term review is educational, but it may help those engaged in policy formulation and implementation to better understand the deep rooted causes of change over time. For, change is a dimension that can not be easily discerned from snapshots of events, streaming down as they do at a blazing rate.

25. Banking and financial markets both operate on a great deal of trust. It is the key ingredient to understand varied response of markets whether these are markets for banking credit or markets for securities. In old fashioned ways, banks in their early incarnations appended the word "Trust Company" as suffix to their corporate entity. Trust is fragile; yet it is central to how various participants behave to signals of the market. If they do not trust the signal makers, or if they have doubts about authenticity of signals their behavior pattern is off line. It has happened in Pakistan several times.

26. The roller coaster that financial markets in Pakistan have been through past decades and the behavior of market participants, most of it can be attributed to arbitrary interventions and *ad-hocism* in promulgating regulations and controls, not only during the period of nationalized financial system and a repressive financial regime; but also thereafter. A good deal of distortions in market operations, be they financial markets, product markets, factors market, or any can be traced to these reversals in policy framework and financial regime. It is in recent times that these practices have subsided but not forsaken. A more methodical approach has been pursued in rather trying circumstances by those who occupy the center stage. They need resources and all the support that can be mustered to accomplish their task.

27. We also need to develop a comparative understanding of financial market growth among leading developing countries like East Asian economies, the so-called East Asian Tigers; or next door, India; or selected

Latin American countries who started on this path a few decades earlier. We need to understand in outline how they managed to transform their markets; what type of transformation they went through; what institutional changes they had to initiate, pursue, and endure. This is mentioned here only as beacon to applied studies like this. How far this can be accomplished is another matter. Surely, Pakistan's financial markets have strived and have traveled a similar path, but this path has been littered with periodic aberrations. The markets have lagged behind not so much because of a lack of understanding of the direction to be undertaken, but because of inertia in institutional development and governance during transition from administered financial regime to market based financial regime.

28. This is predicated upon *necessary conditions* that prevailed before and were the focus of financial reforms aimed in its early phases. It involved replacing the financial regime that prevailed before, and transplanting a new financial regime to promote investment via financial market mechanisms. These mechanisms had to be customized to the conditions that prevailed at that time and had to be installed during the reform process to sustain competitiveness and efficiency of private sector, away from the public sector which was the centerpiece of growth strategy in the past.

29. Some would like to call it *initial conditions* of financial system growth and stability; conditions that prevailed at start of reform process. But just because major reforms have been enacted, and initial conditions have been rectified, further tinkering with financial regime is not going to produce more robust results unless corporate growth occurs. In Pakistan, discussion of corporate sector growth and its viability is muted and not on the forefront. Much emphasis is on financial regime and mechanisms in analysis as it ought to be in evaluations of any financial systems. Corporate growth is a separate matter. But this linkage of markets with the economy is critical for charting future path of development; yet it is often missing.

30. But what happened in transition to corporate growth, constitutes a prominent part of *sufficient conditions* for financial market growth in post reform era. For growth of financial markets, the most important factor is size of private corporate sector and its growth, its profitability, its depth and diversity which contributes to growth of modern sectors of the economy of Pakistan. Without a solid base of corporate sector, no amount of financial engineering and innovative 'financial products' in market-based regime is going to make much difference to growth of securities market, especially long term debt and equity markets because corporate sector is the most important client of these markets.

Securities Markets – *Bulls and Bears vs Boom and Bust*

31. Most people are familiar with allegorical reference to bulls and bears characterizing market sentiments and trends, signifying persistent rise of stock markets in bullish phase of investor sentiments, and downward spiral in bearish phase. There is much more to it than this characterization. It gets complicated fairly quickly. At first blush, it seems that attributes of both market trends, namely *bulls and bears* and *booms and busts*, are reflexively a twin image of same phenomenon, but actually they are quite different from each other. Bullish and bearish market sentiments are largely a cyclical phenomenon, and are amenable to anticipations and forecasts that may help investors to adopt a corrective response. The calls made by analysts that market is due for a 'correction' do not go unheeded.

32. But booms and busts are opposite ends of market trends; they are *reversals* of market; not a 'correction' of market as the term is understood. Their outcome is severe for those investors caught at the opposite spectrum of the market. They occur with such rapidity that does not leave room to maneuver. Booms take time to develop, and are synchronous to market fundamentals in their early stages. But once market boom begins to persist, sooner or later herd behaviour takes over, mixed with speculative buying frenzy, called by various names, famously known as 'irrational exuberance'. In a boom market, if it is riding on speculation, stock prices bear little relation to market fundamentals or market valuation of corporate stocks. The price earning multiple is soon out of line, but if short term or day trading begins to yield capital gains unheard of before; market turnover zooms past prudent levels and arrives at a configuration that is not sustainable.

33. This is not a cyclical phenomenon; this is not a bulls market. It has little relation with leading economic or financial trends. This is a speculative binge that can sustain only as long as this variety of *financial pyramiding* will last. This phase is short lived. Sooner or later, those closer to market trading, begin to unload their holdings, and as soon as the word gets around, the reversal has set in. It soon degenerates into a market bust, where stock values plunge to levels that are not comprehensible to many; sometimes loosing half of their market value in couple of weeks of frenzied trading with no end in sight and with 'no place to run'. A good number of investors hang on to their portfolio; some begin to buy more stocks, instead of closing their position after taking a loss. The day traders have fled the market, but they are back again as short sellers; this time betting that market will move in just opposite direction of what it was following a short while ago. When bust occurs, it is not a bearish outcome of routine variety; it is a market collapse.

34. *At macrofinancial level*, in times of bullish or bearish trends, their impact on market value of securities is affected by a host of factors shaping market trends. An understanding of these bullish or bearish market trends requires a grip on fundamental economic and financial factors. Prominent among economic trends are output and employment growth, trends in foreign trade and balance of payments, particularly current account deficit, capital flows, government's fiscal operations, interest rates, exchange rate, inflation and price level movements. Among financial trends, prominent ones are money market liquidity, interest rates and exchange rates. There is no watertight differentiation between economic and financial factors, but this is the practice generally followed. These factors together define economic and financial environment which shapes market values of securities, well beyond firm-specific factors that shape risk and return features of securities, and thus their market values.

35. Risks of investment in securities are broadly categorized as market risks versus firm level business risks. In between are sector risks specific to broad sectors of the economy. Even if the economy as a whole were to be operating at normal pitch with modest growth all around, there may be sectors lagging behind. Thus, risks associated with market fundamentals are ascribed as market risk, interest rate risk, and exchange rate risk. This class of investor's risk in securities is as important to understand as are firm level risks associated with profitability and earnings per share; known as company risks or sector risks specific to securities.

36. Most *cyclical changes* in market trends, bearish or bullish, can be attributed to changes in market liquidity, interest rates and exchange rates, which are prominent among a host of factors of domestic or foreign origin, affecting market trends. Profitability and financial strength of businesses and corporations depends on these macro-financial factors, since firms and business operate within the parameters defined by this environment in an economy, regardless how well they do in conducting their own businesses. For all practical purposes, these factors are external to the firm's business operations in that firm and businesses do not have any control over them; but they are affected by them in a significant manner, nonetheless.

37. *At firm level*, market fundamentals shape underlying *risk and return* features faced by investors on the securities held in their portfolio, be they individual investors or institutional investors; not the other way round. Surely, risks and returns are determined in the first place by financial strength and viability, and performance of businesses, corporations or financial institutions that originate securities being traded in the markets at a given time. Perceptions of risks and returns specific to firms are also shaped

by how well functioning are mechanisms and processes of financial disclosure and reporting which they are not in many developing countries including Pakistan.

38. Besides private sector companies, governments and public sector entities issue debt securities, not stocks or shares, unless public sector enterprise issuing the stock is listed on stock exchange as publicly owned company which in most cases it is not. Risk and return features of these public sector securities are different from those of private businesses. Yet, economic and financial environment affects both entities though with varying intensities, be they from private sector or public sector. Investor sentiments and mind-set depends on factors both external and internal to the firm. Learning of risk and returns is essential, but so is the learning of economic and financial environment shaped by leading elements like market rates of interest, exchange rate and monetary stance adopted by the central bank over the time period.

39. In bullish or bearish phases, cyclical changes emerge mainly owing to changes in market fundamentals, and it carries with the entire structure of risks and returns. It is for this reason that when a market downturn occurs, there is hardly any place to run away from eroding values of securities held in a portfolio. The market downturn seems to overwhelm even well functioning businesses and corporations. Therefore, a grip on basic concepts is vital namely, money, liquidity, inflation and price level, interest rates and exchange rates, asset pricing, market values and returns on securities.

40. In times of booms and busts, none of these rational considerations are of much help. In booming markets, riding high on herd behavior, speculative frenzy and day trading, market pressures are too strong to admit such analysis. During boom period, various rationalizations offered by 'market specialists' sound convincing enough to enhance market exposure; often on margin finance, or its counterpart in Pakistan, through *badla* finance. When reversal occurs, all previous rationalizations quickly evaporate; and same 'market specialists' begin to explain why stock prices are in a tailspin. If one were to put together these two opposing views it would be hard to believe they emanate from the same source about the same segment of the market, or about the same stock or security.

41. The flip side occurs very quickly indeed; but by then it is too late for many investors not glued to daily proceedings of the market. Mutual fund managers, by and large are ahead of the pack. They also find there is no place to run and substantive losses to mutual funds do occur; those are not unheard of. But mutual funds can not sit out the market by holding on to

liquidity for long; they can. They are not paid to sit tight on their liquid funds and not invest. They have to enter or re-enter the market, and have to stay invested. If losses occur to mutual funds and if they are in modest amounts, these losses are in part cushioned by their counter trading and portfolio re-orienting, as feasible. But in a bust, there are no winners; even mutual funds. Everyone is a loser.

Financial Markets - *Perceptions from Applied Realm*

42. A few observations are offered below, more in the vein of an overview of the discussion of what financial markets are, how do they function and how do they perform; and more importantly how they are to be perceived by those not close enough to the daily routine of markets.

43. **First**, markets are *never perfect*; there are degrees of *imperfections*; be they product markets or financial markets. Perfect markets exist only as a theoretical construct, not in applied realm. In operational terms, both buyers and sellers in the market are 'price takers', not 'price setters'; that is, individually, neither buyers nor sellers are able to dictate price. In theoretical sense, this is implied by the concept of *perfect markets*. But operationally, there are market imperfections; most of it originates from asymmetric information. There are additional stipulations of what a perfect market is, but for the moment let us stay with price determination.

44. For sellers in product markets, imperfections are attractive because they translate into additional profits, often monopoly profits, if sellers are able to corner the market, which happens in Pakistan rather frequently. For buyers the opposite holds; except that prices of products can not be below a level where producer's incentives of normal profits are compromised - howsoever the term normal profit is interpreted - much less eliminated. In financial markets, imperfections are even more hazardous, because of several reasons, asymmetries in market information being one of them, and a critical one. Hence, trading in *imperfect financial markets* will not be as profitable as it could be; imperfection of securities markets apportions trading profits differently to different market participants. In simple terms, profits from investing and trading are not the same for all participants.

45. **Second**, markets are notoriously *unpredictable* in spite of state of the art info-tech apparatus, instant information flows globally, market analysts, laureates in economics, portfolio advisors and savvy investors. Somehow, markets refuse to be system-analyzed, no matter how sophisticated the technocratic set up is. Analysts can gauge general directions and call target price for a security, which they do; but they can never predict security prices in future. If they could, markets will not be what they are. Their record is even more dismal in predicting market crises that have erupted so often.

46. **Third**, markets are *not efficient* in a pristine or academic sense; efficient market hypothesis is just a hypothesis, no more. There are degrees of inefficiency all around, specially in financial markets of developing countries. Their efficiency depends mainly on operating procedures and mechanisms, payments and settlement mechanisms, registering and recording system, information flows and supportive regulatory framework.

47. **Fourth**, markets are not *self-regulating*; much less *self-correcting*. Markets are often driven by speculation, herd behavior and plain greed as much as they are driven by rational response. Opinions about these aspects have never stayed the same. Over the past few decades, prevailing view was that markets should not be interfered with in the guise of regulations. Markets ought to be left alone to their devices; because markets operate best when they are not interfered with; and that markets serve common good; whatever that may mean. But time and again, whenever markets have undergone upheavals or crisis, these views dissipated quickly, and the blame has been laid at the door of regulators. That is, market would not have turned sour only if regulators were vigilant enough or smart enough. This blame game is rather self-serving.

48. **Fifth**, markets operate best for buyers and sellers when operating within a time tested regulatory framework, specifying a set of **trading safeguards** – circuit breakers they are called – to avoid market volatility and extremes of price movements, supplemented by watchdog rules to intercept market abuses, because *insider trading*, *front running* and hence price tampering is not exceptional, eroding public confidence in market proceedings. It is frequent in developing markets, *and* not that uncommon in advanced markets. If afforded half a chance, those closer to market processes engage in these practices owing mainly to weak regulatory mechanisms, oversight functions, and poor implementation of disclosure requirements.

49. **Sixth**, *regulatory control* is a must and timeliness of interventions is critical. Hence regulators have to be knowledgeable and ahead, not behind market developments; they have to be more than a match to those operating

in the market. But this is not possible; the function of regulators is to regulate markets, rather than intervene in their investment decisions. Interventions at best are advisories; interventions do not mean jumping in the market to do buying and selling as the central bank may do when it intervenes in the money market. There is no equivalent of this intervention in capital markets.. Regulators neither have resources, nor wherewithal, nor the mandate to intervene in this fashion. Same is the case in developing country markets, including Pakistan.

50. **Seventh**, markets *can not be ordered* to behave. They defy attempts to steer them in the name of stabilization through financial interventions by state. Government sponsored arrangements to steer prices in certain directions are rarely successful; they never seems to work. If anything, markets seem to punish such interventions by handing massive losses as shown by past experiences. Why, because of contrasting expectations among pairs of opposites; buyers and sellers Financial crisis and sliding share prices drive out many investors, so it seems because the same scenario attracts those who consider it a rare buying opportunity. In Pakistan, we have gone through market upheavals during this decade. We need to learn these fundamental; from our own experiences or from comparative experiences!

Section 2: Financial Markets

Structure and Functions

1. In generic terms, *financial markets* are referred to by various names as per classification given below which need to be clarified to first timers because of overlaps among the categories of markets as listed. For example, financial markets are often called *securities markets* in the literature, though in a literal sense, securities are taken to mean debt or debt-like obligations of issuer of a security, be it government, public sector enterprise, or private business corporations. Thus, securities are generally seen as borrowing instruments for the issuer, like bills, bonds, or notes, signifying *debt financing* by the issuer. Markets for bills, bonds or notes are *debt markets*, are classified according to the type of debt security being traded in these

markets, whether short term or long term, such as bills or bonds of different maturities. But this literal sense does not prevail in the applied realm. It is too confining. For, there is *equity market* for equity financing, done through corporate stocks traded in *stock market* where trading is conducted at stock exchanges or in OTCs (*over-the counter-market*). Hence markets for stocks are called *equity markets*, as distinguished from debt markets, and these are classified as part of securities markets.

2. In the discussion of market structure, both terms - *financial markets* or *securities markets* - are used synonymously to cover the same spectrum of markets with a caveat that securities markets are mostly confined to bills, bonds and stock markets, but do not cover others like currency market. Operationally, securities markets are referred to by instrument or by type of security they deal with, apart from classification based on maturity and type of financing secured through market trading. Thus, we have market for securities issued by treasury, called treasury bills or bond market. Likewise, we have interbank funds markets; central bank funds market; debt markets including bonds; equity markets for stocks. This diversity of markets is overwhelming to those unfamiliar with its structure.

3. The classification given below is not a comprehensive listing of all types of markets, but for our purposes it will suffice. Which classification among these is most suitable depends on the perspective of investors; their portfolio objectives and their investment strategies. Most often, markets are named after the instrument being traded; or by type of trading like market for *repos*; or by various instruments of similar types lumped together such as money market, loan market, funds market, deposit market, options market, futures market, derivatives markets. Markets can also be classified based on maturity of instruments being traded. Thus, there are short term money markets consisting of a variety of them markets, mainly of treasury bills or funds markets like interbank funds or central bank fund markets, and a fairly large currency market; and there are long term debt and equity markets.

4. Hence, we must follow a classification and stay with it. There are considerable overlaps as evident from the classification given below. These overlaps are discussed in Chapters 5 through 9 ahead. There is some unavoidable repetition, but this is essential to achieve an understanding of structure of financial markets. We have to adopt one of these classifications, follow its nomenclature and attempt to highlight structure of financial markets as best as feasible.

Financial Markets Classification

by type of claims:

Money Markets

Government – Treasury Bills, Repos

Private – Inter-Bank Funds, Deposits, Bills of Exchange

Currency – Foreign Exchange (forex) Market

Capital Markets

Debt Markets – Government and Corporate Bonds

Equity Markets – Stocks

by origination and trading:

Primary market – initiation, floats, syndication, IPOs

Secondary market – bonds market, stock market

by maturity of (debt, assets) claims:

Short Term – money markets

Long Term – bonds market

by type of instruments and trading:

Securities markets

Derivatives markets;

Futures (forward) markets–options, swaps, derivatives

by type of coverage, clientele:

Domestic, Foreign

5. We have chosen *maturity based* classification, the most commonly adopted, to highlight structure of financial markets as shown in Chart 1 attached. Thus, in the following discussion as shown in the chart, structure of financial markets is divided into short term and long term securities markets, and within this classification, market structure is *instrument based*. Market for short term instruments is mainly money market; and for long term instruments it is capital market. Instruments traded in money market are mostly debt instruments for funds or liquidity transfer, whereas in capital markets both debt and equity instruments are traded. Markets for derivatives do not follow this classification scheme, nor market for foreign currency, though both are part of financial market. Since the main function of financial

markets is *direct financing*, and since derivatives market or currency markets do not play this role, therefore they are not included in securities market as such in the definition adopted here and displayed in data sets attached at end of chapters.

6. These markets operate under a *financial regime* which stipulates rules and regulations concerning market operations and trading of securities in primary markets; and subsequent trading in secondary markets. The trading operations of treasury bills and government bonds in the primary market are conducted through auctions, and those of stocks through IPOs. Their secondary market trading is conducted through a vast *network* of market participants, namely, financial institutions, traders and investors, brokers and agents. This is a *system of trading* of its own, supported by market *infrastructure*, information network, and a system of recording trades, clearance, payments and settlements. Among these, regulatory framework and market infrastructure are vital for smooth and efficient functioning of market operations. Their depth and sophistication is indicative of state of development of financial markets.

7. No matter what characterization of financial market one follows, the central function of financial markets is *direct transfer* of funds from savers to users. Together, these markets represent a system of *direct finance* including cost and price of transfer discussed in detail in Chapter 2 of **Volume I**. The mechanism of direct transfer is to be contrasted with the mechanism of *indirect transfer*, namely financial intermediation, representing deposit mobilization and credit operations of banking system. This discussion is pertinent to understand role and functions of financial markets as part of financial system and its role in the economy.

Short Term Financial Markets

Money Markets

8. Short term financial markets provide a mechanism for liquidity management for the government and private corporate sector, besides providing investment opportunities for a portfolio investor of short term funds. Short term markets are *money markets* where transactions are conducted in short term securities or where their discounting is done for liquidity management mainly by banks and corporate sector. Their objective is to ascertain availability and transfer of these short term funds on market terms from those holding these funds, namely surplus units, to those needing it, namely deficit units, the borrowers.

9. Among short term markets *treasury bills market* is the leader in the sense that it is a *price setter* in short term financial markets. The price setting, namely short term interest rate structure is largely based on the *yield rates* of T-bills arrived at under some mechanism like auctions in the primary market of treasury bills discussed in Chapter 5. These yield rates serve as *benchmark rate*, the interest rate for wholesale short term funds. A step further, the discount rate of central bank mainly for treasury bills serves as a benchmark rate, called *bank rate* in the secondary markets not only for treasury bills, but as a pivotal rate for the entire interest rate structure for banking credit and securities including short term papers issued by business corporations and financial institutions alike, mostly banks, and short term papers created in foreign trading called banker's acceptances.

Long-Term Financial Markets

Capital Markets

10. Long term financial markets are *capital markets* which include two categories of securities as regards type of funding provided to users, namely *debt markets* and *stock markets*, or *equity markets*. Debt markets provide long term *borrowed funds* primarily through bonds, both public bonds and private corporate bonds or term certificates. Stock markets provide *equity funds* through issue and trading of shares of a company; representing ownership, no matter how infinitesimal, and this ownership might be exercised in proxy through board of directors elected by shareholders. Capital markets are vital for providing long term finance to private corporate sector. It is difficult to say which one comes first, but in practice capital market development follows on the heels of growth of corporate sector; not other way round. The reason is that there has to be demand for long term investment funds before a market in these funds can come to exist.

11. *Capital markets* have their own instruments, a system of trading, a financial regime stipulating rules and regulations, market operation facilities, stock exchanges, securities dealers, brokers, market makers, underwriters, investment banks, a system of rating, a system of payments and settlements. Generally, original issuers of securities are governments and other public sector entities in public sector. In private sector, issuers are corporations, businesses or financial institutions, while buyers are mostly corporations and financial institutions. These are primary markets, akin to wholesale markets. Subsequently, these securities are traded in the secondary markets operated under stock exchanges and OTC as discussed below.

12. For example, a marketable debt instrument such as corporate bonds or debentures are primarily purchased by a *syndicate* of *underwriters*, which could be investment banks or their large institutional investor clients like insurance companies, mutual funds or pension funds. This is discussed in Chapter 7 and 8 in detail. These bonds are resold to public in the secondary market at bond or stock exchanges, or over the counter market (OTC). Likewise, a new issue of treasury bills and government bonds is sold first to primary dealers registered with central bank, mostly commercial banks.

13. A critical function of bond markets is to establish long term interest rates which serve as *benchmark interest rates* for long term debt instruments as well as interest rate on long term borrowings from banking institutions. This market leader function is not transmitted smoothly on the banking side for term loans. On debt securities side, it is not performed effectively either until a viable market for long term government bonds comes along first.

14. At any rate, debt markets for securities of Private Corporation rely a great deal for signals from government bond markets, howsoever weak they may be and in whatever stage of development they may be. In other words, corporate entities issuing long term bonds or taking long term loans from banks look at interest rate government is paying on its long term bonds. Realistically, they can not hope to raise debt financing at interest rates below the interest rate government is paying on its long term debt instruments, because government securities are default risk free, whereas securities of private borrowers are not free of default risk.

15. Nevertheless, benchmark rate of return thus established is operational for debt and equity markets alike and it is critical in setting rate of return on private sector securities and hence their prices, based as they are on a composite of the yield rate of the long term bonds issued. The composite yield rate is usually arrived at the auction of a new government bond float in the primary market of bonds among the bidders who are authorized primary dealers. These auctions are conducted by central bank and are keenly followed by market participants of all varieties. This long term interest rate provides a basis for determining coupon rate for corporate bonds at the time of their issue by their underwriters, be they investment banks or investment companies acting singly or jointly as a syndicate of underwriters, with the commitment to buy the new issue of corporate bonds.

16. In equities market, whether it involves floating a new issue of stocks or an initial public offer of stocks of existing companies, i.e., an IPO of a brand new corporation, or issue of shares of an existing family owned company, or shares of joint venture whenever it goes public, the primary sale is to

institutional investors involved in the float of IPO, and broker-dealer firms. The resale follows, to the general public or investors in secondary market. This is discussed in Chapter 9.

17. Among capital markets, *stock markets* occupy a prominent place operating through stock exchanges, and its twin, over-the-counter markets (*OTC*). The difference is in listing of stocks. Stock exchanges conduct trading only in stocks of companies listed with the exchange; whereas same stock may also be listed on other exchanges as often observed in developing countries, given the limited reach of local stock exchanges. In contrast, OTC markets deal in stocks, listed or not listed on stock exchange. Unlisted stocks are usually shares of small new companies who *go public* through initial public offers (IPOs) on the OTC market to attract venture capital or equity funds to expand their business operations.

Primary and Secondary Markets

18. For *operational purposes*, the structure of financial markets need to be classified first as consisting of primary and secondary markets because this classification cuts across all other typologies based on type of instruments used, return and yield properties, and their maturity structure. Briefly, a rough analogy of *primary market* is that of wholesale market where a new security is offered for sale by the issuer to pre-qualified institutional investors or large volume dealers or underwriters, be it a treasury security or a private corporate debt security or a company stock floated as a new *IPO*. Subsequently, primary investors or dealers release this security in secondary markets for trade on retail basis at stock exchanges or OTC markets to investors at large, be they individuals or institutional investors.

19. In this sense primary market dealers for *government securities*, say, treasury securities consists of central bank and the banking system, or a select group of pre-qualified institutional investors called primary dealers who mostly are commercial banks for reasons of monetary control and management that flows through banking system. This is the wholesale market for treasury securities. Subsequently, this new government security, if it is a treasury bond, it is traded in the *secondary market* between the bond holders and the buyers, whether they are institutional investors portfolio investors like insurance companies, pension funds or mutual funds or private individuals on either side of the transaction.

20. For *private sector security issues*, primary market consists of original issuers of stocks and bonds, mostly corporations, business and public utilities where new stock or new bond is released for sale or subscription among lead *participants*, who mostly are institutional investors, banks and other financial intermediaries. These investors are *underwriters*, and *investment banks* working individually or through formalized *syndicates* for the issue of a new security. Afterwards, buyers of new security in the primary market may offer part of their holdings for resale to the general public and to the investors in the secondary market.

21. Hence, secondary markets are retail markets where underwriters of bonds or institutional investors, who initially bought new issue from underwriters, or from brokerages, both sell it to the public. These are markets for outstanding securities, mostly stocks and bonds, traded by a variety of retail investors. The principal secondary market for securities is stock exchange, and over the counter market. The secondary market trading is undertaken through a *network* of dealers, brokers, clearing agents, market makers and individual buyers and sellers. For example, a newly released bond is resold to new investor after the original issue is purchased by underwriters or other institutional investors.

22. Further, *primary markets* for government securities, mainly treasury bills and government bonds, first are sold by the central bank to financial institutions, mostly banks on behalf of the government largely through auction mechanisms discussed later in Chapters 5 and 8. Suffice to say here that participation in auction mechanism is limited to pre-selected primary dealers who actively engage in the *bidding process* in the auction. The bidding process eventually determines with some variations in between, price of Treasury bill or price of government bond. Since expected rate of return on these securities is based in their nominal rupee price, therefore, this expected rate of return has come to be accepted as the reference rate if return for securities markets and the underlying price is accepted as reference price. Likewise, treasury bills auction yield, or its rate of return serves as benchmark rate of return or interest rate, and also serves as reference price for other short term securities issued and traded in the secondary markets.

23. Similarly, long-term government bond prices thus determined in the primary market through their cut-off yield, their weighted average serves as the reference rate, and implicit price serves as benchmark price both in primary and secondary markets for similar issues of corporate bonds or term certificates of finance. In primary market, the mechanism of issue of these private long-term debt securities is *syndication* discussed in Chapter 7 and 8 in the context of bond markets. While auction are publicly reported, much of this primary market activity between issuer and the syndicate engaged in the

float of corporate bonds, is out of public sight because of delicate financial dealings and agreements involving fees and bond price, coupon value and coupon rate of the bond to be floated in the secondary market.

24. Operations of *secondary markets* occupy most attention for all investors, be they institutional investors or public at large. For, it is the market price of a security in secondary markets that determines capital gain or loss and thus returns to investors. How price of a security gets determined in the secondary market, i.e., at the stock exchanges or OTC market, occupies centre of attention and efforts of everyone, specially those invested in the markets, and those in financial services industry like market analysts, brokers and dealers, and an assortment of market reviewers, even academics. Their track record is a mixed one at best, because if any one could forecast stock prices with any certainty will no longer be in the business of forecasting stock prices. Their post market rationalizations of why prices behaved the way they did are very entertaining.

25. Among this group, market analysts to the extent they are unbiased, they come close to assessing and forecasting quarterly price of those stocks in which they specialize for the reason that they have the resources to obtain information and conduct a thorough analysis of the company, industry and the sector concerned. Much of this analysis is focused on assessing quarterly earnings per share, EPS, of the company whose announcement at the end of the quarter almost certainly impacts stock prices. The *consensus price* of market analysts about a stock is mostly interpreted as what “the street is saying” or what “the market is saying”, forecasting where price of a stock will be at the end of the quarter. It is closely followed by investors. However, market being what it is, most often price of stock has already moved before EPS announcement at end of the quarter, thus proving or disproving what the ‘street was saying’ prior to announcement. This happens frequently. In this sense, ‘what the street is saying’ becomes a self-fulfilling prophecy, the closest it ever comes to what transpires in the market.

26. Finally, in daily operations of secondary markets and stock trading, role of *market makers* is critical because they are engaged in matching and balancing buy and sell orders on the floor of stock exchanges. These market makers, often called market specialists, are licensed brokers who perform this function in routine daily trading on the floor of stock exchanges. In Pakistan, the practice is different; in the sense that there are no officially designated market makers on the floor of stock exchanges with clear rules and obligations to maintain inventory of selected stocks that they must hold for smooth trading.

Financial Markets – Core Function

27. As stated earlier, the core function of financial markets is transfer of funds from suppliers of resources called *surplus units*, directly to the users of funds called *deficit units*, be they private investors, household, government or corporations, domestically or overseas. They all constitute the *system of direct finance*. Transfer of financial resources occurs through mechanisms and operations of financial markets and institutions, involving an array of financial instruments, mainly securities, which embody terms of transfer, price and maturity together with their attendant risks, originating from their issuers and available for trading. Since financial markets deal with a variety of securities of different maturities, their structure and operations represent a challenge for those embarking upon an understanding for the first time.

28. This system of direct transfer is not financial intermediation, and should not be muddled up with what financial intermediaries do; that is, what the commercial banks do, or other types of bank-like institutions do, such as specialized banks. They all engage in lending whether it is deposit based, or borrowed funds based. Financial intermediaries, however, do participate in financial markets, and they are a major player in all types of securities markets. In particular, money markets operations are almost entirely conducted by banks. Debt markets are operated by investment banks, but commercial banks are dominant in these markets because they own sizable amount of debt securities in their investment portfolio, and they are major player both in primary and secondary markets. Banks do not supply credit to investors for their securities trading, except indirectly via margin finance, arranged through a third party, mostly brokers. Hence, financial intermediation is not financial market operation.

29. How efficiently securities markets perform *core function* of transfer of financial resources from savers to borrowers and investors in debt markets or stock market is of central concern to all, participants and regulators alike. It involves transfer of money balances from savers to investors to finance short term liquidity needs, or to support working capital needs; or supply of long term funds to finance investment needs of the users. A layer above at macro-financial level, these matters are of pivotal concern regarding operations of any financial system, be they in developing countries or in advanced countries. Securities markets *allocate resources* raised from suppliers of finance between various users of finance, who may be businesses or government or households, or any combination thereof. Market operations reconcile these needs. This role is inordinately bound with opportunities for returns on portfolio of investors. This is the essence of *direct finance* through market transactions.

30. For example, government and institutional borrowers in securities markets usually need large amounts of capital, well beyond the capacity of a single supplier to provide on its own, such as private investors. It is also beyond the capacity of institutional investors, such as banks or finance companies even though they may have a fairly large funding base of their own as large insurance companies or pension funds do. Further, borrowers need long term debt or equity finance, whereas investors may not wish to lock-in for long term commitments and may want to maintain reasonable liquidity. Borrowers would like to minimize cost of capital, while investors want to maximize their returns.

31. Securities markets perform role of arbitrage between these parties. Markets perform the function of providing liquidity to holders of bonds and stocks by selling them off in times of liquidity needs and provide borrowers a mechanism to raise liquidity for short term, or to raise borrowed financing for long term. But markets do not perform the function of term transformation; neither this function is performed by borrowers and investors. Instead, term transformation is done by banks, the financial intermediaries, and their operations on credit side, the loan financing.

Financial Markets and the Economy *Investment and Economic Growth*

32. This topic energizes many because of the impact financial markets have on economic growth. A review of the economy from perspective of financial system has been done in Chapter 2 of **Volume I** of this book. A similar review is needed from the perspective of financial markets with focus on investment and growth over a selected period. Its analysis requires an understanding of fundamentals and leading elements concerning the economy, investment and growth and their interlinkages with performance of financial markets. This in turn needs a grip on size, structure, organisation and operations of financial markets. This type of review has not been included here as a self standing chapter, though brief discussion of these topics has been included in the context of various types of markets in chapters ahead.

33. These interlinkages are critical not only for financial markets but also the economy as a whole. There is no way to meaningfully discuss developments in money market or debt markets without reference to short term economic outlook, particularly investment, price level and inflation,

interest rate and exchange rate in the framework of prevailing financial regime. Analysis of these elements is indispensable for sorting and analyzing trends in financial markets and for analysis of investment and growth in the economy.

34. Foremost, our concern is how financial markets operate and impact on the economy. Discussions of financial market operations ordinarily do not focus on impact of operations on the economy. It is taken for granted that whatever financial markets do, it must be beneficial to the economy, viz., it will lead to promotion of economic growth because markets are efficient and competitive, their activities are transparent and participation is open. Since markets allocate resources to maximize returns, that alone ensures efficient utilization of resources. This is not always the case.

35. Conceptually these assertions are very neat and logical; but most often market imperfections are such that allocation of financial resources is not efficient; that is, in real world situation, markets are not neutral between uses of resources; neither at firm level, nor at macro-financial level. For example, lavishly financed mergers and hostile take-overs arranged by investment bankers with high stakes, do not necessarily result into enhancing productivity at firm level when the dust clears. Often takeover accomplish just the opposite: they confirm monopoly power on acquirers.

36. This assertion about optimal allocation of resources derives from the premise that uses of resources are determined by a convergence towards optimal returns and risks, spread across securities portfolio, regardless who ends up holding these portfolios, be they individuals, financial institutions, businesses or corporate entities. This is the central function of *efficient*, *open* and *competitive* markets. How far markets meet these criteria in developing countries like Pakistan has been explored here as feasible. For theoretical aspects of these concerns, recourse to various text books would be needed. A good number of them are listed in the Reference.

37. At conceptual level the above holds, but how actually it pans out in real world situation is a different matter. This is because real world situation is quite different from such a serene view of financial markets, given recurrent market bubbles and ensuing financial crises that have periodically occurred both in advanced and developing countries alike. Development of financial markets is relatively a recent phenomenon in most developing countries. It has been spurred in large measure by the scramble to attract a sizable part of foot loose foreign portfolio investment (FPIs), given their massive growth over the past three decades as discussed in Chapter 11.

38. The rush to attract FPIs did succeed, and spectacularly in some countries; but time and again footloose FPIs inflows reverted and very fast, leading to financial crises of proportions never experienced before. But why it happened is still being analyzed and debated upon. One reason is that FPIs, unlike foreign direct investment (FDIs), are not always deployed to finance investment in new industries or plant and machinery, but FPIs do provide substantial amounts of equity finance to companies which may eventually get deployed in investment activities.

39. But FPIs can revert back as fast as they came in; not FDIs. That is the reason why FPI inflows sometimes have been detrimental to recipient countries by encouraging overexposure of financial institutions in speculative lines of investment; for example, the so-called real estate bubbles, the latest one being in the real estate market of Dubai in last few years of the past decade.

40. Financial markets promote economic growth by providing finance for long term capital needs for investment in new plants or for modernization and expansion of existing ones, mainly through capital markets. But this would not be sufficient unless it is supplemented by short term financing to cover working capital needs of businesses. This short term financing is usually arranged through banking system, not through short term money markets, because short term money markets are markets for funds between banks and financial institutions, not between business borrowers of short term finance and financial institutions. In capital markets, a sustained rise in share prices enhances capitalization of listed companies, thus bolstering capital base to seek debt financing, or make it easier to float supplemental stocks in the market. As long as these flows of resources are properly invested, investment results in economic growth.

41. But quite often that does not occur in developing countries as it should, or to the extent it is expected. Financial resources may get diverted and end up as capital outflows, specially in countries like Pakistan who need these resources the most for their growth. This may happen because their economies are unable to generate the kind of spectacular profits and returns available elsewhere which is the principal motive of capital inflows in the first place. Another part may get diverted to finance leveraged buy-outs or mergers. Mostly, businesses follow their own priorities which may not necessarily result in optimal growth. Witness the over-investment in urban properties and massive growth of five star hotels in countries where tourism sector is not well developed, tourist trade is limited and basic tourism infrastructure is rotting away.

42. Unless one is careful, above discussion gets mired into debate of markets versus directed regimes governing financial markets and the economy. Suffice to say that market forces are a necessary condition, but not a sufficient condition for system level issues like these. As long as capital inflows are invested, they enhance economic growth in recipient country. Evidence from comparative experiences is incontrovertible on this point, but only if the caveat holds. Often it does not; for example, there is evidence from applied experience which show markets are neither *open* nor *efficient* in the pristine sense as espoused in the literature, briefly enunciated in section 1 of this chapter. More explanations of market imperfections and their consequences follow in chapters ahead.

Chapter 1: End

Chapter 2: Securities Markets - Pakistan

Thematics

Securities Markets - Pakistan

Financial Markets - *the Full Spectrum*

Problems of Estimation, Aggregation

Securities Markets - T-bills, Bonds and Stocks

Structure, Size and Trends- *Pakistan*

Money Markets, Capital Markets - *Structural Shifts*

Treasury Bills Market - *Components, Size and Trends*

Capital Markets - *Relative Size and Trends*

Securities Market and the Central Bank

T-bills: Primary and Secondary Market Operations

Inter bank Funds Market, Repo Market, Discount Window

Operations of Money Market - *Liquidity Management*

Interface with Monetary Management

Impact on Financial Markets and the Economy

Currency Market - An Outline, Size and Trends in Pakistan

Securities Markets

The Stakeholders

Concentration and Dominance of Banking System

Structure, Size, Relative Shares

Role in Resource Mobilization and Allocation

Implications for Market Growth

Chapter 2

Securities Markets - *Pakistan*

1. The structure of financial markets has been discussed in Chapter 1. The classification of financial markets presented there in generic terms is difficult to pursue in applied realm. Therefore, we need to explore what constitutes financial markets in Pakistan in operational framework? What are its dimensions? How large and diversified are these markets? Who are the participants, and how they operate? What is the depth of these markets and what does it mean to investors? How does it compare with financial markets of comparator countries in the region or elsewhere?

2. For a host of concerns like these, the focus ought to be on salient elements pertinent to the market under discussion, rather than the theoretical elegance of structure. This analysis should not be confined to review of trends over a short span of a week or a month or even a quarter, the typical time frame for analysis of stock markets or bond markets. The up-down chronicle of market events does not illuminate the underlying structural characteristics of securities markets over such a short span. But we need to start with some idea of the size of financial markets in Pakistan before we get down to structural features. This is attempted below in this Chapter.

3. In applied realm, for a variety of reasons, it is not possible to arrive at a meaningful estimate of size of full spectrum of financial markets as outlined in Chapter 1; that is, it is difficult to chart out macro-financial aggregates of all types of financial markets, complete with estimates of size of their primary and secondary markets, which must be distinguished from volume of trading or their turnover. A more difficult issue is of valuation. For size estimates to be meaningful, valuation has to be consistent. If it is market value, then it must refer to a time period, usually end of trading week, month or year. In this sense book value is not meaningful and is unlikely to be available across categories of securities by their holders. The market value must be recorded for the same date all across for all categories of securities regardless of their holders; but reporting is often based on holdings by various groups of investors.

4. Financial markets and their components must be delineated carefully; and these have to be dealt with on the basis of a consistent classification to ensure accuracy across the financial markets as well as compatibility within a subgroup or within a category. Estimates of their size and their operations have to be treated on stand alone basis and these estimates must ensure that there are no overlaps. For example, currency market can not be lumped together with interbank funds market. We have to treat currency market on its own; and within currency market if data is available it may be useful to identify subgroups on the basis of leading currencies. We have not done this breakdown of currency market in Pakistan in this fashion after estimating overall size of the market in the accounting currency, the US dollar.

5. We have followed similar approach for securities markets confining our efforts to the estimation of treasury bills, bonds and stock market and analysis of their operations over the past decade. We have narrowed down the subsets of these three markets in their leading components, built the estimates at component level within the three securities markets, then attempt an aggregation to arrive at a meaningful *operational* estimate of size and trends of securities market.

6. Such estimation has not been attempted for financial markets in Pakistan before. For a single market there are estimates, but aggregation of diverse market is not possible, and no answer can be found to the query as to what is the size and distribution of securities markets that we are dealing with. That being so, for analytical and operational purposes, there are three markets to be considered, foremost. One of these is treasury bills market which is a dominant part of short term money markets. The second one is bond market, both for government and private bonds, which represents long term debt market. The third one is stock market, namely equity market. Apart from these three major securities market, there are currency market, call money markets, *repo* markets and others.

7. These short term money or funds markets are substantial and their turnover is very large. Some way has to be found to incorporate their operations in size estimation. But this has not been attempted here for the reasons discussed in detail later; briefly because it is turnover of the same stock of treasury bills being discounted in interbank funds market or *repos* market. In addition, it does not make any sense to include currency markets in the estimation because currencies are cash asset indeed but not securities. In a developing country like Pakistan, on the fringes of mainstream securities markets, there are IPOs, OTCs and options markets, a fledgling forward and derivatives markets, a tiny deposit market, a personal credit market, a market for housing mortgages but in name only, and the like.

8. All these markets are fairly small and are in their nascent stages of development, though some of them are growing very fast like mutual funds and Islamic finance. A good number of these markets are not reported in Pakistan and it is not possible to get any reliable account of their operations or a simple compilation of their activities as independent market unit. It is difficult to find an industry composite of these markets to gauge their size and operations on a consistent basis over defined time periods. Besides, these markets are trading in instruments that are essentially some derivative variant of primary securities; mainly corporate stocks. These markets are engaged in trading and turnover of primary securities based instruments; though of a special kind.

9. In addition, there are *informal markets*, whose combined operations are conceivably large in Pakistan, though there is no way to determine their size. There are tell-tale signs of their substantial presence, but no estimates can be ventured. These informal markets are mostly in currencies and their transfer across borders like *havala* or *hundi* market. There is a very active *badla* market in stock trading, and it is thriving in spite of attempts to regulate it or to replace it with formal margin finance. What impact *badla* market has on stock market has never been established in a quantifiable manner; but it does exist. The reason is there is no credible estimate of size of *badla* market operations; embedded as they are in turnover of stock exchanges and OTC markets. There are conjectural point estimates for a single period, a year or so; not a time series even for a few years

10. There is even larger but undocumented gold market - the sink hole of immense liquidity in the economy and its crowding out impact on financial markets or its destabilizing impact on currency market and exchange rate in times of gold price booms. If Indian experience is any guide, who happens to be the largest net importer of gold, Pakistan is not far behind. Much of this market is informal and enduring. Its size or turnover is not known; it is never reported for the reason that gold traders are not about to declare any detail of their trading operations. Everyone would acknowledge that gold market is massive and trading has always thrived, but beyond anecdotal references not much is known about it.

11. People buy gold at current price, but the reverse does not seem to happen; that is, people do not sell off their gold holdings just because gold prices are down, or because stock market is doing well, or because currency market has turned other way round and exchange rate has improved, which it rarely does, if it does. Central banks do not sell off their gold reserves either just because price of gold has gone up. If they begin to unload their bullion stock piles, gold price will tumble; hence central banks do not sell

their gold reserves. People and central banks, both are alike in this behaviour. True, gold market is not a part of financial market; instead, it is the dominant part of market in precious metals. But we have taken it up here to highlight problems of estimation.

12. Since the size of gold market is not known, it is difficult to establish a verifiable inter-link between gold market, currency market and stock market. This linkage does exist and is intuitively understood. Here we have a market that we believe is very large; it is significant for liquidity levels in the economy; it has strong impact on financial markets, but there is no way to find out its size or its operations. That speaks a great deal about efforts like these at estimation of size of financial markets. Given these operational features of informal or undocumented markets and their sublime presence, it is not possible to come up with an aggregation of these formal and informal markets that would make sense, *combined* under one banner called financial markets; but that does not mean they do not exist in Pakistan. The size of informal market are not known, their participants are invisible but their presence is palpable, their operations are not quantifiable though fairly large, like that of gold market, the sink hole of liquidity, then there is no way to come up with system level estimates.

13. In circumstances like these, how could regulatory mechanism be effective, no matter how cleverly designed or calibrated, if knowledge of such basics is elusive. This problem is not typical to a developing country like Pakistan. There are active off-shore markets of all sorts linked with major currencies, they have a sizable presence of small or large multinational banks, but their off-shore operations have remained *off-shore, off-sight* and *off-limits* to the US or UK regulatory authorities; yet these operations are intertwined with and impact on-shore financial markets in a significant manner.

Securities Markets - Pakistan

14. Given this variety of markets in Pakistan, a good number of them being undocumented and unreported, we shall confine our efforts to estimate size of financial markets to a narrowed version consisting of only three securities, namely treasury bills, government and private bonds. and stocks, and refer to them as *securities markets* as this term is widely understood. Treasury bills represent short term money market; while bonds and stocks together represent long term capital markets, or debt and equity markets. This narrowing down is arbitrary no doubt, but this configuration has been

followed to get some idea of size of securities market in Pakistan as a first approximation. Efforts can be launched subsequently to enhance the coverage and get a better fix of what is the size of financial markets in Pakistan. For this study this would suffice.

15. Estimates of size of market have been attempted here on the basis of their *stock value* reported as outstanding balances at end of a fiscal year, not their *flow values* during a fiscal year. For example, it is easy to sum up private corporate bonds, the TFCs, issued during a fiscal year, but the new TFCs issued are a flow variable. They add to the stock of TFCs outstanding only when maturing TFCs are set off against new issues; and that depends on the time slice one is dealing with. Similarly, it is difficult to construct estimates of size of T-bills market by adding up flows of T-bills auctioned over a selected period, even after maturing T-bills during have been netted out; and it is not necessary. We simply take stock value of floating debt outstanding as reported by Treasury for each fiscal year. Flow values have to be identified and removed from stock value estimates.

16. Another issue to be resolved is whether outstanding value of stock of a security versus its turnover over a designated period is to be the basis of size estimate. In practice, turnover vastly exaggerates size of market concerned. The turnover of a security could be several times larger than the value of securities outstanding at end of accounting period, depending on how many times it gets traded and re-traded within a short period of say a quarter of the year; each time on a different price or discount rate, or interest rate. Does this mean that market is several times larger?

17. In case of stock markets, its size is denominated by market capitalization at close of trading day; not the turnover during any day of trading. Similarly, interbank *repos* market is a series of turnover transactions churning over shortest segment of time, a day or a week or ten days. These transactions involve securities issued and outstanding in the market, whether T-bills or bonds, purchased in primary or secondary markets, and are lodged in the portfolio of financial institutions. The same securities are being used for trading over and over.

18. Capital markets are fairly straightforward to pursue size estimates, because investment in capital market are well known both on stock or flow basis. Money markets are more varied with overlaps in their operations; hence they do not lend themselves easily to gauge their dimension. The turnover in money markets is very large over any given period because same stock of securities is floating around, already accounted for in existing portfolio of financial institutions. Some part of these securities may be traded

and re-traded in interbank funds or *repo* market, central bank funds market, or call money market for liquidity augmentation, with volatility in between. Their turnover does not represent size of the market; rather their value at the start or at end of the period is taken as a measure of size of the market.

19. Market size of any item is typically measured by sales, the turnover. The value of stock outstanding consists of domestic production plus imports over a given period. Which one of the two represents market size, the turnover or the stock? If we take market size as value of stocks at start or at end of the period, the value outstanding at end period depends both on price and stock of the item concerned. For example, take the case of gold market once again, the most intractable of all. The market value of quantity of gold at start of a typical trading day may be taken as size of the market for the day while a part of it may get sold several during the day at prevailing price. At end of the trading day it is the *turnover* of gold market. The question is does this turnover represent size of gold market, or the initial value? Further, if the period under consideration is a month, and since there are 25 trading days there are 25 values of turnover. Adding them up would enormously exaggerate size of the market; and that does not make any sense. Same is the case with securities market, more or less. The size of a security market, say bonds, is the value of bonds outstanding at end of the month or at close of trading on the last day of the month or the year, and this value is a *stock* variable, not a *flow* variable, expressed in nominal terms because these are financial assets not physical or real assets as such.

Size of Securities Market - Pakistan

20. Based on this narrow classification of securities market, a summary of securities markets of Pakistan is presented here. Among securities market so configured, money markets, specially T-bills market has been dominant in Pakistan after stock market crash. Intuitive reasoning suggests that money markets are several times larger than capital market in a developing country like Pakistan where both bond market and stock market are in their early stages of development. Indeed money markets taken together are larger than capital markets if all instruments of money markets are accounted for. They become immensely large if *turnover* is used as the basis of estimation as discussed above, together with secondary market trading of securities and currency market trading. But as discussed above, turnover of money market is not counted in the estimates of the size of securities market.

21. Securities markets in Pakistan began their climb after the era of financial reforms was largely over; financial markets had made their transition from nationalized to market-based regimes; and privatization had proceeded far enough to create a viable private sector, essential for *a market* to exist and operate in the sense the *term* market is understood. There can not be a meaningful market in *directed regime*, either concerning prices or quantities. Therefore, advent of financial markets could not have been possible during times of nationalized financial system, or in the times of directed or administered financial regime, or in times of nationalized companies, because these state owned enterprises, large or small, were funded by the government from its own sources, both with regard to their equity financing needs and also working capital needs. Surely, money and capital markets existed during the decades of 1970s until end of 1980s; but their operations, their mechanisms and processes of price discovery, their transactions and turnover, participation - all these leading features were substantially different from those that came to exist after era of reforms was over. This is the crux of this review.

22. The size of *securities market in Pakistan* was an estimated Rs 891 billion in FY00, and increased to about Rs 8614 billion in FY10, growing at an annual rate of close to 26 percent per year over the decade. This is a very high and sustained growth for a long period of a decade, market crash of 2008 notwithstanding. (see *Data Set 8.0*) In FY00, securities markets of Pakistan were fairly small, amounting to only about 24 percent of GDP; and subsequently rising to about 68 percent of GDP by FY07 because of banner performance of stock market during boom period. This proportion of securities market to GDP came down to 46 percent at end of FY09 in the wake of market collapse; but within a year, by end of FY10, this proportion rose back to 57 percent, signifying a strong recovery over a short period. The boom lasted for about 5 years but it did not lead to *structural shift* in securities market. This remains to be further analyzed but it can be attributed to lack of depth in securities market, particularly in stock market which did not move from its original position prevailing in early 2000s throughout the decade as discussed in Chapter 9.

23. Stock market in current times are fairly shallow, riding on a small group of companies whose stocks are most active in trading, no more than 30 of them, and these 30 stocks contributed most towards stock price boom. The proportion of stock market to GDP did rise from around 10 percent in early years of the decade to about 45 percent by FY07, but then plummeted back to about 18 percent of GDP in the last couple of years of the decade. This would imply a significant improvement in its relative position. Likewise, the share of stock market in securities market of Pakistan was about 42 to 45 percent in

early years of the decade; then this share increased to about 66 percent in FY07. (*Data Set 8.0*) After crash and recovery, the share was around 32 percent in FY10, nearly half of what it was at its peak in the period, but below the level at start of the decade. This is the essence of comment above that stock market operations over past decade did not lead to structural shift in the structure of securities market; boom and bust aside. Growth of T-bills market did.

24. How could this be, given the sustained growth of nearly 26 percent in securities markets overall? It could have occurred only if *relative rates of growth* of other two components of securities markets, namely T-bills and bond markets overtook growth of stock market over the past decade, and shares shifted away from stock market towards these two markets. That is what happened. The share of bond market in securities market declined from 20-24 percent in early years down to about 8 percent by close of the decade. Bond market shrank *relative* to the total size of security market; it lost nearly two thirds of its share in securities markets of Pakistan. As a result, relative share of T-bills nearly doubled from about 35 percent during FY00-01, to about 61 percent in FY10, growing at an average annual rate of about 32 percent over the period of ten years. This growth of T-bills market displaced capital markets from their eminent position which held a leading position for most years. The implications of these developments are as follows.

25. Money market has overshadowed capital market during the past decade, the period of privatized financial system, though one would expect a reverse outcome. The reason is that money market is dominated by treasury bills, a government security; whereas capital markets are mostly dominated by private sector securities. Hence share of capital markets, in a sense is a reverse image of share of money market in total size of securities markets. The share of capital markets declined from about 65 percent in early years, and stayed around there for several years, rising to about 70 percent in boom years, but then dropping down to about 40 percent at the end of 2010.

26. If the boom years are removed, capital market share in total securities market did not budge from around 65-67 percent for many years, and then declined in the last couple of years (*see Data Set 8.0*) This happened even though average growth of capital markets was decent enough at around 20 per cent per year. But it harbored a great deal of volatility. This growth was very high at average annual rate of about 31 percent during boom years FY03-08, riding on growth of stock market. Thereafter, during FY07-10, estimates show that there was an average annual decline to about 8 percent in asset value of capital markets outstanding at end of reporting period.

27. This shift in the structure of securities markets of Pakistan did occur, and it harbors implications for investment and output growth prospects of the economy. As discussed in Chapter 5, T-bills market is short term debt market for Treasury borrowings, whereas capital markets as discussed in Chapters 7, 8, and 9, represent mostly private sector investments facilitated by operations of long term debt or equity markets. But bond market operations were also largely debt financing mechanism of Treasury. Hence, equity markets were the only recourse left for private sector; but equity markets were highly volatile and were caught in the boom and bust cycle. Did equity market facilitate *new* net private investment remains an open issue to be looked at more carefully? If they did, what were the magnitudes and what was the outcome? That remains to be explored.

28. These results also point out the depth, or lack of it, in securities market of Pakistan. The overall ratio of securities market assets to GDP did grow and is around 57 percent as observed earlier. Yet, securities markets in Pakistan are relatively small when compared with securities market of comparator countries. These comparative country comparisons are rather illuminating. In parallel, growth of securities market was beholden to a variety of scenarios that unfolded during the decade including major economic and financial developments, socio-political environment, the ongoing war, domestic law and order situation and societal conflicts that have prevailed over the decade of 2000s. Investment climate has suffered several set backs that have their origins beyond the confines of economic and financial factors alone. In between, there has been a spectacular stock market growth and equally spectacular market crash during these years.

29. The growth of money markets, i.e., treasury bills market has occurred because government busted all limits of prudential borrowings both from the banking system and SBP, leading to substantial inflationary pressures and a slide of exchange rate from levels of around Rs 60 in mid-2000s to a US dollar to about Rs 83 towards the end of the decade. This is not to suggest that government borrowing alone is the cause of devaluation; but it is one of the major elements of aggregate excess demand in the economy. Devaluation had the usual macro-financial consequences for the economy over this period. The pressures have mounted because public spending seems to be beyond control, in spite of limitations placed in standby agreement with IMF. All the three securities markets showed volatility features of their own. Intuitively it would seem that given stock market crash of 2008, instead of growth there ought to be a decline in the size of securities market. But this did not happen because of growth of T-bills market which not only compensated for crash induce reduction in the size of securities market; rather it added to growth during last three years of the decade. Bond market

was not in the counting, given its declining share in securities market from about 21 percent in FY00 to 7.5 percent by FY10 with volatility in between. Such were dynamics of securities market over the past decade.

Money Markets - Pakistan

Treasury Bills Market

30. Estimate of securities markets begins with money market. Since T-bills market is dominant, the focus is on structure and trends of T-bills market discussed in detail in Chapter 5 and encapsulated here. Treasury bills market has grown rapidly at average annual rate of about 27 percent over the past decade. But this average annual growth is not meaningful because during first four years of the decade, there was considerable volatility in T-bills market. It actually shrank during FY02, and nearly doubled a year later. Thereafter, during FY03-08, T-bills market growth was close to 33 percent per year, and it further accelerated during the FY07-10 to nearly 47 percent per year. Given this volatility annual averages for ten year period needs to be interpreted with caution. (*see Data Set 8.0*)

31. Currently, among the three markets, T-bills market is largest amounting to roughly 60 percent of securities markets. But this is a recent development. For most of years of the decade, FY00-FY08, the share of T-bills market hovered between 30 to 32 percent of securities of market; thereafter its share shot up to about 56 percent in FY09, and then rose again to 61 percent in FY10. In FY00, size of T-bills market was an estimated Rs 320 billion; by middle of the decade it had grown to about Rs 1100 billion, but thereafter there was a significant expansion, and by end of FY10, T-bills market had grown to estimated Rs 5231 billion. This increase in the relative share of T-bills market is a recent phenomenon.

32. The *primary market* for T-bills is auctions market. It is fairly large, where a good part consists of maturing T-bills are being recycled into new maturities; a type of revolving credit extended to Treasury by banks and SBP. Maturing T-bills are being replaced all the time with new ones with maturities of 3 months to 12 months. Another part of auctions market is net addition to the stock of T-bills outstanding with banking system. However, auction trading transactions are repetitive and are not included in size estimation of T-bills market, but net change in treasury bills outstanding shows up in the portfolio of banking system which is included in size estimation of T-bills market.

33. Similarly, *secondary market trading* of T-bills is fairly large and it stands on its own, apart from primary market of auctions. It has its own structure of discounts, or what is the same, its own rate of return or yield rate structure. Hence price of T-bills in secondary market is different from those in primary market. But trading in this market, the interbank *repos* market is turnover of T-bills in portfolio of banking system, where these are being re-sold or re-purchased all the time. Therefore, transactions of T-bills in interbank *repos* market are not included in size estimation of securities market. This could be contentious, but as discussed earlier, turnover trading does not alter size of market as such. The T-bills being discounted and sold in *repos* markets are the same T-bills *outstanding* in portfolio of banks, and are being used in secondary market trading, be it *repo* trade or any other.

34. A large part of T-bills issued is lodged in the portfolio of SBP which government has used to borrow from SBP, which are essentially liquidity replenishment operations for the banking system, but these are also debt and short term liability management by the treasury, the originators of treasury bills. These operations of SBP take place on behalf of the treasury or as part of system of monetary control. That is why they are popularly known as open market operations. These T-bills lodged with SBP are not traded in the market except as part of liquidity management operations if need so arises as explained below. If any part of it is eventually sold to absorb liquidity of banks, they become a part of T-bill portfolio of banks which may then be traded in secondary *repo* markets; not otherwise. Therefore, treasury bills held in the portfolio of SBP are not counted here as part of T-bills market. Note that the proportion of treasury bills in money market trading is quite large because sheer size of T-bills outstanding with banking system is large relative to government bonds. There are no other tradable government securities in the market except treasury bills and government bonds.

35. Next, SBP does trading of government securities for absorption or injection of liquidity as per liquidity trends or as per needs of monetary control. This is a market for *central bank funds*; SBP funds in Pakistan or Fed funds in the US. This is augmentation of liquidity of banking system but in the process it also augments size of T-bills market, though size, timing of trade and interest rates are all different. If SBP were to sell T-bills from its portfolio to banks to absorb liquidity, these become marketable treasury bills, which they were not before. If SBP were to buy T-bills for injections of liquidity it would reduce size of T-bills in banking system portfolio and thus reduce the size of T-bills market. Hence, OMO operations are included in size estimation, though with these operations are almost entirely in T-bills trade for SBP funds; while government bonds may be a minor part of this trading.

36. Note that total value of OMO-based trading, both sales and purchases has been included in the size estimation of T-bills market since timing of operations and their impact on size of T-bills market and hence on the size of securities markets is not the same. The amount of OMO based trading is larger than amount of T-bills outstanding with banking system most of the time. That does not mean that OMO market is larger than treasury-bills market. It would appear that net injection of liquidity over a time period, say a quarter of the year, enhances size of money market, but in exchange, the size of securities held in banking system portfolio has declined. The net outcome may not meaningfully alter size of the market.

37. SBP also operates *three day repo market*, a substitute for old discount window of SBP. Generally, central banks frown upon access to discount window by a bank, because it reflects upon its liquidity management, and it may be harbinger of financial distress. This market is also SBP-funds market but only for 3 days. It is a *repo* turnover of securities that are already in the portfolio of banking system; hence these are not included in size estimation. Same is the case with interbank fund market, *repo* market or call money market. Those are markets for overnight liquidity or at the most for a few days driven by temporary cash needs or exigencies banks are facing. Part of transactions in these markets may occur to lock in gains from interest rate arbitrage opportunities that may arise temporarily because of stickiness of some interest rate whose movements may not be along the lines of structure movements, but only for a short while, until trend line changes catch-up. These turnovers are not included in size estimation of money markets.

Capital Markets

38. Next, we need to look at size of capital markets and its trends in summary fashion while details are discussed in chapter 7. Briefly, the *size of capital markets* was Rs 556 billion in FY00 consisting of both debt and equity markets namely bonds and stocks, and it rose to near about Rs 3400 billion by FY10, growing at annual rate of about 20 percent per year. (*Data Set 8.0*) During early years, growth of capital market driven by growth of both bond and stock markets together, but during FY03-08, the boom period capital market growth was 31 percent per year, pulled mainly by stock market growth. The size of capital market at end of FY07 stood at Rs 4389 billion, the highest it ever has been. Thereafter, capital markets shrank to Rs 3383 billion by mid-2010, owing to a sharp reduction in total capitalization of stock market of about 8 percent per year during FY07-10 period.

39. Capital markets in Pakistan are driven mainly by *stock market* movements. The reason is even though bond market growth was about 14 percent per year during the past decade; its market was overwhelmed by stock market growth whose share in capital has been much larger throughout the decade. In FY00, the share of stock market in capital markets was about two thirds to begin with, but by middle of the decade its share had risen, and in boom years it was about 90 percent with a corresponding decline in the share of bond market. This distribution of capital market shares between bonds and stocks stayed there, until the end of the decade. Subsequently, this share declined, but it was still very high at about 80 percent at end of FY10, meaning that in Pakistan capital markets are practically markets for stocks, not for bonds. In FY00, capitalization of stock market was Rs 392 billion, rising to Rs 2732 billion by end of the decade at the rate of 21 percent per year at a growth rate higher than that of capital markets. But in between there was market crash of 2008, hence this average annual growth is not meaningful. A 21 percent average annual growth is fairly high, but it does not hint of volatility of stock market. It is the same weakness of average annual growth as an indicator discussed earlier.

40. During the boom period, *stock market* capitalization increased from Rs 746 billion at end of FY03 to a peak of Rs 4825 billion in April 2008, at an average annual growth rate of 38 percent. Thereafter, stock market went into a tailspin and lost two thirds of its capitalized value in 8 months during April 2008-January 2009 what it had gained over the previous five years. Since then, stock market capitalization has shown a significant recovery to a level of about Rs 2732 billion by mid-2010. But the average annual rate still shows a decline of nearly 12 percent during the period of July 2007-through June 2010. For this reason, analysis of securities markets over long periods based on average annual growth could be misleading.

41. As for *bond markets* of Pakistan, these are too small and have just begun to resuscitate from dormancy during nationalized financial system. There could not have been any meaningful bond market as such in those days of nationalized regime, as the term market would be interpreted, that prevailed for nearly three decades starting in early 1970s and ending by late 1990s. The history of bond market, therefore, is confined to the decade of 2000s, and no more. The size of bond market in FY00 was a meager Rs 164 billion. (see *Data Set 8.0*) By end of the decade, bond markets had grown at an average rate of 13 per cent per year to Rs 555 billion as discussed in Chapter 8. This rate of growth during middle years of stock market was nearly half of this decade long average at 7.6 percent; but after that there was a significant expansion of bond market, and the of growth during FY07-10 period at 14 percent per year, twice of what it was during FY03-08.

42. More than 95 percent of bonds are *government bonds*. Private corporate bonds are a negligible part of bond market, a point that is repeated often in this text. Bond markets were nearly a quarter of securities market in FY00, but since then, their proportionate size has been declining throughout the decade. At the height of stock market boom, the proportion of bond market had reduced to about 8 percent of securities market as would be expected owing to ballooning of stock values; but after crash, this proportion doubled to about 14 percent; not because size of new bond floats doubled, rather because relative share of stock market went down due to declining share prices and delisting of companies at stock exchanges.

43. Growth of money and capital markets in Pakistan therefore was essentially growth of T-bills and stock markets, not bond markets. These two markets together have led securities market growth in the past. For most of the decade, capital markets have been predominant. Their proportion in securities markets was nearly two thirds, and this remained virtually unchanged until the last couple of years. There has been a dramatic reversal; money markets now constitute nearly two thirds of securities market and their share is rapidly rising. This is not driven by any structural shifts in financial markets, rather by factors exogenous to financial markets, namely public sector borrowings. In spite of heavy government borrowings; bonds are not leading instruments of government borrowings, rather treasury bills are leading instrument. Therefore bond market growth is lagging far behind treasury bills market growth. Given these trends and prospects of lackluster growth of private bond market, the domination of stock and treasury bills markets is likely to continue for the foreseeable future.

Currency Market - Pakistan

44. Currency markets are discussed in detail in Chapter 6; this is an encapsulated version of the discussion. Currency market is different genre altogether. These are not a market for security based assets as T-bills or bonds are. Hence, volume of currency trading has not been included in the size of securities market, but that does not mean they do not have inter-linkages with securities markets. It is a fairly large market and it is linked up with market liquidity and interest rate trends at any given time with significant impact on banking operations, depending on market trends. These markets are global, operating nearly round the clock with largest turnover of all markets where participants are usually price takers in the

sense that no single participant or a group of participants can exert notable impact on this market in terms of currency rates prevailing in the market.

45. Currency market dimension in any country including Pakistan has to be treated in terms of supply or demand of foreign currency. On the supply side, there are inflows of currency; and on demand side there are outflows of currency in any given year estimated from balance of payments data, for lack of any direct estimates of these macro-financial magnitudes. The size of market can be gauged by either of the two flows but not aggregate of both. These recorded inflows and outflows are traceable. This is not the turnover during the year; rather these are flows of currency amount, with different time of trading. The estimates of inflows and outflows of foreign currency for Pakistan are given in *Data Set 6.0* attached. All outflows are recorded as payments or debits in balance of payments and represent the demand side of currencies over a given year; while all inflows of currencies, the supply of currency in domestic markets are recorded as total receipts or credit items on the balance of payments. In accounting sense, the debit side must be cleared by credit side; that is, the two are reverse images of the same magnitude.

46. There are serious valuation and reporting problems embedded in translating multicurrency balances both ways; inflows or outflows into accounting currency balances, the US\$ for Pakistan, in times of fast moving forex rates throughout the year. The balances of inflows are held by a large number of participants, namely banks in the interbank market, and also by foreign exchange companies, the FECs. The two streams, inflows and outflows are almost identical year after year, and they must be, since it is accounting identity. Hence size of currency market can be interpreted either as inflows or outflows, but not both, even though the two transactions occur at different times and at different exchange rates.

47. The total currency outflows, representing demand side, were about US\$ 19.3 billion in FY00, rising to US\$ 49.3 billion in FY10. As expected, the largest outflow concerns payments for imports of goods and non-factor services of about US\$ 9.6 billion in FY00, or about 52 percent of total outflows, rising to US\$ 31 billion in FY10 or about 63 percent of all outflows. The remainder outflows were recorded for current transfers, factor income, other services, capital accounts, and financial accounts which are essentially clearing balances in this scheme of reporting.

48. On the supply side, total inflows were about US\$ 15.8 billion at the end of FY00 and increased to US\$ 49.4 billion by FY10. In the early years, exports were nearly half of the inflows; the remainder was distributed between transfers including remittances, factor income receipts and other service

inflows, capital account inflows and financing inflows. The last item, the financing inflows are significant for Pakistan, because these inflows counterbalance deficits on current account. Slowly composition of inflows shifted, and by end of the decade exports *nfs* were about 39 percent inflows, but financing inflows increased significantly, while proportion of other inflows remained roughly the same. These estimates can be refined, but for figuring out size of currency market of Pakistan, this would suffice with the caveat that we can not lump currency market together with securities markets to arrive at aggregate size of *financial markets*.

The Stakeholders – Securities Markets

49. The major stakeholders of securities market in Pakistan are:
- i. Issuers of securities; government and private corporate sector; borrowers in debt markets; equity finance seekers in stock markets.
 - ii. Institutional investors, mostly financial institutions including banks and non-bank financial institutions.
 - iii. Investor public; private investors
 - iv. Brokerages and stock exchanges.
 - v. Regulators; mainly SECP, also SBP.
50. Among this group of stakeholders, by far the most influential ones are institutional investors, brokerages, stock exchanges, and regulators. There are considerable overlaps among them, for example in case of supervision of financial institutions, both banks and NBFIs including contractual savings institutions and mutual lately funds; rules and regulations that affect investment in securities, management and disclosure of investment portfolio of financial institutions. The role of financial institutions as investors in securities has been explored in detail in next two chapters. As for investing public, individual investors operate mostly in stock market; but they are a spectator in operations of other securities market. They do not wield much influence on these elements; but this is most vocal group which creates an impression that they are dominant in *securities market*; they are not.
51. The single most important challenge facing major stakeholders is to maintain some order of stability in securities markets and transparency in its operations. These are complex issue and no single stakeholder can go alone in this direction, though each one of them has a great deal riding on the prospects of a stable securities market. For example, a speculative run on the market or undocumented financing through *badla* system, or reckless short

selling, insider trading and other collusive practices require a collaborative effort of all stakeholders which is not easier to come by because not much can be done by any single stakeholder to smother speculative investing or herd behavior. Circuit breakers in stock market trading can dampen the frenzy; but that only postpones the inevitable. Circuit breakers can provide some breather to enable remedial actions if they can be taken, but circuit breakers can not overturn a runaway trend, neither in advanced markets nor in developing markets like those in Pakistan.

52. Close behind is the challenge of maintaining public's confidence in market operations. That would require a price discovery process that is transparent and trustworthy; though price discovery is not so much of an issue in money markets as it is in stock markets. Much of financial market operations are shrouded in mystery for investing public at large. The apparatus for disseminating reliable market information, through accessible channels is not yet up to the requirements of ordinary investors. As for the perennial issue of how to promote development of securities market, its main elements are known to all stakeholders.

53. The major pieces of reforms and restructuring of securities markets are in place and there are no banner items on the agenda awaiting policy changes as they were during reform years. Frontline items have been taken care of. Improvement in mechanisms of trading, reporting and valuation seems to be a perpetual preoccupation of regulators, but this is not holding back growth of markets as were the initial conditions that prevailed before. Likewise, it is not market infrastructure that is holding back future growth. There are operational aspects like margin financing that need to be put together, but it can not be accomplished without collective efforts all the stakeholders. A review of the role of major stakeholders in the development of securities markets from these perspectives needs to be done more systematically than has been possible here in this book.

Securities Market

Concentration and Dominance

54. Major participants in securities market in Pakistan are financial institutions, mainly banks and NBFIs. Private non-institutional investors are mostly confined to stock market; they are not active in money markets or debt markets. Participation of financial institutions in securities market is discussed in chapters ahead, but this discussion is with reference to the

prime function of markets, namely direct resource transfer at system level, which occurs through a variety of market mechanisms. We need to develop some idea of where resource transfer is concentrated and what are the implications of this concentration or dominance, before we delve into details of investing activities of participants in securities market.

55. If we look at resource transfer from financial system perspective, the issue is size of total transfer of financial resources through both direct and indirect mechanisms which sheds a different light on securities market activities. Financial system of developing countries, for most part has been dominated by banking system, and this domination has pre-empted growth of capital markets. This dominance originates mainly from *banking system credit* as primary source of financing for private sector; but in part it is also originating from short term money markets. For example, treasury-bills market is entirely in the hands of banking system; so is the interbank fund market and all *repo* markets. Central bank funds market is also primarily banking system centered market, where central bank is engaged in OMO operations involving liquidity injection or absorption depending on market liquidity, but more so depending on monetary policy stance of central bank. Thus, money market is in effect banking system operated market. Currency market is also largely in the hands of banking system.

56. Banks are an important player in bond markets in developing countries where it is mainly a market for government bonds whereas corporate bond market is very small. This is not the case in emerging market countries of East Asia or Latin America. As historical experience shows, private bonds are a small part of securities market relative to government bonds in early stages of bond market development almost in all developing countries. Same is the case in Pakistan. For all practical purposes, bond market in Pakistan is government bond market, where SBP conducts auctions of government bonds to authorized bidders who are a select group of banks. Private bond market in Pakistan is dominated by bond issues of financial institutions, not corporate sector at large. Therefore, from the perspective of financial system, banks not only operate credit market, they have money market and bond market also under their sphere of operation.

57. That leaves only stock market outside the sphere of banking system where banks are not a noticeable participant, against commonly held belief that banks are major investors in stocks. Commercial banks dominate money markets and bond markets in Pakistan, but not stock markets. Thus, one can argue that financial system is banking dominated in developing countries. This has major implications for growth of capital markets. If we take account of the role of banking system in resource transfer through financial

intermediation and securities market, both, then domination of banking system becomes apparent, not otherwise.

58. In Pakistan, during early years of the decade, banking system credit alone was larger than size of securities market as estimated here. If we add banking system holdings of securities, namely bonds and stocks, then banking system credit plus investment have always been a high proportion of total size of financial system based transfers of resources. In early years of this decade, in Pakistan, banking system credit plus investment in securities were around 150 percent of the total size of securities market. This proportion moderated a bit as stock market boom began to take hold. In FY07, this proportion was 58 percent of securities market, but after stock market collapsed and with corresponding decline in capitalization levels, the proportion of banking system credit and investment in securities market rose to back to about 74 percent in FY09. (*Data Set 8.0a*)

59. By close of the decade, this proportion was still about 60 percent. Therefore, the total size of financial intermediation by banking system and its investment in securities market were never less than half of the size of securities market. This happened not because there was a structural shift in the securities market vis-à-vis banking credit market, but mainly because stock prices had climbed fast, and capitalized value of stock market has grown rapidly. As the stock prices tumbled, the proportion of banking credit plus investment in securities rose fairly high. The long term trend however is clear. Slowly this dominance will decline, but only if capital market growth is substantive. That does not seem to be in the cards in immediate future.

60. One may argue that we should confine this comparison only to the proportion of banking investment in securities to the total size of securities market to see whether banking system dominated securities market or not. This is a legitimate point. But if we look at it from the vantage point of financial system level and seek out the role of banking system in resource transfer, rather than look only at what transpired in banking system investment, then from this perspective, the appropriate way to analyze would be to figure out aggregate of resource transfer represented both by banking credit and investment, and compare it with direct resource transfer undertaken by securities market. If we do that, the inescapable conclusion is domination of banking system.

61. This perception harbors implications for financing behaviour at firm level or institutional level. Because of this domination, those seeking financing, intuitively think of bank borrowed funds, rather than capital market borrowed funds even for their investment needs through perpetual

roll over embedded in overdraft lending. The mind-set is geared to banking credit based financing; not securities market based financing. Hence, instruments of financing in most developing countries are largely bank oriented not capital market oriented; so they have been in Pakistan. This has put capital market at a disadvantage, because trading in financial assets and securities is not as much capital market oriented as it ought to be. An extension of this pattern is that in Pakistan, growth of securities market trading has been fairly narrow, confined to a market niche for long time, rather than mainstream of financial market.

62. This may be alluded to the cartel like behavior of a small group of powerful brokers, assisted by licensing practices of authorities concerned, intentionally or otherwise. Only a small number of market traders have come out of the tiny market niche that they were ensconced into for a long time. They are not ecstatic about sharing burdens of capital market development, not because of cost involved, but more because it would need significant changes in their business practices. They are not enthused by the prospect of a more visible role and a closure scrutiny by nosy regulators on every facet of securities trading. Above all, the move towards enhanced taxation of capital gains and a drive for enlarged tax net are not conducive to interests of securities dealers. The recent moves like demutualization are a far cry from the days of clubby anonymity of business they were so used to prior to the limelight of capital markets growth.

Chapter 2: End

Chapter 3: Financial Markets – Participation *Institutional Investors, Pakistan*

Thematics

Financial Markets – Participation, Trading

An Overview – who participates?

Institutional Participation; Underlying Features

Non-institutional Participation; Private Individual Investors

Investing in Financial Markets – Pakistan

Participation Impact, Market Exposure Stability

Market Exposure; Growth or Crises?

Banks and NBFIs; Comparative Experiences

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Chapter 3: Financial Markets – Participation

Who Participates?

1. Who participates in securities market operations is an elaborate topic; yet, this has to be clarified. As a first approximation, the largest group is that of institutional investors. Among these, financial institutions dominate, consisting of both banks and non-bank financial institutions. Among banking institutions, *Commercial Banks* virtually constitute the banking system. They primarily are financial intermediaries as deposit money banks and creditors, but they are single largest group of investors as well because they have considerable amount of investable funds from their deposit base. There are also a number *non-bank financial institutions (NBFIs)*, who are not deposit taking institutions as such and they do not collect deposits from their customers, but they receive contractual inflows such as insurance premia collected by insurance companies on the policies issued, or contributions made to provident funds, retirement funds. All of these are dependable cash inflows to these non-bank institutions defined as contractual savings. These contractual savings institutions are involved in a major way in investing and providing investment finance through capital markets. There are investment banks and various types of finance companies; but they are a negligible participant in securities market of Pakistan. Lately mutual funds have emerged as a sizeable group of non-bank institutional investors.

2. All these financial institutions are major portfolio investors. Given the course taken by financial system development over past decade and a half concerning reforms and privatization of financial institutions, NBFIs have been marginalized and they are not important players in securities market as compared with commercial banks. However, financial institutions access securities market as part of their investment portfolio management or as part of their asset-liability management orientations. They may do active investing on their own, or may go through asset management companies which may be their own subsidiaries as currently the trend is in Pakistan. But they have to access securities market through brokerage houses unless they happen to have brokerage license which rarely is the case.

3. In developing countries like Pakistan, business corporations and companies do not normally engage in investing in securities market beyond very limited asset-liability management activities, given that much of their business is financed to the hilt by revolving type of banking credit. They do not have spare funds lying around to go about investing in bonds or stocks. There is a sizable group of non-institutional investors, mostly private individuals, who do investing mostly in stock market on their own as discussed below. There is also a group of foreign investors who participate through emerging market mutual funds. They are major investors in front line developing countries but not in Pakistan.

4. Central to the understanding of participants and their market behavior is *portfolio investment* behavior, be they institutional investors or private individual investors. Here, only some highlights are provided in the context of applied experiences in Pakistan as the discussion proceeds. But detailed analysis of portfolio behavior, techniques and tradeoffs, strategies involving risk management, the underlying trade-offs between risks and returns, choice of securities or their derivatives is not covered here as this subject is discussed in various text books in a rigorous fashion.

5. There is a whole range of *objectives* of investing for participants of securities markets to pursue which defies a clear cut classification and can not be treated in detail beyond an introductory discussion in Chapter 4 on market fundamentals and operations. Similarly, strategies and techniques of portfolio investment are a subject as exhaustive as any and a fascinating one for academics and practitioners alike. For our purposes, suffice to state that participation in securities market is motivated by a single over-arching objective: namely to *maximize returns* on securities portfolio over a time horizon of their own, within *acceptable levels of risks*. Let us leave it there.

6. Participation of brokers and dealers is central to trading in securities markets, but only as agents of their clients; as a go between. Strictly speaking, brokers and dealers are supposed to be what their name suggests; that is, they are supposed to be intermediaries between buyers and sellers, which they are. But they are also active investors, either on behalf of their clients or on their own account. They do trading or investing for their own account or take positions in securities market under strict guidelines, which normally they do observe while this regard. These guidelines are supposed to prevent abuses involved. Some of these abuses are *insider trading* or *front running* discussed in this chapter.

7. A commonly prevalent way for brokers and dealers to get in and out of market for their own portfolio is through their own family of funds. Where regulations allow, they may engage in market trading on their own account. However, a popular perception in developing markets, may be fair or not, is that brokerages engage in *insider trading*, and also do *front running*, without raising the specter of impropriety. These practices are illegal and there are severe restrictions on conduct of brokerage business, whether on the market floor or outside.

8. Brokers and dealers are also involved in short term lending to their select group of clients through margin financing which now has been institutionalized in many countries through hefty lines of banking credit available on tap to the brokerage houses for advances to their account holders, keeping securities portfolio in the account as collateral. In Pakistan, this type of marginal financing is not yet operational as discussed in Chapter 10. In its place there is informal margin finance, namely *badla* finance, which has prevailed for a long time. In the past, several efforts were made to introduce a system of formal margin finance, but without much success.

9. In modern times, globalized securities markets have attracted a new genre of dealers and brokers, financiers, and investors, all rolled into one. These are large money center banks, or multinational banks, or *universal banks*. Given their financial depth, market reach, expertise and overseas network, they are a formidable presence in securities markets, globalized or local, but mostly in advanced countries. They provide their clients facilities for securities market investing on a scale not available before.

10. The largest groups of participants are *institutional investors* of all types as discussed below. These include financial institutions of all variety of domestic or foreign origin, namely banks and non-bank financial institutions as discussed below in detail. Among these, non-bank financial institutions include a large number of companies whose *main business* may or may not be investment in financial markets as such, like leasing companies, insurance companies, brokerages and security trading companies, but they do invest in financial markets for their own account rather on behalf of their clients. The aggregate of their investments in all types of financial markets is substantial. This listing practically accounts for nearly all, if not the largest proportion of investment in all types of financial markets, just not *securities markets* as defined and discussed in previous chapter. No attempt has been made here to tally the size of investment in all financial markets undertaken by all types of institutional investors at macrofinancial level; though for securities market of Pakistan such estimation has been done here, perhaps for the first time and is discussed in the context of market in Chapters 2, 6, 8, and 9.

Participation – *Private Investors; non-Institutional*

11. Non-institutional investors, by definition exclude institutions of all variety of domestic or foreign origin, such as banks, and quasi-banking institutions also known as NBFIs. It also excludes corporate businesses who may invest in financial markets and maintain a securities portfolio of their own. That leaves individual investors in this category; the retail private investors. If we look at participation in terms of proportional shares in this fashion at macrofinancial level, our assessment is that *individual investors* are a relatively small proportion of all investors active in financial markets taken together, though no attempt has been made to estimate size of their investment as a category of their own.

12. The reasons for investment and participation of individual investors being a relatively small proportion of financial markets in comparison with those of institutional investors are fairly straightforward. Individual investors can not participate in money market; they are out of it. That is individual investors do not participate in treasury bills market, or short term inter-bank funds market, repo markets or central bank funds market. They do participate in foreign currency markets, but only in a segment of formal currency market. Their participation in currency markets are overwhelmed by banking system and business corporations in foreign currency transactions. Same is true of bond markets, because the size of investment by institutional investors in bonds markets is much larger than those of individual private investors.

13. It is only in stock markets that one hears a great deal about individual investors, whom brokerages and security companies have dubbed as *odd-lot* investors, a connotation which is not generous in its folkloric interpretation. This is rather unfortunate, because those not familiar with market lingo, they would think, odd-lot investors mean those out of luck. That may or may not be so. They are called *odd-lot investors* because trading is done in batches of 100 shares of a stock, called a *round lot*, because its trading is easy to execute on stock exchange floor. A trading order of less than a multiple of 100, is called *odd-lot order*, and is not easy to execute in the frenzy of transaction being done on the floor.

14. Brokers do not earn much commission from these small odd-lot orders, and they have to make extra effort to execute them within day's trading at specified price. But if prices are fast moving, or worse if they are volatile, it is difficult to do matching of trades and fill such orders; hence these orders and

their investors are out of favour. But because these odd-lot investors outnumber all other participants; they are very vocal, and they are originators of much of the 'noise factor' heard around. If so, why brokerages make efforts to engage odd-lot investors? The reason is the same as to why deposits banks make every effort to reach and attract such a vast number of households or individual depositors? The *individual* size of their deposit may be small, but together they account for nearly the entire deposit base of banking system in most countries. This is not quite the same in case stock brokers, but a good part of business of brokerages and securities companies originates from odd-lot investors.

15. Then, there are *day traders*. They are not investors in the true sense of the term. They are not *investing* in the market with the objective of providing investment funds via equity finance or bond finance to corporate businesses for expansion, and thus participate in corporate growth, no matter how infinitesimal their participation may be. They have only one objective: to clear the deck at end of the day in black; not in red, not in a loss. But day trading is not limited to odd-lot individual investors; a good number of hedge funds or other funds and brokerages as well, do engage in day trading; may not be so massively relative to the size of their holdings. Their day trading volume and turnover are not known; but they are there.

16. There is a circuitous way of estimating the size of investment by non-institutional individual private investors. It has not been attempted here but it can be outlined as follows. At the end of any financial year, the size of investment in capital markets by *all types of financial institutions* is known and it is documented in their annual financial statements regularly made public in Pakistan. Likewise, investment in capital markets undertaken by the non-financial business corporations is routinely reported as part of their disclosure requirements and those can be found from their annual financial statements and added up, sector by sector and then for the corporate sector as a whole including both private business corporations and public sector companies. That is, the aggregate of investment or institutional exposure to capital markets thus can be ascertained in a fairly accurate manner.

17. We have done this assessment for banks and NBFIs. Since the size of bond market and capitalization level outstanding at end of financial year in stock markets is known, the *residual* after deducting this institutional aggregate can be interpreted as the size of investment by non-institutional private investors and this is a fairly accurate estimation. The only segment left out is investment in securities by small privately owned businesses who do not report their financial statements. But do these businesses invest in capital markets of Pakistan? That remains to be ascertained.

Section 1: Participation - Institutional Investors

Commercial Banks

1. Commercial banks are key players in financial markets of Pakistan as elsewhere, but mostly in money and currency markets. They practically monopolize operations of short term money markets including Treasury bills market, funds markets and *repo markets*. They are also quite active in bonds markets (T-bills), particularly after they were allowed to engage in underwriting in Pakistan, elbowing out investment banks, brokerages and other underwriters. Thus, commercial banks straddle the full spectrum of debt markets, both short term and long term. They are not a key investor group in stock market of Pakistan for reasons of investor risks involved as well as by regulations like exposure limits imposed by SBP. They may eventually acquire a significant position in stock market in future, but indirectly through their subsidiaries like asset management companies and mutual funds.

2. In early years of this decade, there were proposals to encourage banks to diversify into financial services industries, and also in financial markets as providers of investment services to their customers and possibly margin finance, all under one umbrella, following the pattern of universal banking, but it did not go too far. Banks have dominated government securities market; their exposure was an overwhelming during the first half the decade. It still is. Treasury bills market is entirely in their sphere; it is a virtual monopoly in Pakistan as it is in all other countries. Same is true of bond market as discussed in detail in Chapters 5 and 8. For the past decade, far from dominating stock market, banks have invested a very small proportion of their total investments into stocks; it is virtually negligible. This flies against commonly held belief that banks call the shots everywhere, in all markets. They were holding no more than 3 percent of total capitalization of stock market most of the time, sometimes even less. (*Data Set 8.7*)

3. For, primary business of banks is not investment in securities market, the way it is for investment banks. The proportion of banking system investment in securities markets was never more than one third of total size of all securities markets taken together. In the first half of this decade, this proportion ranged around 35 percent for most years during the first half of the decade; but in the second half it declined to 22-25 percent. That is, investment by banks in all securities market is down to one fourth or less of

total size of securities market, a conclusion that needs to be highlighted and is discussed below in further detail.

4. This is because main line of business of commercial banks is deposit mobilization and lending, not investing in markets. Banking credit is their main pre-occupation. Hence there are self-imposed limitations on their exposure to various types of investments besides SBP imposed limits. As it is, banks have a sizable exposure to risks on their loan portfolio, and essence of banking is to manage various risks of banking credit. Banks only have a notional risk on their deposit portfolio; but a risk of investment portfolio plus risks on loan portfolio represent combined risk that banks face as a financial corporation. How pervasive are credit risks in Pakistan can be gauged by non-performing loans that Pakistani banks accumulated both during the reform and post-reform period in spite of repeated efforts to neutralize them. Banks have their hands full managing their loan and deposit portfolios, helping to manage market liquidity through their role in T-bills and bonds markets. They could not conceivably enter into turbulent waters of equity market of Pakistan and take on added risks of stock portfolio management.

5. Thus, commercial banks own and operate *three portfolios*. One is *deposit portfolio*; but the major one is their *loan portfolio*; and the third one is investment or *securities portfolio*. All three portfolios have their own risk and return features. The essence of asset-liability management (ALM) at a bank lies in balancing and fine tuning their portfolio holdings in so as to achieve best configuration of returns within acceptable degrees of risk on all three portfolios. The risks across the three portfolios emerging from *adverse* movements in interest rates relative to their holdings in these portfolios are significant. Therefore, leading element of banks' asset liability management strategy is to manage their *loan portfolio* risks, first and foremost; which includes not only interest rate risk, but market risks and the full range of credit risks, mainly default risk on their loan portfolio. They simply can not afford to cross the line and engage excessively in stock markets.

6. Applied experience both in developed and developing countries has shown that by and large, banks avoid undue exposure to securities market. Much of their securities portfolio consists of investment in relatively less risky securities, namely treasury bills, government bonds and AAA corporate bonds. They also invest in stocks, but their stock holdings are concentrated in income generating stocks, rather than high growth capital gains generating stocks which are much riskier than others. In the past, bank failures have occurred, not because of their imprudent exposure in securities market, rather because of bad banking practices and their off-balance-sheet activities. Rarely banks have got into serious financial distress, even failure,

because of their overexposure in securities markets. This is borne out time again from comparative experience over the past couple of decades.

7. There are regulatory limitations on commercial banks with regard to their exposure in stock markets. They are not allowed to invest in stocks beyond a certain proportion of their overall investment portfolio as stated above. They are primary market participants both in the short term government securities, namely treasury bills, and also in the long term debt markets, namely government bonds. These income generating portfolio holdings are substantial at any given time, and when combined with their stock market holdings, the total size of commercial banks exposure to securities market instruments becomes significant.

8. In spite of these regulatory limitations and portfolio management concerns mentioned here, participation of commercial banks in securities markets is quite significant in two ways. One, they maintain an investment portfolio of their own and are very active as institutional investors. Secondly, they provide banking credit a part of which directly or indirectly ends up financing purchase of securities. Availability and cost of banking credit is one of the major factor in determining short term securities market trends because of its impact on liquidity position of all those concerned.

Investment Portfolio - Banks

9. There are *several elements* to the analysis of investment portfolio constituting all kinds of securities, both short term and long term debt securities and stocks of the banking system as itemized below. These elements concern, *inter-alia*, long term growth of investment portfolio; internal composition of banking investment portfolio; that is, the varying proportions of investment in treasury bills, bonds and stocks and their relative shares in investment portfolio; relative position of investment portfolio in total assets of banking system; namely, the aggregate of investment and loan portfolio and other assets of banking system. Another element and important one concerns exposure of banks to securities markets as a whole, including money market, bond market and stock market. Let us consider the following.

10. *First*, As regards size and trends of banking system investment portfolio, total investment of the banking system in securities and stocks has risen at a fast clip over the past decade at an average annual rate of around

20 percent over the past decade, FY00-FY10. Their total investment in three securities increased from Rs 311 billion in FY00 to Rs 1950 billion at the end of FY10. (*Data set 8.7*) This growth was faster than the rate of growth of total assets of banking system estimated at about 14 percent per year. As a result, the proportion of investment in total banking system assets increased from about 16 percent in FY00 to about 28 percent in FY10.

11. The implication is that banks preferred to enhance their exposure to securities market rather than to enhance their exposure in credit market as discussed in Chapter 7 of **Volume I**. Its implications for resource allocation are significant at system level; namely, if banks divert their attention from their main business at financial intermediation and participate more vigorously in investing in securities market, this diversion does not bode well for growth of corporate sector. The corporate sector is likely to be deprived of working capital needs and also investment financing needs.

12. Further, *average* annual growth of banks' investment in securities markets has been around 20 percent for the entire decade, but this growth has been volatile. During FY02, this was about 39 percent as compared to about 1.4 percent a year before. Next year, in FY03, this growth shot up to 60 percent, the highest it ever has been for a single year. These are early year's trends, and may not be so relevant a decade later. But their analysis sheds some light on the evolution of investing by banks shortly after major parts of financial reforms was over. Two years later in FY05 investments decreased by about 8 percent. Same happened in FY08 in the aftermath of stock market crash. There was a decline of about 6 percent, but in 2010, annual growth of investment once again was phenomenal, about 43 percent. (*see Data Set 8.7a*) There is a declining trend discernible in stock market investing by banks as proportion of capitalization levels over the entire decade, beyond annual up-down changes in the growth rates by substantial margins. At institutional level, it may be different.

13. What are the implications of this annual volatility in investment of banking system? Clearly, banks do not have any targeted annual growth of their investment in securities and stocks that they would try to maintain in normal times as they do for their mainline business, i.e., banking credit growth per year. It depends on market conditions, interest rate movements, liquidity concerns, SBP's open market operations, and the like. Much of this volatility owes to their portfolios' exposure to T-bills and money market developments. There are regulatory stipulations that limit banks' exposure to stock markets and regulatory prohibition to invest in NSS instruments, lack of depth in bond and stock markets of Pakistan, and presence of large speculative elements in stock markets; all these factors have kept overall

exposure of banks to stock markets to rather low levels in the range of two to three percent of total capitalization of stock market during second half of the past decade.

14. *Second*, as regards composition of investment portfolio of banking system, it is concentrated in government securities, and within government securities, investment in T-bills is the largest. Commercial banks hold around 55 to 60 percent, i.e., more than half of their total investment portfolio in Treasury bills. The remainder is spread over to other income generating securities and stocks. (*Data Set 8.7*) During second half of decade, the proportion of bank's investment in government securities including T-bills and government bonds to total investment portfolio has been around 70-75 percent for most of time; but it was even higher, around 80-85 percent during first half of the decade. The stock of T-bills held by commercial banks rose from Rs 106 billion in mid-2000 to Rs 1120 billion in mid-2010.

15. There is a considerable reshuffle of maturities as well as size of these holdings within a given year in response to monetary policy stance of SBP, liquidity requirements, changes in interest rates in money and T-bills markets, portfolio returns and profitability considerations. After-all, T-bills, from perspective of banks, are like revolving credit extended to the government, where T-bills are a key element of short term debt liabilities of government to banking system. In spite of this reshuffle during the annual cycle, the trend is clear. There is a considerable reshuffle of maturities as well as size of these holdings within a given year in response to monetary policy stance of SBP, liquidity requirements, changes in interest rates in money and T-bills markets, portfolio returns and profitability considerations. After-all, T-bills, from perspective of banks, are like revolving credit extended to the government, where T-bills are a key element of short term debt liabilities of government to banking system. In spite of this reshuffle during the annual cycle, the trend is clear.

16. The concentration of investment portfolio has been in *T-bills* for a variety of reasons as discussed in Chapter 5. To recapitulate, the main reason is that T-bills provide a risk free investment with guaranteed returns if bought on the day of auction and not discounted before the day of their maturity. In the early years of past decade, banks preferred to park their liquidity into T-bills rather than risk lending to their customers. The banks did diversify into consumer lending, mostly credit cards and installment lending, but otherwise, they preferred to seek income generating assets outside of banking credit network. No amount of cajoling by SBP and borrower groups could persuade them to do otherwise, and there was plenty

of it in those days, and still is. This happened primarily because of the spread between cost of their funds and returns on their T-bills holdings.

17. *Third*, as regards investment of banking system in bonds, both government bonds and private bonds, corporate term finance certificates, and lately *sukuks*, the Shariah compliant bonds, banks have preferred government bonds, though they are not allowed to buy prize bonds or invest in bond like instruments of NSS. However, the proportion of investments in government bonds in total banking system investment portfolio has been declining. It nosedived from about 41 percent plus in first three of years of the decade to around 11 percent in last year of the decade. (*Data Set 8.7*)

18. The same volatility is not found in banks' investment in private bonds. There was significant increase in private bonds in the market, but this is misleading because it is concentrated in a few issues for which banks were underwriters. This is a captive growth as discussed later in Chapter 8. These trends have implications for growth of bond markets in years to come, specially if banks marginalize their investment in as secure an asset as government bonds. For most of the past decade, banks have held a very small proportion, only 4 to 5 percent of their total investment portfolio in private bonds of all variety.

19. Clearly both public and private bonds have been displaced from a prominent position in bank's investment portfolio to no more than 16-19 percent. There have been unusual times like FY08, but investment in bonds by the banking system has remained relatively a small part of total investment in financial markets. After the crash of stock market, bond investment by banks picked up and its rate of growth during FY07-10 was 7 percent per year, in spite of rather limited opportunities of a reshuffle in the portfolio composition. What were the reasons for this shift over long periods needs to be further investigated. In advanced countries it is the other way round. Bonds are a favorite of banks in their investment portfolio, risky though they may be, but with better prospects of sustained returns and portfolio profitability over long periods. This is not the case in Pakistan. As for stocks, investment by banks in stocks has never been more than three percent of total banking investment in securities market including the time of boom years. After the crash of 2008, banks did not pull out of stock markets. They are maintaining the same level of exposure in stock market as they did historically in previous years.

20. *Fourth*, the proportional share of investment in securities to total assets of banking system, inclusive of all types of assets, has grown from 16 percent in FY00 to about 28 percent by FY10. There has been a steady shift in asset

composition of banks in favor of securities. As expected, largest share of assets has been in loans and advances at around 46 percent for most of the years, with some volatility during the boom years and after. Otherwise this proportion has held fairly steady. But this proportion of banking credit assets is well below bench mark of banking industry all around which ranges between 55 to 65 percent of total assets. Therefore, rise in the share of investments has occurred with a corresponding decline in share of banking credit and other assets, mainly cash balances held, inter-bank lending and loans to financial institutions and the like. A detailed discussion about these long term changes in asset distribution of banking system is given in Chapter 4 of **Volume I**, relative to assets of central bank and NBFIs.

21. *Fifth*, the relative size or proportion of total investment of all scheduled banks in securities markets has been declining over the past years. This investment includes all types of securities, both short and long term, debt securities and stocks, equities or shares. In FY00, this proportion of banking system investments outstanding in securities to the total size of securities markets as defined in Chapter 2 was about 35 percent, the highest it has ever been. (See *Data Set 8.7*) Since then this share kept declining and was down to about 18 percent during the height of stock market boom at end of FY07, but further declined to 16 percent in FY08, the lowest it ever has been. Thereafter, this share began to rise owing largely to increase in T-bills holdings and was 22 percent over the last couple of years of the decade. Thus, *overall exposure* of banking system to *securities markets*, both short term and long term, has been very volatile and any generalization renders is not meaningful. Yet, this exposure has been around 30 percent of securities market as estimated here. (see *data set 8.7, line 19*).

22. *Sixth*, as discussed earlier, contrary to popular perceptions, banks do not invest in stock market of Pakistan in a big way. This is repetitive, but needs to be stressed. Their investment in corporate stocks as a proportion of total investment portfolio of the banking system has been no more than 8-9 percent most of the time. (See *data set 8.7, line 28*). Seen another way, the share of bank investment in corporate stocks has been no more than 2 to 3 percent of the total market capitalization of KSE stocks for most years, appoint worth repeating. Over the past of couple of years, this proportion has risen slightly. One could argue that depressed stock prices over the past couple of years, offered bank a buying opportunity with relatively safer investments in well known stocks. Yet, stock investing is not the main activity of investment portfolio managers of banks in Pakistan.

23. *Seventh*, investment of banks in mutual funds is rising, thus enhancing their exposure to stock market though indirectly, but it is hardly any

significant proportion of investment portfolio banking system-wide. Of the late, banks have moved in mutual fund industry in a big manner and that may explain why they are reluctant to take a direct exposure in stock market. Most banks have established asset management companies of their own as subsidiaries, including small Islamic banks, and these companies in turn have floated a variety of mutual funds which have proliferated over the second half of the decade. But mutual fund industry of Pakistan is in its infancy and it is too early to say what impact it may have on the investment profile of banks over the years to come.

24. Similarly, bank holdings of NIT shares has never been large; most of the time it has been around 3.5 percent of their investment portfolio. Recently, bank's investment in NIT is declining as their own mutual funds replace NIT as the medium of investment for private investors they prefer asset management companies to do managing of their stock portfolio, while a large bank provides financial backing and credit as feasible, rather than dive into an uncertain and volatile market on their own.

Section 2: Participation - Non-Bank Financial Institutions, NBFIs

1. The group of non-bank financial institutions engaged in securities markets includes *mutual funds, contractual savings institutions* such as insurance companies and pension funds, *DFIs*, an assorted group of financial institutions like *investment banks, modarabas, leasing companies, finance companies* and a motley group of *thrift institutions*. Investment patterns of contractual savings institutions are discussed below in some detail. As shown in *Data Set 8.71*, the size of investment portfolio of all NBFIs during first couple of years was about Rs 130 billion and is estimated to have grown to Rs 594 billion by FY10 at an average annual rate of about 17 percent over the past decade which is a decent rate of growth. It is not known what amount of this estimated total investment is lodged in securities market.

2. Total estimated investment in securities market of all NBFIs thus far has been a small part of securities market in Pakistan, ranging around 9 to 10 percent during most part of second half of this decade. (*see Data Set 8.71*) This proportion is not likely to rise significantly in near future because their

investment growth relative to other investors has been moderate for most of the period under review, except for those of mutual funds. But even if net asset value of all other NBFIs were to grow three times over next five to seven years, relative share of mutual funds will still rise, because they are growing faster than other NBFIs. Still, for all NBFIs taken together, the proportion of their investment in securities market of Pakistan is unlikely to exceed 9 to 10 percent; the same as they have been over second half of the decade. They are likely to remain a marginal player in securities markets.

3. Investment of mutual funds and contractual savings institutions accounts for nearly 85-90 percent of total investment of all NBFIs in securities markets and has significantly grown over the decade. Hence we have to focus on these two investor groups for applied analysis. Among these two, mutual funds are likely to become single major investor in securities market in future, given trends of their growth in Pakistan and if comparative experience of other developing countries is any guide. Investments of remaining NBFIs and their exposure to securities markets, such as DFIs, investment banks, *modarabas*, leasing companies, finance companies is fairly small. Their share in investment of all NBFIs taken together is negligible.

4. As regards distribution of NBFIs' portfolio among various types of securities, it is reasonable to conclude that nearly 90 per cent of NBFIs' investment portfolio is in securities market, apart from some investment in real estate or similar investments. For one, entire portfolio of mutual funds is in securities markets, but distribution of investment of NBFIs between types of securities held in their portfolio is not known. Since we know that investment of contractual savings institutions and mutual funds, together, constitute the largest proportion of total investment of all NBFIs, their distributional features of securities portfolio shadows features of portfolios held by all NBFIs in Pakistan, regardless of what other NBFIs like *musharakas*, *modarabas*, leasing companies or finance companies are doing.

5. Therefore, two groups of NBFIs, namely mutual funds and contractual savings institutions is all that matters for securities markets in a substantial way. It is not easy to estimate size of participation of all NBFIs, given such large number of these institutions grouped into non-comparable categories; incompatibility of data series, sometimes on financial year basis, other times on calendar year basis. But these estimates can be built up by annual financial statements reported on the basis of consistent classification. Since these are stock figures not annual flows, over long period of a decade the discrepancies pan out and do not materially affect trend analysis or its conclusions summarized below; a brave statement indeed.

Mutual Funds

6. In Pakistan, private sector mutual funds are relatively new. Public sector mutual funds, called Unit Investment Trusts in earlier times have been around for a long time, though by now they are almost extinct owing to privatization and mergers as discussed in the last section of this Chapter. A few of them are still surviving, but they are inconsequential for mutual fund industry, because private mutual funds are expanding fast and as a group their investment in securities market is growing rapidly.

7. The size of mutual funds industry is a small proportion of securities market of Pakistan even in their truncated version as defined above. Mutual funds have been around in advanced countries but their popularity, size and market depth is no more than four decades old. In most developing countries, mutual fund industry started in the 1990s and has gained a foothold and is growing fast but has not yet become widespread.

8. Mutual funds are popular mostly among small private investors who are not active investors, or those who do not have capacity or resources to follow market trends on a regular basis. These investors can not replicate the range of services mutual funds render at costs which are affordable, given small size of their portfolio. Another attractive feature of mutual funds to all investors is their expertise at professional management of portfolio with regard to risk and returns of investing based on market information and analysis that is difficult to garner in a timely fashion; or to interpret market trends that are likely to affect the portfolio, not to speak of the type of remedial actions needed *before* market turns around.

9. The main advantage to investors, however, is diversification of portfolio that can be summed in the *classification* given below.

By income, investment strategy, concentration

- Aggressive Growth
- Balanced Growth
- Growth and Income
- Index Funds
- Bond Funds
- Stock Funds
- Emerging Market Funds

By sectors of economy

- Agri-business
- Health and Medical Care
- Pharmaceuticals
- Energy, Gas, Petroleum
- Transportation
- Communication, Information Technology
- Bond Funds, government, corporate, municipalities

By size of firms

- Large Caps
- Small Caps

10. This type of classification is actually investor's guide issued by large mutual funds to enable them to choose their objectives more carefully, and then invest. It enables investors to pursue their investment objectives and strategies more rationally. Buying shares of mutual funds is to ensure the type of *diversification* that a single investor can never hope to achieve in his own portfolio, and combine it with a risk and return profile that investor is seeking. The diversification and size of a mutual fund is a kind of insurance against risks of investing through participating in funds investment in a wide variety of stocks in different sectors. The technical know-how and resources needed to achieve similar diversification is beyond the capacity of a single investor. Besides, group ownership of funds permits easy switch-over between various types of funds available under one banner, if investors so desire. This flexibility is limited in retail transactions of shares and is very costly if done through brokerages via investor accounts opened with them.

11. A description of mutual funds within a category is widely available which details their mode of operations, management strategies, and past performance. Each category provides for portfolio specialization as suited to investor strategies, or in a combination thereof. Most advantageous are *specialty funds*, focused on a sector or industry, like pharmaceuticals in health group of funds. These specialty funds provide a deeper understanding of how leading firms are performing and how this performance matches with 'street call' of earnings per share at close of the quarter. Often fund managers extend their pursuit to new products pending their patents or authorization for public sale, which if materializes could mean a multiple boost in stock price of the company and its positive feedback on remaining companies in the sector. Such knowledge of a company is difficult to garner by small retail investors on their own.

12. Apart from built in diversification in mutual fund investing, the next big advantage to mutual fund is in managing a portfolio which is not possible for non-institutional private investors. Large mutual funds have the resources to build a team of fund managers with specialized portfolios, who pool their expertise and information base, thereby improving their shared grip on market trends which can not be replicated even by portfolio managers elsewhere, not to speak of small investors. This anticipatory management of investment portfolio is critical in uncertain times of market corrections and sudden downturns triggered by national or global events. Time and again, mutual funds have proved to be more effective in managing market slide, though their performance has not been uniform.

13. Investing through mutual funds is a longer term undertaking, though what is a long term is specific to investor's own investment horizon. Investing experience shows that best returns from mutual fund investing are obtained when invested positions are not turned over frequently. But those who would prefer day trading or short position, for them mutual funds are not suited. Most mutual funds would not allow frequent turnover through term requirements of their portfolio that are binding on investors; otherwise mutual fund managers, in turn, can not do investment designed for long term gains. In Pakistan, the practice is different. Shareholders of closed-end mutual funds can sell their holdings at stock exchange any time; and funds have to repurchase these shares at current NAV per share at close of trading as per regulatory requirements.

Mutual Funds - As an Asset Management Company

14. A mutual fund is an investment company, or an investment trust as in Britain and in Pakistan, or a mutual fund in the USA or in Pakistan. But, mutual funds are an asset management company. They manage invested assets in securities markets for their clients. Mutual funds provide a range of investments in specialized portfolio, concentrated on a single sector of the economy or in composites of various types of securities, stocks or bonds, or any combination thereof. Thus, mutual funds diversify risk and return features in a way an ordinary investor can not. Besides, large mutual fund companies provide a family of funds catering to all sorts of investment objectives, ranging from high risk-high growth stock funds to low risk to zero-risk government bond funds, with a range of income or dividend prospects built in their portfolios.

15. This is attractive to those who need annuity like perpetual income flows from their investments, besides prospects of capital gains over time. Since majority of investors seek escape from exposure to high risk, and yet hold prospect for decent capital gains, this combination of investment objective can not be easily realized by retail investing in securities market unless one learns and also has where-with-all to be a step ahead of market trends. For these investors, investment in securities markets through mutual funds represents an attractive alternative.

16. There are several types of mutual funds. First, they could be *open-end* or *closed-end* mutual fund. In *open-end mutual funds* the size of securities portfolio, number of shares, investor base and membership in the fund as share holders is not fixed to its starting base stipulated at the time such a fund is incorporated and floated. That is, participation is not closed to new investors after its share are sold to original members; rather fund is open to entry of new investors or exit of old ones. New investors can buy shares in open-end fund at market price - the net asset value plus charges in case of load funds, calculated at close of trading day. These funds announce their daily sale and repurchase price of shares and do not have to be listed on the stock exchange. In practice, they mostly are.

17. In contrast, a *closed-end fund* is restricted to its starting portfolio base as well as to its investor's base at the time it is floated in the market. The portfolio of these funds may be enlarged but only in the securities that were included in original portfolio. Additional shares are available to only those investors who are already members of the fund; no new investors are taken. A closed-end fund may get terminated automatically, like a bond fund, when bond holdings have matured. Or, it may be closed down after its stocks are sold out at some future date, usually at considerable capital gains. These funds must be listed on stock exchange. Their investors are allowed to get in and out of fund portfolio as desired through trading at market price of shares, typically set slightly below their NAV.

18. Mutual funds are usually established by large brokerage companies, investment banks or underwriters, but this is not limited only to this group of financial institutions. Mutual funds are also established by commercial bank as a subsidiary of a financial institution, as it is in Pakistan. The costs of establishing a new fund, plus start-up costs are borne by those incorporating it. At time of incorporation as an investment management company, owners have to subscribe 20 percent of shares, while the remaining 80 percent of shares are floated to the public, and funds thus collected are used to build a portfolio of securities or multiple portfolios called 'mutual fund'.

19. The company manages portfolio for a fee whose maximum is set by the regulators. It is the largest expense item in income statement of investment company. Mutual funds are known to have expired early because of losses to them in their initial phase before they could attract outside investors. The operating cost of mutual funds is mainly cost of managing a portfolio and this is well publicized as required by regulations. It helps investors to decide in their selection of a mutual fund to invest and maintain a portfolio.

20. Often mutual funds are floated in a variety of funds, called *family of funds* owned by large investment company or a group, to suit investor needs and preferences along the lines of classification given above. These families of funds offer investors versatility of investment choices; a wider selection of portfolio objectives, together with transparency or veracity of transactions in dealings with investors in developed markets, there is a bewildering variety of funds. Emerging market countries are fast catching up and depth and specialization of their mutual funds is also building up swiftly. In Pakistan this trend has just started, and already there are a number of specialized funds in major categories as listed earlier such as income funds, growth funds, balanced funds and the like.

21. The prospectus of a fund describes in detail classification, strategy of investment, orientations of fund managers, and costs of managing and past performance. Unfortunately past performance is no guarantee as to how an investment portfolio will fare in future. Mutual funds have not escaped this uncertainty. But performance ranks very high as it shows quality of portfolio management by top managers of a fund, who earn a celebrity status or notoriety depending on what has been their performance over the past few years. These elements are key ingredients of investor's confidence in investing in securities market through mutual funds.

22. Investors have considerable choice with regard to cost of joining a mutual fund; and funds are classified likewise. First choice of investors is to join *no-load* funds, who do not charge a fee at the time a new investor buys its shares. In contrast, some funds imposed a fee added to the cost of shares purchased by a new investor, though it is proportional to number of shares purchased. It is a one time fee, expressed as a rate, not a fixed amount. These are called *front-load* funds. In early period of mutual fund industry, most mutual funds were of this type. Others charge a fee at the time an investor sells out all shares and closes down his account with the fund called the *back-load* fee. These fees are charged by mutual funds to cover costs of managing its portfolio and are substantial, at about five percent.

23. In current times, most funds are no-load funds at either end at the start or at closing of account, because mutual fund industry has been able to pare down costs of managing portfolio to around one and a half percent of market value of portfolio. These no-load funds are popular with investors because hardly any difference in their performance as compared with performance of front or back load funds and they are free of entry or exit costs.

24. The performance of a fund boils down to the *net asset value (NAV)* of its portfolio announced at the end of a trading day based on closing time price of securities held in the portfolio. That is, investors can gauge performance of a fund and compare it with others on a daily basis. Hence mutual fund industry is fearsomely competitive. The NAV of a fund is better tempered to market movements, *provided* fund is invested in securities which are moving fast in either direction. However, gains and losses of mutual fund on any trading day are tempered because NAV is the average value netted out for gains and losses on *all* securities held in its portfolio. In times of fast rising prices, mutual fund will show gains but not as much as those who owned precisely only those securities with fast increases; and *vice-versa*.

25. The downside of investing through mutual funds is that it all depends on the quality of fund managers responsible for daily investing and trading, operating under specific guidelines and orientations as per fund objectives and strategies which are pre-specified and clearly stipulated. Fund managers, no matter how savvy they are, can not outsmart markets all the times. Frequently mutual funds suffer significant losses in their net asset value. In spite of all these concerns, mutual funds are nearly tailor made to small investor's preference and portfolio objectives as outlined above. They have amassed a remarkable record of sustained growth over long periods both in advanced markets and emerging markets.

Mutual Funds - Pakistan *Performance and Trends*

26. Mutual funds have been around in Pakistan for a long time but they were not a noticeable participant in capital markets until recently. Up until late 1990s, mutual fund industry was concentrated between two public sector funds, NIT and ICP; private sector mutual funds were virtually non-existent. Since their advent in mid-1990s, private mutual funds have significantly grown, partly because of privatization of public mutual funds and partly

because performance NIT and ICP was disappointing like most other public sector financial institutions in Pakistan. In the early period from 1960s to mid-1990s, public sector funds were the only ones on the scene. The combined NAV of these public sector funds had an anemic growth; and their overall performance in was lackluster as a number of them were unable to pay dividends during times of stock market growth.

27. That being the checkered history of UIT type of mutual funds during the decades of 1960s through 1980s, most of private mutual funds are of recent origin in Pakistan. They are beginning to gain a foothold in securities market. Their combined NAV in early years was less than 10 percent, but has grown very fast and in recent years it is about 76 percent of total NAV of mutual fund industry, while share of public sector mutual funds has declined. If this trend continues, private mutual funds will complete their take over of this industry. As size of their operation grows, their client network expands, overtaking small odd-lot investors of dive-in dive-out variety, and as their market penetration grows, their impact on investing scene is likely to become more substantial than it has been thus far.

28. It is the same process that has played out in emerging economies. The difference is the size of private corporate sector and its sustained growth, its competitiveness and profitability, and its depth and diversity, which is higher than in other developing countries like Pakistan. Without a strong corporate base, no amount of financial engineering and introduction of innovative 'financial products' is going to make a difference to the growth of mutual funds or to the growth of securities market. In the context of financial system development in Pakistan, this element of corporate sector viability is rarely placed in the forefront. All the emphasis is on selling an investment position to the client in a highly competitive atmosphere.

29. Efforts to improve mutual fund industry were started in 1997, but progress was slow. It was clear that mutual fund industry had to be restructured and privatized if small private investors were to be attracted to participate in capital markets. The private mutual funds have to be supported to expand their operations as feasible, and new mutual funds need to be floated in the market. From the beginning, large brokerage houses were interested in starting their own mutual funds given their comparative advantage, that interest was sustained over the past years, and by now most of them have a decent cluster or family of funds of their own. Their participation was critical in early stages to give a jump start to this industry. Their needs were: improvements in enabling environment, package of incentives, and changes in rules and regulations governing establishment and operations of mutual funds industry.

30. The efforts to revive mutual fund industry gathered momentum during early years of this decade during 2002-3 at the behest of IFIs and with support from ADB. Since then there has been a significant turn around. In FY02, the combined NAV of all private funds was only about 10 percent, a very small proportion indeed. By mid-2000, total number of mutual funds had grown to 41, but this is somewhat misleading, because 27 of them were some variant of ICP funds, two of them were NIT and UTP funds, and 12 of them were start-up private funds. After privatization and restructuring of ICPs and NITs into Abaci or PICIC funds, the number of private mutual funds began to increase. As mentioned above, nearly all of the new funds are private sector funds, established by large brokerages and financial institutions, thereby strengthening their capital base, financial support and management capabilities.

31. Most of these funds were open-end mutual funds of no load variety, constituting nearly 70-75 percent of industry; and they still are. The remaining were closed-end mutual funds. Their trading activities and NAVs per share are reported daily at close of trading, but their NAV, quarterly returns and performance is to be tracked down at source. A comparative performance listing is not available yet the way it is regularly reported by financial media elsewhere in advanced countries. An easily available and credible comparative mutual fund performance is essential for generating public's confidence in investing via mutual funds. This is the starting phase; hence it is all the more needed.

32. By close of decade, the number had grown further. There were 127 open-end mutual, 19 closed-end mutual funds and 28 pension funds. Among open-end mutual funds, there are 46 income funds, 24 equity funds, 23 balanced and asset allocation funds, 11 money market funds, 10 fund of funds, couple of index funds and only one bond fund. Among closed-end funds there are 12 equity funds, 4 balanced or asset allocation funds, no bond or money market funds. In numbers, then income and equity funds together dominate the scene. What has been their performance, how well have they have done over the turbulent years of FY07-10, what was their performance during the boom years- all of this is difficult to find in public arena, and it remains to be ascertained.

33. Their combined NAV increased slowly during early years; thereafter it picked up momentum and increased at phenomenal rate of 54 per cent during FY02-FY08 period. A good part of this growth was due to a booming stock market over these years, and mutual funds did suffer losses but not of the same magnitude as total capitalization of stock market. By end of FY09, their NAV was Rs 204 billion after the dust of stock market collapse had

cleared. Funds of all variety suffered a significant loss of their NAV, but stock funds suffered the most as shown by a decrease of about 39 percent in their net asset values by mid-FY09. In July 2008, assets of stock funds were about Rs 83 billion; but by January of 2009, market value of these funds had declined to about Rs 50 billion.

34. However, by end of FY09, they had recovered nearly one third of their losses, and their asset value was about Rs 60 billion. By then, a number of these funds had switched from stock funds to income funds or money market funds. This asset roll over was a significant development in the aftermath of crash. Among these, money market funds invest mostly in government securities of short maturities, namely T-bills to avoid exposure to risks of stock market.

35. In spite of such a fast growth over the past years, mutual funds are still a small participant in capital market with fewer than 100,000 investors, with assets of Rs 230 billion in April 2011 which was about 7 percent of total stock market capitalization. Of this total, nearly Rs 200 billion, about 87 percent was in open-end mutual fund and the remainder in closed-end funds. These are mostly equity investment funds because they lack a wider range of instruments to acquire market depth or portfolio diversification, with roughly 56 percent of total NAV of all funds; about 17 percent are income funds; and the remainder 27 percent are money market funds.

36. This profile is rather fluid, hence one has to look at the structure over a longer period than a few months or even few years. Performance of public sector mutual funds has improved in line with market trends. In the past, this industry was dominated by public sector funds led by NIT, and a small proportion was in private sector open-end funds led by UTP. This domination of public sector funds has already eroded with entry of a large number of open-end mutual funds.

37. As far back as early 1990s, emerging market type of foreign dollar-based investment funds were set up with great deal of anticipation and briefly Pakistan enjoyed the status of an emerging market, although not in the same league as emerging markets of East Asian and Latin American countries. By mid 1990s, these emerging market funds had suffered a great deal of losses amounting to nearly three fourth of their original investment of dollar based value made by retail investors as discussed in some detail in Chapter 11. A good number closed down their operations. Some of them ran aground of investor attitudes of the type outline above, together with fickle minded investment policy regime of Pakistan that did not foster healthier investment environment. For a good number of years no new investment

funds were set up until the late 1990s. Thereafter, most of the private institutional investors sprang up in the post-privatization phase. Will Pakistan ever again achieve status of emerging market is difficult to say.

38. During the stock market boom of 2005-08, the interest of FPI investors revived briefly, but in spite of all the hyperbole of 2006-07, foreign currency based mutual funds were not established in overseas markets the way they were in early 1990s to attract investment from their investor base in the country of origin, mostly USA and perhaps European countries. Pakistan did achieve a very high rating as one of the best performing stock markets, but large overseas investment banks stayed away from a long term commitment via their own mutual funds. The growth in mutual fund industry that occurred during the past decade was indigenous, not foreign financed.

Contractual Savings Institutions *Insurance Companies, Pension Funds*

39. Contractual savings institutions mobilize obligatory *or contractual savings* as distinct from *voluntary savings* accumulated by households for various motives that are fairly well known. These are contractual inflows originating from households as part of their contractual obligations under various contracts or contract like obligations such as insurance policies, pension fund contributions, mandatory retirement funds and the lime. Hence, these are a well defined and dependable source of cash inflow to receiving institutions.

40. For example, insurance companies collect premium on underwriting various types of risks packaged as insurance policies to their clients. Payments of premia on account of insurance policy contracts can not be classified *savings* in strict terms; but their financial flows are like deposit flows, and they are guaranteed to occur as per insurance contracts. Hence these insurance premia are obligatory savings or contractual savings that are paid by policy holders during the period of insurance contracts issued for a term, a designated period covering a number of life years, or providing causality and damage loss coverage.

41. The policy owner or their designated beneficiaries or heirs are eventually indemnified with sizable returns if the covered risk were to materialize. Besides life insurance policies are paid out on expiry while covering life risks during the period of contract. All this is well known.

But what insurance companies do with these cash inflows, or how they manage this liquidity, and how they use it to build up investment portfolios is not so well known. No matter how these inflows are managed, the potential reverse flow has to remain fully funded at all times. Insurance companies must have access to liquidity, parked in assets that could easily be sold in financial market, preferably without delay when indemnities fall due; their timing is not known for sure.

42. Regardless of the nature of insurance policy contracts, periodic inflows of premia to insurance companies are sizable and predictable. Insurance companies have to invest these funds accumulated from their clients, and manage their investment portfolio much like any investor in securities markets will do. The premia collected by insurance companies are fairly large; likewise their investment portfolio is also sizeable. Given long-term nature of insurance contracts, the resulting term structure of premia enables insurance companies to invest in long term debt instruments and in stock markets with only one major constraint.

43. Given the myriad of risks underwritten by insurance companies, on the liability side insurance companies can not undertake exposure beyond certain thresholds of risk tolerance in their investment portfolio on the asset side. They have to do a delicate balancing of risk and returns. Invest they must, because they do not have an alternate like lending as banks do. Yet, prudent they must be in their portfolio management, given risks underwritten and risks of investing in securities markets.

44. Both insurance companies and pension funds are *conservative investors*. Nearly 80 percent of their investments is in government securities; the remainder is in stock market and a good number in urban commercial real estate. While data is available for insurance companies; no comparable data on consolidated sub-sectoral basis is available for pension funds outlining details of their investment activities or patterns and their investment exposure in securities markets. Most of these pension funds are in public sector; private sector funds are not numerous. One simple indicator would be the proportion of assets of all public sector funds to total assets of these funds; even that has remained elusive. Conceivably insurance companies and pension funds could be a significant player in financial markets as they are in advanced countries, but in Pakistan as a group they are not large investors. Given their exposure to risks, or business risks of their clients, contractual savings institutions prefer low risk low return generating securities of long maturities to earn a reliable income flow, rather than seek elusive capital gains in stock investing.

45. These institutions would not normally like to load up different risk factors on both sides of their financial statements, namely risk and liability of payout from cash inflow and risk of loss on their investment portfolio. The trade-off between risk and returns for these institutions is critical. How they have fared over the past decade remains to be analyzed in detail. This does not mean that insurance companies or pension funds do not invest in stock; they do, but their orientation is towards income flow and prospects of stock dividends, rather than capital gains on stock holdings.

46. A comparison of various portfolios of insurance companies with those of mutual funds is instructive, because of significant differences in their sources of funding as well as with regard to their investment strategies. For insurance companies, annuities are quite reliable inflows; for mutual funds, share purchases by their investors are unpredictable. Insurance companies are conservative investors while mutual funds could adopt almost any orientation as per their objectives within limits of prudence and undertake investment in a broad range of securities, or concentrate and specialize in a narrow range with respect to risk and return profiles of securities as desired.

47. As regards pension funds or provident funds, established by business corporations or governments as employers to provide pension benefits to eligible employees upon termination of their service if tenured and vested, or upon their retirement under rules and regulations of pension eligibility. Pension plans may be fully vested after a designated tenure, a required length of service; or partially vested if the employee's service period is less than required tenure period. The regular periodic contributions of pension fund members are not the only source of cash inflow. Their employers also make matching contributions as part of their benefit package, and as per service terms. These matching payments could be some times higher than the amount contributed by members. These periodic payments are obligatory and must be paid to keep the contract alive by their policy owners; hence these are regarded as contractual savings of households.

48. Pension funds have their own legal and financial entity separate from corporate or government employer to safeguard interests of pension receiving retirees. Often, Pakistan government has transgressed with impunity this *social compact* and used accumulated funds for other purposes with disastrous results to the benefits of retirees; but this is has not happened among large private companies. They strive to remain financially healthy so as to be able to meet their actuarial obligations falling due in future. Sometimes a pension trust is formed to manage pension fund but for fully funded pension plans only, where employer may

transfers sufficient amounts to pension fund trustees to cover cost of pensions payable to designated beneficiaries of the trust. How these pension funds in Pakistan, have invested in securities market, or in long term government debt market, needs to be analyzed further than has been possible here. Given rather limited opportunities of investing with acceptable levels of risks and returns for conservative portfolios, it is likely that much of their investing has been in various types of government sponsored savings instruments, like those of NSS; but this needs to be examined.

49. No matter how they are managed, the liabilities of pension funds or provident funds consist of annuities paid out to participants as per their retirement agreements. Their asset side is cash inflow, the monthly contributions made by fund members. It is a guaranteed inflow since it is deducted at the source, namely the payroll of organisation, hence the name contractual savings institution. This inflow is similar to monthly premia payments made to insurance companies by policy holders as per insurance contracts for various types of insurance policies bought from insurance companies.

Section 3: Participation, *Other NBFIs*

Investment Banks

Finance Companies, Thrift Institutions

1. Investment banks or their predecessors called investment companies, or their British equivalent, *mercantile banks*, have evolved into a major source of debt funding for corporate sector, but not in Pakistan. In all, there were nine investment banks in Pakistan in mid-2009, but they were fairly small in the sense that total assets of all these banks was Rs 44 billion at that time, which is invisible on the scale that we have been dealing with concerning securities market and banking system portfolio at macro-financial level. Their main source of funding is CODs from their limited clientele. They are not allowed to take current or savings deposits like regular banks. Most of their business is lending to their business clients, and only a tiny amount is invested in securities market assets.

2. In advanced countries, investment banks have focused more on more lucrative activities like arranging financing for leveraged buy-outs, (LBOs), mergers, and acquisitions, friendly or otherwise, often dubbed as 'corporate raiding'. The scramble to become lead manager of LBOs and mergers has occupied much of their efforts, as it is highly competitive business, at least for the US investment banks, than their traditional role of arranging long term capital for their clients through debt financing in securities markets through underwriting of corporate bonds and notes. By the same token, investing in stock market is not their favorite line of business; their focus has been debt markets, and they do invest in bonds and corporate notes mostly as underwriters of a bond float.

3. Since much of debt financing in securities market occurs through bond floats, first in the primary markets through large institutional investors, and then in secondary markets when the bonds are sold to public, much of discussion of primary markets focuses on activities of investment banks in the context of US securities markets. There are differences between the way investment companies operate and the way investment banks operate, but both end up providing long term debt finance through operations in primary markets.

4. Investment banks undertake three major types of activities. If the client firm or corporation wants to pursue long-term debt financing through issue of bonds, investment banks, investment banks offer specialized advisory services regarding the feasibility of issuing the bond, its pricing and interest rate, the coupon rate, and the procedures to be followed. their involvement may end at these activities or may continue depending on the agreement reached with their clients. Investment banks may go further and offer to buy bonds issued by the corporation through *underwriting* agreement either on their own, if they are a large investment bank, or through *syndication* agreement by bringing in the fold other institutional investors like commercial banks, mutual funds, insurance companies or others This is discussed in Chapter 8, but needs to be reiterated here.

5. The *syndication agreement* is undertaken by a group of institutional investors to arrange for a bond float through underwriting for a borrower, usually a large company or corporation, designating a lead investment bank for management of underwriting and syndication, specifying terms and conditions of bond float, fees and charges, together with a nonpreference clause. Under this clause, contribution to underwriting by each bank or investor is treated at par with regard to the debt or loan portion of agreement concerning servicing of the debt or the loan and claim on the collateral.

6. *Syndication fee* is a service charge, or compensation for services rendered by lead institution in syndication. The best way to figure out what syndication involves is to get hold of an underwriting arrangement, typically a full page announcement of bond float in the news papers, the prospectus as it is known, complete with details about the float together with main elements of underwriting arrangement by each member of the syndication. This prospectus is quite instructive and also fairly complex for those not familiar with corporate finance, accounting procedures, rules and regulations of syndications requirements of financial disclosure, limits that are binding upon various parties to syndication, and the full content of agreement. This page is typically festooned with messages of issuer or declarations of those participating in the syndication. A glance at the prospectus page is sufficient to confirm who are the main investors in private corporate bonds in the country. They are mostly commercial banks or financial institutions. The learning content of prospectus is invaluable for beginners.

7. Investment banks may undertake a hybrid function; they may do underwriting, as well issue bonds for public sale, thereby lowering their investment exposure in the bond issue; nonetheless ensuring the client corporation for a successful bond float and entry into the secondary market of bonds. Most often investment banks undertake a hybrid function. They may do underwriting; as well arrange bonds for sale in the primary market on wholesale basis to large institutional investors, not to the public at large. Their turn would come in secondary market. This is done to lower their investment exposure in the bond issue; nonetheless ensuring the client corporation for a successful bond floats and entry into the secondary market of bonds. These investment activities are not limited to investment banks alone. The same functions may be performed by commercial banks, or by universal banks, or by investment companies if rules and regulations allow.

8. Same considerations apply to participation of *finance companies*, more or less. These companies engage in financing of investment activities, mostly in real estate; portfolio investment is not their main business. They do not engage in business lending except to their large or medium size business clients. They are very active in their own market segment such as mortgage financing, but their primary concern remains their investment clientele. Investing in stock market or bond market exposure is a secondary consideration. If they do invest in securities market, their main objective is to maximize their overall returns with manageable risk levels across their loan portfolio and securities portfolio, including interest rate risk and credit risks to which they are exposed.

9. Finance companies are found everywhere, also in most developing countries. In Pakistan, they were established in lieu of regular banks in a rather mistaken belief that they would foster competition in financial markets without massive equity outlays needed for establishing a bank. During the 1970s and 1980s, sentiments ran high against banks; and governments in some developing countries were keen to break the gridlock of a few large banks. But these finance companies were no match to banks. They were poor in resources; management and clientele base, but were out of regulatory orbit of central bank. In Thailand in late 1970s and again in mid to late 1990s, their excessive exposure to real estate market brought the financial system down with substantial cost to the central bank both the times.

10. These finance companies caused a near crisis in India and also in Pakistan in the early 1980s. At long last authorities discovered that finance companies must be brought under a tight leash, and they eventually were. But in Pakistan, the attitude has vacillated. Up until early 2000 these companies were under SBP regulation, and later they were handed over to SECP. By now, growths of commercial banks and financial services companies have further marginalized their role, and they have been relegated to an obscure niche of financial markets.

11. In the same category are deposits taking *non-bank thrift institutions* called savings and loans association; as in the US. These thrift institutions have limited membership who are mainstay of their deposit base, and are confined to a limited range of lending activities, mostly residential mortgages, but only to their members. Their exposure to securities markets is almost nil. These institutions are significant in US financial system because of their overall size, and their deposit mobilization and lending activities. But they are no important segment in developing countries. Their financial intermediation activities are fairly small and they are not an important player in these securities markets.

12. *Thrift institutions* started their existence as a small cooperative venture among employees. By early 1980s, their deposit base and asset growth *in the US* rivaled banks of medium size. They were deregulated and allowed to operate like regular banks in most ways. This liberalization soured and turned out to be a very costly lesson to the US in what happens when quasi-banking institutions are allowed to behave like banks without regulation and supervision. They proliferated into lines of businesses that led to large losses and nearly brought a collapse of banking system. Their depositors were left holding the bag and were eventually bailed out by massive public funds. As a footnote, these savings and loans association were not active in financial markets in the US. Their presence in Pakistan is relatively fairly small.

Unit Investment Trusts (UIT)

13. Unit investment trusts are no longer in favour with securities investors in Pakistan. They were established in early 1960s, and were engaged in securities market in substantial manner. But they faded out over the past decade and are no longer a noticeable participant in securities markets of Pakistan, relative to mutual funds; their closest rival. Their activities in securities market are almost negligible compared with other players, because UITs have been unable to attract new retail investors who may buy their shares as they did in the past.

14. At the time they were introduced, they were practically only alternative to enter stock markets or bond markets for ordinary small investors with modest resources. These investors had practically zero access to key information vital to investing in securities markets, or about companies and their financial performance whose stocks they wanted to buy, or about prospects of profitability and dividends in times ahead. In those days, given cost of brokerage transactions, and the effort and time needed to get active through brokerages, for most investors, it was difficult to directly engage into markets. Having once entered, it was equally difficult and costly to close out losing or less attractive positions open.

15. UITs are like closed-end mutual funds, but with some limitations. As the name implies, they represent a single line of investment at the time of their inception - a single time entry for investors, and thereafter entry into a UIT is closed to new investors. The pool of securities held by UIT is limited to original holdings. There are other limitations as well on their *modus-operandi* as mentioned below. They operate as a trust that does not involve active portfolio management of securities held the way mutual funds do.

16. The UIT starts its existence when an investment bank, an investment company, or a large brokerage firm launches it as *sponsor*, by buying a class of securities, usually bonds, for total amount of investment envisaged in a new UIT. The sponsor, therefore, is investor and it does investing from its own sources, much the same way as mutual funds begin their life cycle at the time of their opening. Subsequently, the sponsor sells the shares to public recouping its investment in UIT. Usually underwriters of new bond floats engage in sponsoring and setting up a UIT, since they are positioned to do so. After UIT is set up, and its shares are sold to investors, the initiating entity namely its *sponsor*, hands over securities to be kept in a trust by a designated *trustee*, which may be a bank or any large financial institution who operates the UIT until it expires and is closed down.

17. Sponsors of UIT buy mostly a portfolio of similar class of securities, and once composition of a portfolio is thus arrived at, it does not change over time. Managers of UITs do not actively trade into their holdings the way mutual fund managers do, who are trading and fine tuning the portfolio based on assessment of market trends. For the same reason, UITs can not actively diversify to keep ahead of market trends. The line of investment gets fixed for the life of trust, and comes to an end when portfolio matures if it is a bond based UIT. Redemption amounts thus generated are not re-invested.

18. The cost of shares to investors at time of inception of UIT depends on cost of investment its portfolio plus fees and charges of sponsor concerned. This is base cost of shares. Subsequently, when trustee takes over, costs of trust managing is also charged to the UIT and is paid out from coupon rate earnings on bond holdings. The net income of UIT thus arrived at becomes source of dividends to share holders In this sense, UITs are akin to income funds or bond funds sold by mutual funds, except that no new bonds are purchased by UIT to augment its portfolio when old bonds mature. After initial shares are sold out to investors, no new investors are sought by manager of UIT, the trustee, nor are any additional shares issued to existing investors. This is the closed-end feature of UIT. This brief sketch of UIT should suffice for present purposes because they are no longer an active segment of investors in Pakistan. It is a historical account as stated in the first para of this sub-section.

Chapter 3: End

Data Set 8.7		Banks: Investments in Securities Market										End June, Rs billions			
		FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10			
5	Securities Markets, Size \ I	891	807	1205	1602	2711	3454	4612	6054	6240	6011	8614			
6	Stock Market- Capitalisation	392	339	408	746	1403	2037	2766	3981	3744	2120	2732			
7															
8	Banks: Inv Securities Markets	311	315	438	703	784	725	867	1107	1037	1360	1950			
9	Government Securities \ I	254	252	374	616	670	603	592	826	742	947	1328			
10	Federal Government Bonds	148	126	152	211	259	188	182	169	183	198	208			
11	Treasury Bills as reported by banks	106	126	222	405	411	415	410	657	559	749	1120			
12	Private Sector Securities	57	63	64	87	114	122	275	281	295	413	622			
13	Private Bonds	16	14	20	37	29	22	34	36	37	70	105			
14	of this: Corporate Bonds - TFCs	15	13	18	36	28	21	32	32	35	64	96			
15	Stocks, Equity Shares	25	29	33	35	53	64	90	95	115	129	154			
16	Corporate Stocks	13	17	23	24	35	33	48	56	46	57	66			
17	NIT Shares and Mutual Funds	12	12	10	11	18	31	42	39	69	72	88			
18															
19	Bank Investment/Securities Markets	34.9	39.0	36.4	43.9	28.9	21.0	18.8	18.3	16.6	22.6	22.6			
20	Bank Inv in Stocks / Securities Markets	2.9	3.6	2.7	2.2	1.9	1.9	2.0	1.6	1.8	2.1	1.8			
21	Bank Inv in Stocks / Stock Market	3.4	5.0	5.7	3.2	2.5	1.6	1.7	1.4	1.2	2.7	2.4			
22															
23	Government Securities	81.7	80.0	85.4	87.6	85.5	83.2	68.3	74.6	71.6	69.6	68.1			
24	Private Securities	18.3	20.0	14.6	12.4	14.5	16.8	31.7	25.4	28.4	30.4	31.9			
25	Treasury Bills	34.1	40.0	50.6	57.6	52.4	57.3	47.3	59.3	53.9	55.1	57.4			
26	Federal Bonds	47.6	40.0	34.8	30.0	33.1	25.9	21.0	15.3	17.6	14.5	10.7			
27	Private Bonds	5.1	4.4	4.6	5.3	3.7	3.0	3.9	3.3	3.6	5.1	5.4			
28	Equity, Stocks	8.2	9.1	7.5	4.9	6.7	8.8	10.4	8.6	11.1	9.5	7.9			
29	of this: Corporate Stocks	4.3	5.3	5.3	3.4	4.4	4.6	5.5	5.0	4.4	4.2	3.4			
30	Investments in govt & private Bonds	52.7	44.5	39.3	35.3	36.8	28.9	24.9	18.5	21.2	19.7	16.1			
31	SaF Data Set														
32	\ I Fiscal year data, recalled from Table 8.0, as reported by banks														

Source: SBP Annual Reports, Data Annexes, Table 6.1, & Banking Statistics

p: provisional, subject to revision

	Banks: Investments in Securities Market										End June, Rs billions					
	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10					
33	Data Set 8.7a															
34	Banks: Investments in Securities Market															
35	End June, Rs billions															
36	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10					
37						(Annual growth rates)										
38	Securities Markets, Size \ 1	-9.4	49.3	32.9	69.2	27.4	33.5	31.3	3.1	-3.7	43.3					
39	Banks: Inv Securities Markets	1.4	39.1	60.4	11.5	-7.6	19.6	27.8	-6.3	31.1	43.4					
40	Government Securities \ 1	-0.7	48.5	64.6	8.7	-10.1	-1.8	39.6	-10.2	27.6	40.3					
41	Federal Government Bonds	-14.7	20.9	38.6	22.7	-27.7	-3.1	-6.8	8.1	8.0	5.2					
42	Treasury Bills as reported by banks	18.9	76.2	82.4	1.5	1.0	-1.2	60.2	-14.9	34.0	49.5					
43	Private Bonds	-12.5	42.9	85.0	-21.6	-24.1	54.5	5.9	2.8	89.2	50.0					
44	Stocks, Equity Shares	13.4	14.1	5.9	51.7	21.2	40.6	5.5	21.1	12.2	19.4					
45	Corporate Stocks	25.4	37.5	3.5	45.6	-5.2	45.5	16.4	-17.7	23.9	15.8					
46																
47		Average Annual Growth Rates							Average Annual Growth Rates							
48																
49		FY00-10	FY01-07	FY03-07	FY07-10			FY00-10	FY01-07	FY03-07	FY07-10					
50	Banks: Inv Securities Markets	20.2%	23.3%	12.0%	20.8%			27.0%	28.3%	34.1%	30.3%					
51	Government Securities \ 1	18.0%	21.9%	7.6%	17.1%			20.7%	17.0%	-0.7%	42.9%					
52	Federal Government Bonds	3.5%	5.0%	-5.4%	7.1%			20.3%	16.2%	-2.6%	44.2%					
53	Banking Inv in Pakistan Investment Bonds	21.4%	30.7%	-1.1%	10.4%			19.7%	22.0%	28.5%	17.5%					
54	Treasury Bills, Debt data, MTBs	26.6%	31.7%	12.9%	19.5%			17.3%	22.2%	23.7%	5.7%					
55																
56																
57	Memo Items:															
58	Stock Market Size, KSE Capitalisation	392	339	408	746	1403	2037	3981	3744	2120	2732					
59	Banking System Credit + Investments	1108	1177	1323	1674	2026	2419	2938	3853	4440	5125					
60	Banking System Credit	797	862	885	970	1242	1694	2071	2816	3080	3175					
61	Bank Investments / Total inv+Credit	28.1	26.8	33.1	42.0	38.7	30.0	29.5	26.9	30.6	38.0					
62	Banking System Investment (CY, net)	304	351	701	787	679	800	823	1087	1737	2078					
63	Banking Inv in Pakistan Investment Bonds	27	28	81	146	212	159	149	162	177	188					

		NBFIs: Investment in Securities Market										End June, Rs billions					
		FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10p					
2	Data Set 8.71																
3																	
4																	
5	Securities Markets, Size	891	807	1205	1602	2711	3454	4612	6054	6240	6011	8614					
6	<i>of this: Capital Markets</i>	571	533	685	1075	1812	2393	3129	4389	4202	2662	3383					
7	Investments, all NBFIs, (estd)	129	130	158	217	274	326	382	554	632	532	594					
8	Mutual Funds, NAV	13	12	25	52	94	126	160	289	335	204	246					
9	Insurance Companies \ 1	73	77	86	97	112	127	151	198	231	249	282					
10	Development Finance Institutions	26	22	30	42	43	43	38	37	36	59	48					
11	Investment Banks	12	12	11	20	17	21	24	21	17	11	10					
12	Modarabas, Leasing	6	7	6	7	8	9	9	9	13	9	8					
13	<i>Mutual funds and insurance, sub-total</i>	86	89	111	149	206	253	311	487	566	453	528					
14	Shares of NBFIs Inv in Securities Market	15	16	13	14	10	9	8	9	10	9	7					
15	<i>Share of Mutual Funds in NBFIs</i>	10	9	16	24	34	39	42	55	53	38	41					
16	<i>Share of Mutual Funds in NBFIs</i>	56	59	54	45	41	39	40	36	37	47	47					
17	<i>Mutual Funds + Insurance in NBFIs</i>	67	69	70	68	75	78	81	88	90	85	89					
18	<i>Share of DFIs in NBFIs investment, %</i>	20	17	19	19	16	13	10	7	6	11	8					
19																	
20	Mutual Funds, NAV	13	12	25	52	94	126	160	289	335	204	246					
21	<i>Annual Growth Rate, NAV</i>	-8	107	108	108	82	34	27	8	16	-39	21					
22	Ownership, Public Sector, % of total	90	79	90	79	53	49	40	32	25	21	18					
23	Ownership, Private Sector, % of total	10	22	10	22	47	52	60	69	75	79	82					
24	Open-end Funds	78	78	78	78	74	70	73	82	86	89	91					
25	Closed-end Funds	25	22	25	22	26	30	27	18	14	11	9					
26	<i>Mutual Funds: % of Securities Markets</i>	1.5	1.5	2.1	3.2	3.5	3.6	3.5	4.8	5.4	3.4	2.9					
27	<i>Mutual Funds: % of Capital Markets</i>	2.3	2.3	3.6	4.8	5.2	5.3	5.1	6.6	8.0	7.7	7.3					
28																	
29	Average Annual Growth Rates																
30		FY00-10	FY05-10							FY00-10	FY05-10						
31	Investments, all NBFIs, (estd)	16.5%	12.8%			Insurance Companies \ 1				14.5%	17.3%						
32	Mutual Funds, NAV	34.2%	14.4%			Development Finance Institutions				6.5%	2.2%						
33	SaF Data Set	Source: SBP FSA Reports, Data Annexes										p: provisional, subject to revision					
34																	

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Data set 8.71

Chapter 4: Financial Markets – Fundamentals

Thematics

Basics – Concepts, Definitions - a catalog

Financial Assets
Value, Yields, Returns

Financial Market Operations –the basics

Operational Environment

Portfolio Investment

Objectives and Approaches

Securities Market Trading

*Stock Trading, Prices, Rules
Insider Trading, Front Running
Trading in Futures
Options and Swaps*

Portfolio Management

*Managing Risks and Volatility
Uncertainties and Returns – an Outline
Systematic vs Unsystematic Risks
Asymmetric Information Risk
Operational Risks*

Chapter 4: Financial Markets - Fundamentals

Section 1: Basic Concepts, Definitions Assets - Price, Value, Yields, Returns

1. Pricing, value, yield and return associated with different classes of assets are central to investment in financial markets. These elements are intertwined and must be sorted out for a clear understanding. The best way to proceed is to analyze and understand them with respect to one class of financial assets, say, debt securities which include bonds for medium to long term investment, and treasury bills for short term investments. Both these debt securities profoundly affect pricing and returns on other financial assets.
2. Most text books cover these concepts and provide a discussion with focus on different aspects pricing, value, yield, and return depending on their orientation. Among these, recourse to a book on mathematics of finance would be invaluable for the beginners. At start, introduce measurement and calculations of *asset pricing*. This is critical for understanding how interest rates and prices of securities are intertwined, and how their prices get determined in financial markets. The following is a condensed version of these concepts and their definitions; but this discussion needs to be supplemented from other sources as well.

Financial Assets

3. A start is to be made with financial assets; what they are; how are they created and what are their salient properties. These definitions and concepts need to be discussed before plunging into discussions of financial markets and their operations in chapters ahead. Among these, first we have to distinguish between *tangible versus intangible* assets, both have a market value. We need to have some understanding of *how financial assets are created* by various entities both in public and private sectors; mainly financial institutions and business corporations in private sector; governments or their departments and public enterprises in the public sector.

4. Foremost, from the vantage point of financial markets we are looking at financial assets, and only a class of financial assets which are securitized. These assets have a fairly organised market of their own, where trading occurs in their primary and secondary markets; under well practiced procedures of trading familiar to buyers and sellers; in other words organised financial markets only. These stipulations considerably narrow down the class of financial assets that we are interested in. It excludes all other assets, mostly non-financial assets like real estate assets, off-balance sheet items of financial institutions, or other assets that are not traded the way securities are traded. This narrowing down helps to focus on financial market operations only.

5. Following this narrow classification we can look at financial assets in two different ways. One way would be to look at their origination. The assets originating from private sector are created mainly through borrowing instruments in long term debt markets by private business corporations or financial institutions, like corporate bonds term finance certificates, TFCs. More commonly, these assets are created through equity financing instruments like corporate shares, but only those issued by publicly owned private companies, listed and traded on stock exchanges; not by privately owned companies, or even group owned companies unlisted on stock exchange.

6. Financial assets created by banking system, are banking credit outstanding lodged in their loan portfolio, the largest item in their balance sheet, discussed in Chapter 7 of **Volume I**. Only a part of these loan assets may be marketable if they are securitized, which is not the case in most developing countries. Financial assets originating from trade financing through banks, like bills of exchange are of short term maturity and are actively traded in bill's market on discount; a fairly standard practice.

7. Financial *assets originating from public sector* are created through instruments of borrowing. For short term, these are treasury bills; for medium to long term these are bonds and certificates like those of savings scheme NSS. Both treasury bills and bonds are issued in Pakistan; treasury bills are discussed in detail in Chapter 5 and government bonds are discussed in Chapter 8 of this volume and that discussion need not be repeated here.

8. Another way to look at financial assets would be from the perspective of private institutional or non-institutional investors. Among institutional investors, the most important group anywhere, these assets are lodged in their investment portfolio. For banks, their investment assets mainly are treasury bills, bonds and TFCs, and a limited proportion of corporate shares. For non-bank financial institutions, their financial assets are, in part, investments in securities, but not in treasury bills. Among other assets they hold, only those

are to be considered that are tradable and have a market of their own. For households, their financial assets are mainly savings lodged with the banking system, and their investments in securities; namely stocks and bonds. We could do a similar categorization from liability side, but this should suffice to specify what class of financial assets we are after. This clarification is essential for the analysis presented in chapters 5 through 9 in this volume.

9. The following basic sets of concepts need to be explained regarding *properties* or *attributes of financial assets*, though this list is neither exhaustive nor exclusive. It is not meant to be in an applied study like this. Their explanations have been provided to the extent needed in various chapters of the book in both volumes, but these explanations may not be adequate. They must, therefore, be supplemented from further explanations and discussions given in standard text books. These basic concepts among others are as follows.

- *Risk and Returns, Yields*
- *Maturity, short term, long term*
- *Liquidity, for cash or settlement of claims*
- *Marketability, can be sold any time before maturity*
- *Convertibility, into other assets or cash*
- *Divisibility, denomination of face value*
- *Reversibility, round-tripping*
- *Taxability, differential tax treatment of capital gains or loss*

10. Explanations of these concepts need to be embellished with examples, and should be interpreted in the applied context of financial market operations. Their conceptual elegance and theoretical formulations are critical, but such discussion is outside the scope of this study. Here, interpretations have been done, to the extent possible, and explanations have been provided with reference to financial markets in Pakistan. Limited though these explanations may be as given in the sections or subsections of chapters ahead; but even a cursory look will show how close these explanations are to their theoretical or conceptual constructs, or their counterpart comparative constructs as they prevail in other countries. Financial markets seem to follow a well trodden pattern, the well established *norms* of operations, which do not violate basic premises or *precepts* of theoretical or conceptual rendering. If there are deviations from these norms in applied context, the outcome is fairly predictable. This traversing between norms of applied realm and precepts of theoretical realm is essence of learning about financial markets; though not an easy one.

Pricing of Financial Assets

11. The following discussion about pricing of financial assets is with reference to operations of debt securities both in primary and secondary markets. The base price of any asset starts out with its advent in their primary market where they are auctioned, floated and traded first. The price discovery mechanism comes into operation first in primary markets; thereafter in secondary markets. The secondary market prices generally follow suit, but these secondary market prices are quite different from those in primary market owing to constantly shifting market conditions.

12. This is true for both debt financing and equity financing instruments; viz., bonds or stocks, which are widely traded at stock exchanges or on over-the-counter markets. A pivotal element in pricing is rate of discount for bills and bonds which is treated as benchmark rate of interest corresponding to maturity period of the securities concerned. This bench mark rate, is a composite of following elements which are not uniform; hence the diversity in various market rate of interest: For investors, a composite of following elements in interest rate are relevant.

- *real rate of interest vs nominal rate of interest*
- *premia for various types of risks*
- *inflation risk and exchange rate risk, plus*
- *premium for liquidity, and*
- *premium for maturity period of the asset.*

Pricing and Trading – Debt Securities

13. In principle, debt securities like bills and bonds have a face value or coupon value, but their price in primary markets is determined in market auctions. In secondary market trading, treasury bills of various maturities have a *bid price* and *asked price* and both these prices are determined by yield obtained from using *bank discount method*. Note that bank discount yield is different from yield calculated using bond equivalent or coupon equivalent or effective yield method. Why bank discount method yield is used in bid price or asked price is a matter of market convention rather than any methodological or technocratic consideration.

14. On any given trading day, bid and asked prices for different maturities of treasury bills are being routinely quoted by dealers; difference between the two being the dealer spread for a specific maturity. Hence, bank discounted *bid yield* and *asked yields* are also quoted for different maturities of treasury bills. Given these quoted bids and asked yields and the face value of treasury bill, V_f , the price of a treasury bill is arrived at as follows:

$$\begin{aligned} \text{bid price} &= V_f \text{ less } [\text{bid yield} \times V_f \times (n / 360)] \\ \text{asked price} &= V_f \text{ less } [\text{asked yield} \times V_f \times (n / 360)] \end{aligned}$$

where n is the number of maturity days of the treasury bill being quoted. Note that whether it is short term or long term debt security, price of security in each case is derived through some procedure of discounting based on interest like discount factor. In practice, it is taken as market base interest rate for the security. In the above expression, the discount factor is *bid yield* or *ask yield*.

15. *Price of a bond* as a first approximation is interpreted as *present value* of the bond, based on periodic coupon income flows, or periodic cash flows over maturity period of the bond, discounted by an appropriate rate of discount. A bond starts out its life with a coupon value or par value, a coupon rate of interest and a defined maturity period, though the bond may be retired before its maturity period, if it is a callable bond. For bond investor, what matters most is *market price* of the bond and market rate of interest; coupon rate and a rate return based is a secondary concern.

16. If market rate of interest is the same as coupon rate, market price of bond is the same as its par value or coupon value. If market interest rate is below coupon rate, bond will sell at a premium and price of the bond will be higher than its par value because periodic cash flows based on coupon rate, coupon payments on the bond will be more valuable. Conversely, if market interest rate is higher than coupon rate, bond will sell at a discount, because periodic coupon payments will be less valuable to the investor.

17. In contrast, determination of *market price* of short term debt securities like those of treasury bills occurs in their secondary markets, because in primary market it is the *auction price* that prevails. The two are not the same. Market price of T-bills follows a very different route because their investing and trading is almost exclusive domain of commercial banks and its mechanism of trading are very different. Treasury bills pricing first occurs in auctions market, the primary market of treasury bills, and subsequently in interbank *repo* market trading, and the secondary market of treasury bills. How this is done is explained in Chapter 5.

18. Briefly, pricing of treasury bills, originates in the primary market, where auction rate emerges. This is weighted average yield of bids accepted at auctions, not cut-off yield, tendered by pre-qualified banks, the primary dealers, who bid for an issue together with amounts of purchase for a given maturity of T-bills. Subsequently, treasury bills are traded in *repo market*, their secondary market, at different rates than those established in auction. In *repo* market, Treasury bills may be sold to institutional customers, mostly to banks or may be sold to central bank at the discount window or under *repo* facility if owning bank itself needs short term liquidity. In secondary market, the next largest component of interbank market for treasury bills is central bank trading as part of open market operations, OMO.

19. The T-bills rate thus established in *repo* market becomes base rate for other short terms rates of interest like KIBOR, with a difference discussed in Chapter 5 of **Volume I** in detail. The difference is that T-bills rate prevailing in the *repo* market is for a first rate risk free security; while KIBOR must have implicit premia for default risk and market risks; hence it is usually set higher than *repo* rate. It serves as the peg rate for pricing of short term financial assets.

20. For purposes of pricing, treasury bills are like zero-coupon bonds, and are known as zero coupon securities which are sold at a discount in secondary market. Unlike bonds, treasury bills do not have periodic coupon payments, nor a coupon rate of interest, though they have a face value, certificate value or par value of due on maturity date, and a market value different from face value in between, after they begin to be sold in secondary markets before their maturity. Treasury bills prices, however, greatly affect short term interest rates and prices of other short term financial assets like certificates of deposits being the market leader.

21. Pricing in stock market is unlike pricing in debt markets for the reason that stocks do not have any coupon value nor do they have any coupon interest payments, though some corporations do pay dividends stocks to their stock holders based on their financial performance and profitability at the end of their accounting period. In daily trading operations, stock prices are affected by two powerful factors, namely changes in the interest rates and estimates of earnings per share. Beyond these two factors, there are a host of others, mainly expectations of returns and perceptions of risks as discussed in the section concerning system-wide risks and institutional business risks. In contrast, methodology and procedures adopted in pricing of bonds and treasury bills is quite different from the procedures adopted in ascertaining price of stocks intertwined though they may be via interest rate levels.

Market Price of Financial Assets

22. Note that market price of a financial asset at any given time of trading is the same for all buyers and sellers barring market imperfections, and their status is that of *price takers*. Hence, it may also be interpreted as market clearing price of asset for all those concerned but only for that trading time period of the day or the week. Since premia for various types of risk diverges for different buyers, namely different class of investors, given their perceptions and pricing of those risks, based as they are on expected future trends of inflation and exchange rate movements, among other factors, the discount rate changes, and hence price of the asset also changes. Therefore, risk premia is the source of changes in discount rate; for, income flows of asset remain the same throughout maturity period.

23. Pricing of financial assets, perceptions of risks and returns and consequent portfolio behavior cannot be compartmentalized and studied in isolation of each other. There is a very rich literature given in most text books that need to be accessed to gain an understanding of how investors behave in financial markets. There are a number of asset pricing constructs such as capital asset pricing model, and risk and return models. Their discussion is to be found in text books.

24. A few words are in order about *efficient market theory* or its counterpart *random walk theory* which states that pricing of an asset, *ideally*, is based upon a variety of information concerning the asset and that there are no asymmetries of information which is a mighty leap of faith in market based mechanism. If markets are functioning properly this will lead to correct pricing of securities; so far so good. We need not delve into the controversy raging between purists or technical analyst on one side, who claim that they can discern patterns of returns from mountains of data available all over. But security analysts or investors on applied side, feel that technical analysis is fine but it is built on assumptions of random walk or efficient market hypothesis, which ignores a host of factors, euphemistically called market psychology, critical to arrive at an operational price that eventually comes to prevail in the market place.

25. For these reasons, those dealing with securities in market place view efficient market theory or random walk theory as hypotheses that need to be validated. Hence, these theories can not be operationalised or relied upon except as an approximation, and only in times of stable markets, not volatile markets. Price changes in times of volatility are swift and do not allow the luxury of hypotheses testing; hence theories remain an academic exercise.

Value of Financial Assets: PV, FV

26. **Present Value (PV)** is a central concept in finance concerning time value of money. It is the discounted value of future stream of payments received as periodic interest payments on a deposit, an annuity or a fixed amount of return, or income stream per period as cash flow over a designated time horizon. PV is obtained as follows. PV of a constant and equal amount of payments or cash inflows received over a designated time period horizon is discounted at a uniform or periodic rate of discount, which is the key element in determining PV. This discount rate may be market rate of interest, or may be a composite rate.

27. Thus, PV of a future stream of inflows whether constant or variable per period, is the sum of discounted values per period over the time horizon, and is sensitive to rate of discount which may be a long term interest rate or a proxy to a desired rate of return. Note that rate of interest per payment period is not the annual rate of interest rate, rather a part of it, commensurate to periodic payment period of 3 months or 6 months, as the case may be. Interest rate being used for discounting may not be a constant rate for the entire time horizon; it may be variable and fluctuate over time, though these fluctuations are a fraction of one percent, represented by basis point changes.

28. **Future Value (FV)** is also a central concept in finance concerning time value of money. It is the increase in value of interest bearing financial asset, or a bond, or an amount of money at a future date over a defined period of time. Future value provides the saver or the investor, or an asset holder a measure of growth in the value of savings or investment over a designated time horizon. FV of a constant stream of payments, such as an ordinary annuity or income from an asset received in equal amounts per period over a defined time horizon and compounded by an interest rate and calculated as the sum of compounded values per period.

Yield

29. Preferably, **Yield** is to be discussed with reference to bonds or bond-like debt securities, with a par value, a coupon rate, a redemption date, and a market of their own, unlike stocks or shares of companies traded on stock exchanges. **Yield** is the return on the amount invested in a debt security or a bond, and is expressed as annualized percentage. If it is a bond, then the yield of the bond is based on the purchase price of the bond, namely the amount invested at the market price on which the bond is purchased, the

maturity date, the time period of the investment, the number of periodic payments received per year as interest income, together with reinvestment income on the amount of interest received, and redemption value of bond adjusted for any capital gain or loss at the time of redemption.

30. In the context of bond yield, note the following;

Yield to maturity (YTM) on a bond is the income on a bond over the holding period divided by average amount invested, based on purchase price of the bond paid and its redemption value. Hence, yield to maturity on a bond is not the same as coupon rate, because a bond is traded in the market at a price usually different from the par value of the bond; only if market price of a bond is equal to its par value, then yield to maturity is the same as its coupon rate. If market price of bond is higher than par value, yield to maturity is less than its coupon rate; if market price of the bond is less than par value, yield to maturity is higher than its coupon rate.

31. In the context of yield on other assets, note the following;

Yield on a loan is the actual amount of interest earned on an annual basis and expressed as a percentage; yield on a deposit is the interest income earned divided by the deposit balance over a defined period; this is because unlike a bond or a debt security, a loan if or a deposit instrument if not securitized, it does not have a secondary market and is not traded, and does not have a market price like the price of a bond or a security.

Yield - Types

32. There are several types of yield as follows. In its simplest version, there is *coupon yield* or *nominal yield* which is a contractual rate of interest or coupon rate of the bond, fixed at the time of bond issue, provided bond is purchased at par. For example, if a bond of Rs 1000 par value is purchased at par value with a coupon rate of 8 percent, payable once at end of the year, it will have interest income of Rs 80 for the year. Since it was purchased at Rs1000, its coupon yield or nominal yield is also 8 percent equal to interest income divided by purchase price paid by the bond purchaser.

33. *Actual Yield* is the rate of return based on purchase price of the bond and is obtained by dividing the interest income on the bond with the bond price; for example, a Rs 1000 bond paying 8 percent interest rate, if purchased

below par at a discount for Rs 800, its actual yield is 10 percent, calculated by dividing bond income of Rs 80 with the bond price of Rs 800, and expressed as percentage; or the same bond if purchased above par at a premium for Rs 200, then its yield is 6.7 percent, calculated by dividing bond income of Rs 80 with bond price of Rs 1200, expressed as percentage. Thus, actual bond yield will be higher than coupon yield if the bond is purchased below par; actual yield will be below coupon yield if bond is purchased above par because of actual amount invested for bond purchase.

34. *Current Yield*, also called *market yield*, is the rate of return on a bond if purchased at prevailing market price different from its par value; current yield is calculated in the same manner as actual yield. If market price of a bond is the same as its par value, then *current yield*, *market yield*, *actual yield* and *coupon yield*, all are the same for the bond.

35. *Yield-to-Call (YTC)* if bond is callable and is actually called in by the issuer, yield is calculated for the period bond is held until the time it is called in for redemption in the same manner as yield to maturity is calculated substituting par value of the bond with call price of the bond.

36. *Yield-to-Maturity (YTM)* is rate of return on a bond if it is held to maturity, and is based on the maturity period, price of the bond paid at time of purchase, the interest income on bond during maturity period, redemption value of the bond on maturity date, the same as the face value of bond. Hence there is no capital gain or loss on redemption. A loss or gain would occur only if the bond is sold in the market, prior to redemption date and its yield will not be the same as YTM. Hence YTM refers to the yield at redemption and is calculated through method of averages, the simple method, or through method of interpolation involving discounted stream of the cash flow of coupon income as outlined below.

37. If bond is purchased at par value and if held upto its maturity date, then yield to maturity is the same as interest rate on the bond, the coupon rate, or the coupon yield. But YTM varies from coupon yield if the bond is purchased at a discount or a premium. Note that the interest income in calculations of yield has two components; one component is straightforward cash flow received as coupon interest based on number of periodic payments and coupon rate. The other component is interest received on reinvestments of coupon income, the compounded interest of coupon cash flow.

38. Suppose a bond of Rs 1000 at par value, V_p , was issued on January 15, 2000 for a maturity of 10 years, with a coupon interest rate, i , of 12 percent, with $n = 20$ in semi-annual coupon payments; its redemption value, V_r , on

the redemption date of January 15, 2010, was Rs 1000. Two years later, on January 15, 2002, the bond was selling at a discount and is quoted in the market at 94 7/8; hence, the purchase price of the bond, P , at that time would have been be Rs 948.75 = (94.875 x 10) paid by the purchaser; and the cash flow of coupon income, cF , per period to the bond purchaser will be Rs 60 = (Rs1000 x 12 percent / 2) for 16 payments over the 8 years of remaining maturity period of the bond. On this basis:

average income for n= 6 periods, will be [(16 x 60 + 1000 -948.75) / 16] = Rs 63.20;

while the average investment will be = [(948.75 + 1000) / 2] = Rs 974.37

and yield to maturity will be = (63.20 / 974.37) x 2 = 12.97 %

which is a useful *approximation* of YTM.

Yield Curve

39. It is a curve obtained by plotting yield rate of securities of the same class on the vertical axis and the respective maturities on the horizontal axis. The yield curve enables a comparative analysis of the yield rate on short-term and long-term securities. Since yield on a security critically depends on interest rates, yield rates reflect term structure of interest rates over time which is an important indicator for the short-end of security market operations. Yield curve can be constructed for any debt security, but mostly these are constructed for default free securities, the bench mark securities; namely treasury bills and bonds.

40. If yield curve slopes upward to the right, it is called a positive yield curve, meaning that short-term interest rates are lower than long-term rates, and this is a normal term structure of interest rates. The positively sloped yield curve is also referred to as the *normal yield curve*, since it is widely believed that this is the normal shape of the curve given rational expectations of short term interest rates being lower than long term rates, and given positive relation between yield and interest rates; that is, higher the interest rate higher the yield.

41. Conversely, a downward sloped yield curve, or an inverted yield curve shows that short-term rates are higher than long-term rates. This happens whenever short term interests are increased as part of monetary tightening or liquidity control. If there is little or no difference between short-term and long-term interest rates, the yield curve is flat. The interplay of expectations of interest rates and returns affects yield curve. How does that happen needs to be further discussed.

Return

42. Investors in securities markets whether they are individual investors or institutional investors, they are all driven by one paramount goal, and that is to seek better returns on their investment than elsewhere. If this can be done without exposure to undue risks, all the better. The issue is what are the thresholds of risks and returns that are suitable to investors? This cannot be answered without an understanding of risk and return feature of securities being contemplated for acquisition in an environment where competing investment opportunities are also available and have to be figured in investment decisions. How to identify risk-based returns, analyze and estimate them to make investment decisions is central to this quest.

43. Return from investment in a security in the traditional sense is simply its periodic rate of return, annual or sub-annual as defined below. Likewise, return on all securities held at any given time is a composite of periodic rates of returns on all those securities; where the composite may be a simple average or a weighted average of returns. But return on a single security is not the same as return on an entire portfolio consisting of a variety of securities, or a class of securities. These two are different concepts; though appear to be the same, which is a source of much confusion. Therefore, distinguish between return over a time period on a single asset discounted by a single rate of discount, r , no matter how appropriately it may have been arrived at, versus return on a portfolio consisting of a variety of assets. Hence a composite return on a portfolio is to be calculated using various rates, r_i ($i=1\dots m$) specific to securities ($i=1\dots m$) held in a portfolio.

Realized Rate of Return versus Expected Rate of Return

44. Further, simple rate of return or annual rate of return for a security is *realized rate of return* at end of the period that have already occurred. However, investment in securities is undertaken on the basis of *expected rate of return* which is shaped by underlying risks of investing with reference to investor's time horizon, while current cost of investment, namely the current price of security is taken as given. The price is known, the risks are unknown, though they can be quantified and analyzed.

45. The realized rate of return, however, may or may not come to grips with all the risks underlying a security, much less with risks of an entire

portfolio. The risk element has to be built into rate of return if it is to be meaningful, because return on a security can not be isolated from risks involved in investing in securities markets, namely investment in a portfolio. The moment risks are introduced, an investor has to contend with probabilities of returns on each security in the portfolio. The probabilities in turn have to be built into the calculation of return.

46. For these reasons, it is important to distinguish between various types of returns, the discount rate involved, and their inter-relationship with various rates of interest. Among these, the relationship between discount rate and interest rate is critical. But since there is no unique rate of interest as such, returns have to refer to some market based peg rate both for the short term and long term, or some reference rate that is widely used in market evaluations; and this is the source of variation between different estimates. Hence, following concepts need to be explained and discussed, both in their theoretical and applied context.

47. *Realized rate of return* on an income or dividend bearing asset during a year is the sum of income or dividends received plus any capital gain or loss divided by the purchase price of security. It is the same as current yield or actual yield. Thus realized return has two components; one is dividend income and the other is capital gain or loss which becomes realized only if the security is sold off; otherwise it is *accrued* gain or loss for accounting purposes, not *realized* gain or loss to the investor.

- *Realized rate of return on Portfolio* over the end of a given time period, a year, is the sum of periodic dividend or income received on all securities held in the portfolio *plus* capital gain or loss on securities during the period, divided by the market value of portfolio in the initial period.
- *Internal Rate of Return* on a financial *asset* is the rate of discount r that makes purchase price of a *security* equal to the discounted sum of the periodic income cash flows for the maturity period of the security, which is the same as the present value of future stream of periodic cash flows.
- *Internal Rate of Return* on an investment such as a factory or infrastructure facility or a real estate is the rate of discount r that makes the cost of investment equal to the sum of discounted stream of income from the investment. Note that the internal rate of return is the same as the yield to maturity as mentioned above.

Section 2: Financial Markets - Operations

1. Operations of financial markets require an understanding of how these markets function; what are the mechanisms; what governs decision making by participants; what instruments are chosen and why; how does selection of securities for investing in stand-alone stance of investors is affected by their associated risks and returns; and how those attributes of risks and returns behave and jointly impact on a portfolio. To understand mechanics of trading in these markets requires plodding through moves and countermoves of trading parties; role of exchanges concerned; rules and regulations that control trading of securities and their financing. There are common themes that cut across all these markets. Among these, the most important one concerns *risk and returns*, pertaining to investment underlying a security or an investment portfolio.

2. At the start, a few *fundamentals* must be understood. The basic purpose of engaging in financial market operations is to undertake investments in securities markets in *expectations* of profits. Investing therefore, has to be executed efficiently and promptly before price moves away, which is easier said than done. Profits may include an income component if target security is income bearing or dividend bearing; but profits are most commonly capital gains, the primary driver for investment in securities. Expectations of *rational capital gains* for investors, however, have to be tempered with risks of capital loss; though at times most rational of investors indulge into reckless buying of securities driven by herd behavior or expectations of pie-in-the-sky variety capital gains that violate norms of *prudent investment* behavior.

3. Likewise, capital gains are the primary motive for investment in stocks; whereas investment in bonds straddles both motives, namely income and capital gains together, and investment in most money market instruments like treasury bills and CDs are entirely income motive based. There are no capital gains to be had from investment in money market instruments. This is why investing in stock markets for most people is commonly understood as investing for capital gains; period.

4. Next, we must grapple with *risk-return* features – the soul of investing in securities markets. No matter how adept an investor is at buying and selling of securities, rarely investors are able to overcome risks of investing and *beat the market* on its own turf, *consistently*. Beating the market means

achieving returns on a securities portfolio in excess of market returns and consistently so over a period of time. This rarely happens, be they ordinary investors or sophisticated investors. The odds eventually catch-up. This is the reason why it takes markets weeks or months to climb-up, but when the down turn comes, it is swift. At times it is so swift that investors are unable to unload beforehand; and it is pervasive in the sense that there is nowhere to escape and transfer assets or shift the portfolio before derailment occurs.

5. The popular belief that modern sophisticated techniques of investing in esoteric instruments like derivatives and state of the art techniques of options trading melt away underlying risks is more of a myth than reality. At best these tools and techniques allow an investor to pawn-off the risk to someone else, who holds *contrarians expectations* of securities price movements. In that sense, these two are a *pair of opposites*; holding two opposite sets of expectations about the same security. The indulgent one is being an optimist about the outcome; the cautious one is being a pessimist about the outcome; both believing they are rational investors. This is why it is rather difficult to decipher what is meant by *rational expectations* in investing in securities market in applied context. In theoretical context, there are very sophisticated models of rational expectation and investment behavior laced with *a-priori* constructs of necessary and sufficient conditions that may or may not prevail at any given time in the market place; often they don't.

6. These techniques tools and instruments may enable investor to *spread risk* around to a group of third party, who may participate in the market at a different level of risk and return configuration, not the ordinary configuration that one is accustomed to. The investing risk may get diluted, even mitigated for some, but it is always lurking underneath for the market at *system level*. This is a cardinal lesson of the domino like collapse in 2008 of large financial institutions engaged in insuring or investing in various tiers of securitized mortgage backed assets. In the process, the systemic weaknesses, stacked much like a deck of cards, were laid bare that were not so visible to even most savvy analysts, brokers, dealers, insurers and large investment bankers. When the push turned into a shove, the deck collapsed.

7. At the time derivatives were introduced and came in vogue in the 1990s in the US and elsewhere, together with hedging techniques which routinely are beyond the pale for ordinary investors, or even sophisticated ones, there was a great deal of enthusiasm that finally the corner has been turned in managing risks of investing. The derivative crowd and hedge-fund managers were envy of all those looking to beat market risks. The derivative based funds and hedge funds took off and swiftly soared aloft to the heights not seen before; but not many were aware that they are a variant of day

traders, but not ordinary ones. The melt down of securities markets in the US in 2008, the demise of a large number of derivative based funds or hedge funds, and the doldrums of exotic funds has laid to rest myth of invincibility of cutting-edge techniques and skills of derivative traders and hedge fund managers in beating market risks.

8. The sobering episodes in the US markets were not isolated phenomenon. Sooner or later, market risks catch-up. If it is not version of asymmetric risks, then *contagion* takes over. Contagion was partly to be blamed for the swift disintegration of East Asian markets in the late 1990s. The lackluster performance of securities markets of Japan for more than a couple of decades and some in European countries show in a comparative setting, that investor's risks of securities markets do not melt away, simply because one is equipped with latest information technology and investing techniques that were not previously available. Even if such technical facilities are available to investors at large, market risks stay, regardless of how much hedging is done, and how diversified or how globalized is the portfolio.

9. In Pakistan, a few enthusiastic ones started derivatives trading in the backdrop of persistently rising stock market that was ascending to levels well beyond expectations of all. Some succeeded at launching versions of derivative products at rather exotic niche-markets. At academic institutions, derivatives are a rage among faculty and students and are envy of all, exhibiting symptoms of what is popularly known as *physics envy* in social sciences. Derivative trading, howsoever limited it may have been, occurred in the background of rather rudimentary markets of a developing country like Pakistan where asymmetric risks are pervasive, straightforward investing and trading is not routine of the day for most private investors, information flow is weak, and regulatory framework is inadequate or weak at handling violations of rules and regulations in trading operations, not to speak of aberrations from established norms and practices of trading.

10. *Investing risk never disappears.* That is a cardinal lesson of investing in securities market; and there is palpable evidence for this contention. Simply put, investor risks in securities market are real, and are here to stay. They do not melt away simply because investor is well versed with sophisticated investment models and has technocratic expertise that most investors can not muster at call. Collapse of hedge funds in second half of the past decade bears testimony to the fact that risks underlying stripped securities do not disappear. But derivative traders are back at it again.

Market Classification

11. The discussion of trading operations has to be undertaken as per classification of markets discussed earlier. Theoretical and conceptual aspects that govern these markets and their underlying principles are discussed in *text books*, but their frame of reference is mostly US markets. In a developing country setting including Pakistan, these discussions are not much relevant, because their financial markets are still in infancy and in early stages of establishment together with rather weak market infrastructure together with access to their facilities, and weak regulatory framework.

12. For example, demutualization of stock exchanges has been a perennial issue; rating system is newly established and is beginning to have some impact, but it is not so transparent in its practices; payments and clearance mechanism have been set up relatively recently and is operative, but to many investors their operations are not well known. Information flow vital to securities market investing is emerging, but cross cutting verification from dependable sources is not possible yet. In short, these are beginnings of well functioning markets; enthusiastic evaluations aside.

13. Broadly, classification of markets as per their operations are as follows:

- *Money market operations involve treasury bills and trading in their primary and secondary markets; next market for inter-bank funds, repos, and reverse repos; and call money markets.*
- *Debt markets operations primarily involve bonds, both government bonds and corporate bonds. These are discussed in Chapter 8.*
- *Stock markets operations are discussed here in a summary form, and in their applied context discussed in Chapter 9.*
- *Derivatives markets operations are briefly discussed involving futures, options, and swaps; their overlapping categories like commodities futures, currency futures; stock options, and interest rate swaps.*

Market Infrastructure

14. Market infrastructure consists of the following main items. Preferably a separate brief is needed on each one of these with regard to their institutional organization, their capabilities and their operations in Pakistan. Pending that, only observation offered here is that these institutional arrangements were put in place as part of reforms and restructuring in late 1990s and early 2000s at great costs and efforts. Their establishment is a milestone in the

development of financial markets of Pakistan; they are relatively new and have a long learning curve ahead of them. These constituent elements are:

Stock exchanges, Brokerages
Rating Agencies, Bonds
Central Depository, Clearing Houses
Payments, Settlements, and Clearing System

15. These institutional topics need a write-up of their own; but it has not been undertaken here beyond a few paragraphs in relevant sections of various chapters in this volume. Technical information and analysis about their operations is scanty; their glossy annual reports notwithstanding, replete with their organizational structure, and oblique remarks about their achievements. Their operations are not reviewed or analyzed here. A brief coverage of these items is available in SBP annual reports and FSA reports, specially those straddling banking system and financial markets alike; for example payment and settlement system. But care needs to be taken in interpreting these items, because payment and settlement system for banking system is operated primarily for transactions originating within the banking system, and if these transactions are made to clear trading balances, additional institutions take over, like central depositories.

Operational Environment

16. Central to market functions is operational environment confronting market participants. Salient elements of operational environment are:

- *financial regime, rules and regulations, governance;*
- *framework of market participation, rules, regulations, access;*
- *system of trading - brokerages, OTCs*
- *safeguards; market circuit breakers;*
- *market information flow; analysis sharing*

17. Among these, financial regime and governance is a key element in shaping market environment. Financial regime consists of a vast body of *rules, regulations*, stipulations and directives issued by *regulatory authorities*, primarily Securities and Exchange Commission, SEC, but also by central bank and government agencies and departments concerned. Among these regulatory authorities, SEC is responsible for enacting and enforcing

laws, rules and regulations governing operations of securities markets and conduct of its participants, investment banks, dealers, brokers and agents, depositories, payments and clearing institutions.

18. The oversight function of market operations on a day to day basis is carried out by SEC and is monitored by rating agencies. In parallel, there is a system of self-regulation imposed by stock exchanges, and associations of securities dealers and brokers. The primary concern however, remains with ensuring smoothness of operations and keeping investors' confidence intact. The stability of financial markets is entirely a different matter and well beyond capacity of these authorities. Role of central bank then becomes crucial, specially in money and bond markets because underlying interest rates, both short-term and long- term, are treated as bench mark rates, even though central bank is not regulatory institution of financial markets.

Portfolio Investment - Approaches

19. Portfolio investment in financial assets is undertaken in a broad range of securities, in contrast with direct investment in physical assets such as plant, machinery, equipment or industrial installations. Financial assets may be *diversified* and may consist of various types of stocks, bonds and money market instrument; or may be *concentrated* in any one category of financial asset depending on investment objectives, size of investments, time horizon of investors and their preferences regarding risk-return profile of financial assets selected for portfolio investment. Such investment in financial assets confers mobility, flexibility of exposure, and potential liquidity, unmatched by direct investment in fixed assets such as plant, equipment or real estate, and offer generally better returns to investors though with attached risks which need to be compared with risks of direct investment.

20. The portfolio may be domestic, consisting of only *domestic* securities; or may be *foreign*, consisting of securities of foreign countries with potential of high growth in emerging markets or developed markets. The composition of investment portfolio depends on type of investor, orientation of investor, desired risk return profile and market preferences. Investment in securities is undertaken in expectation of capital gains plus a stream of dividend income if security is dividend paying, though not always. Investment objectives, strategies, trading and hedging operations are driven by this central motive. All this is well known, but needs to be reiterated.

Objectives and Strategies

21. There are layers of objectives which may include the following, singly or in any combination, depending on risk-return tolerance of the investor, the time horizon of investment, income and capital gain preferences, and maintaining or maximizing net worth of the portfolio. The following is not an exhaustive list, but most often investment portfolios are built around these lines. In case of investing through mutual funds such classification of objectives and approaches is useful, not only for small private individual investors, but also to institutional investors. Whatever objective are specified and pursued, it impacts on investment strategy adopted by investors and it affects potential returns on investment portfolio.

Aggressive Growth: If securities are purchased primarily to obtain maximum possible capital gain over a defined period, and only secondarily supplemented by high dividend earnings, it is characterized as aggressive growth. It is relatively more risky approach to portfolio investment and is adopted usually in bull markets for short-term horizons. But it may also provide the underpinning for longer term investment strategy.

Average Returns: Under this approach, focus of portfolio investment is to obtain highest possible average returns for a defined period such as three years or five years; the objective is to ensure highest possible average annual returns based on a steady annual rate of return on entire portfolio which is a better measure of a portfolio's performance over extended periods of time.

Balanced Growth: This portfolio investment strategy, also known as *asset allocation* approach, calls for diversification of portfolio whereby the investor or the mutual fund buys a various securities such as stocks, shares, bonds and money market instruments with different risk and return profiles but in clearly defined proportions so as to balance out the risk and return elements. Such a portfolio is held without any significant turnover of these assets or changes in their proportions in response to short term market price movements. It is also a long term portfolio.

Disciplined Growth: in portfolio investment and managing requires maintaining reasonable capital appreciation and avoiding excessive exposure to risky stocks or shares, specially stocks of companies engaged in risky line of activities. The objective remains capital gains but at moderate levels.

Equity Income Growth: This approach calls for investing in those securities that would garner increase in dividend income as well as capital gains, representing a compromise on aggressive growth, to achieve a dependable stream of dividend income. It may include investment in both stocks and bonds in the portfolio.

Value Growth: This approach involves investment in stocks and shares of only those companies which are believed to be undervalued by market as shown by multiple of current stock or share price to earnings, the P/E ratio; or their expected P/E ratio. Investing in such companies requires an in-depth knowledge at firm level which for an ordinary investor is difficult to obtain.

Total Returns: Most often investors are interested in total returns, mostly a combination of net capital gains plus dividends from their portfolio for a defined period of time such as a year. An asset management outfit dedicated to this approach strives to maximize total returns on a portfolio including net capital gain on securities and returns on assets plus any dividends received on stocks and shares held in the portfolio.

22. The foregoing is a compendium of portfolio investment objectives, and serves the purpose for most investors, but mainly asset management companies and their clients. For individual investors this strategy is difficult to pursue and execute because it requires a great deal of expertise and resources. Also there has to be a critical volume of investment. It is not meant for *odd lot investors* or *day traders*. For this reason, these objectives and approaches have come to be identified mostly with investing in mutual funds shares who offer a wide variety of investment choices to those investors who simply do not have enough market savvy or resources to do well informed placements with superior timing of transactions along the lines of any of the above objectives. This function is well performed by mutual funds, given their size, resources, market specialization, ability to switch and execute portfolio reshuffle as deemed appropriate in fast moving, if not volatile, markets. Their market savvy and execution cannot be matched even remotely by individual or odd lot investors

23. In practice, individual investors with reasonable size investments, rarely pursue any single objective exclusively. Their preference in most situations is to combine features of selected objectives as feasible, while the leading edge may be assigned to a preferred objective. In contrast, institutional investors like *mutual funds*, tailor their investments according to a banner objective, similar to those outlined above, and customize their funds to attract a variety of investors with objectives and strategies of their own, but matching with those of mutual funds.

24. Whatever approach is adopted, there are conflicting aspects to investing that need to be reconciled. For example, should investors avoid *portfolio concentration* and seek its opposite, namely portfolio diversification is not so clear cut in practice. Portfolio diversification is measured by the relative size of different types of securities or assets held in

an investment portfolio, expressed as percentage of total value of assets held. Portfolio concentration increases exposure and hence investor's risks in the line of business activity of companies or corporations whose securities are being held in investor's portfolio. Such a concentration of investment portfolio may occur along sectoral lines of business activities of firms, such as sub-sectors of manufacturing, transport, telecoms, electronics and others. Concentration may also be based on underlying characteristics of companies such as scale of operations, capitalization levels, market shares, technological edge, management quality and profitability. A transfer of business risks of companies to portfolio investor is proportional to the degree of concentration of shares of such companies in the investment portfolio of investor.

25. **Portfolio diversification** in contrast to portfolio concentration, its pair of opposite, involves investing and holding a variety of assets to achieve an optimal risk and return threshold in line with the overall investment strategy of the portfolio investor. This strategy starts its orientation with investment objectives, time horizon, exposure limits and preferences to the extent it is feasible within total size of portfolio. Most often, for small investors the binding constraint is amount available for investment, because a small portfolio does not permit diversification easily; it is too costly and not very meaningful; that is why small odd lot investors favor mutual funds to achieve diversification that they could not implement on their own. The salient objective of diversification is to minimize portfolio risk and loss of portfolio's net worth, and is best suited if portfolio is of a minimum size worth diversification efforts.

Securities Market Trading

26. Given objectives of portfolio investing, their prioritization and strategies, the investor has to have some understanding of the system of trading and the instruments being traded, a familiarity with markets, and their rules and procedures concerning trading, howsoever cursory it may sound at this stage. In the following, we will focus on trading in stock markets, derivatives markets, and trading in asset-backed securities markets. This covers spectrum of equities market instruments. Debt market trading like T-bills and bonds is discussed in Chapters 5, 7 and 8 next.

27. Stock market trading activities thrive on volume around price spirals. When markets are active even a small change in the prices of active stocks may mean significant profit or loss to big investors, but not for small

investors given size of their holdings and their exposure. Small investors usually follow their own orientations, though it is difficult for them to execute trading strictly according to their goals that they started with. Worse yet, they are more prone to follow *herd instincts*. Hence, their trading pattern reflects what most investors are doing.

28. Large volumes of trading depend on activities of institutional investors like mutual funds, insurance industries, financial institutions, corporate investors and large brokerages who are the backbone of stock markets. For brokers, large volume translates into big profits on turnover and often they are originators of *market hype* along with security analysts whose evaluations may cause a swing in stock price often counter to market trends. This translates into large volume of trading on any given day. In such a set-up, small investors are likely to suffer the most from market volatility, though weaknesses of trading system affect both small and large investors alike. Among these weaknesses, lack of timely and accurate information flow is critical for all investors.

Insider Trading

29. Inside trading occurs when those privy to decision making and corporate financial information trade on corporate stocks *ahead of financial disclosure* to the public. This happens routinely even in advanced countries and a good deal of such trading is never identified, not to mention in developing countries like Pakistan where charting and implementation of transparent procedures for trading are still in their infancy. For example, corporate executives and finance officers know well ahead of time whether or not their company will meet consensus target of earnings per share for the quarter or mid-year; or when a stock split decision will be taken; or if their corporation is embarking on acquisition or sell-off, or decisions that would impact on stock prices.

30. Insider trading arises from *information asymmetry* discussed earlier, the so-called *lemons* problem. The insider *as a seller*, for example, in adverse expectation of stock price is trading away stocks held in his portfolio, confident in the market outcome that when corporate non-performance becomes public, stock price will go down; therefore trading in advance would secure invested capital and gains accumulated thus far. Returns on such trading could be substantial if the scenario pans out. The investor *as a buyer* is enhancing accumulation of shares, thinking that current stock price is

likely to grow, not knowing adverse outcome owing to corporate non-performance. Safeguarding interest of investor thus becomes foremost responsibility of regulators. Asymmetric information is the origination point and is at the center of insider trading activities.

31. In practice, insider trading is difficult to define. It is even more difficult to pursue legal remedies for the reason that as to who is an *insider party* and who is not, and what constitutes illegal stock trading is difficult to establish in a court. At stake is what constitutes *fiduciary obligation* and who are the people entrusted with *fiduciary duties*. Certainly, corporate executives are privy to sensitive information and they are easier to pin down. Beyond this group, clients or bankers closer to decision making of corporation concerned may also come across sensitive information in *due process* that could impact on market price of corporate stock.

32. Do they owe any fiduciary obligation if they have been retained by concerned party as specialists or consultant, and if they indulge in stock trading using information garnered in due process, in violation of their fiduciary responsibilities? This has never been fully affirmed in the courts even in US markets. Some of the famous are names of Ivan Boesky and Michael Milken were in yester years, long time ago, and Raj Rajaratnam in current times. These are well known names in the US securities markets; there may be others.

33. Regulatory authorities are split on these issues. The court proceedings have not been able to establish how *misappropriation of information* has occurred, if indeed it has occurred, or how fiduciary duties have been compromised by non-corporate employees who may have been accessory to privileged information not in public domain. The distinction between a legal trading activity and an illegal transaction remains wafer thin and is very difficult to establish in court proceedings.

34. The concern is whether insider trading occurs in Pakistan? The perception is that it does. There is enough evidence for it, much of it is anecdotal, but a few cases have been apprehended, and from time to time authorities concerned have found abuses of trading system which has bolstered popular perception of investing public. A few *prima-facie* cases regarding insider abuse were reported in the past; but were not pursued in absence hard evidence or other reasons. In Pakistan, banks, non-bank financial institutions and brokerages have been allowed to incorporate and establish asset management companies as subsidiaries of their own, who in turn have incorporated and floated a large number of mutual funds in recent years. Stocks of parent companies are being traded in the market all the time

and are part of the portfolio of their own mutual funds. The mutual funds are privy to insider information of their parent companies or group owned companies and their affiliates, but this does not constitute *insider trading*.

35. The reason is that patterns of interlocking ownership across financial institutions or group owned affiliations of corporations across different industry groups are well-established and are not prohibited. This feature of corporate growth in Pakistan has never been resolved and is responsible for growing ownership concentration, monopolies and cartels. It prevailed as far back as in early 1960s, and has re-emerged in the 1990s after reforms and privatization. It has sustained over the past decade and is likely to continue in the future. Given this state of industrial organisation in Pakistan and given such industrial framework, what constitutes fiduciary obligation and who are responsible for it while indulging in stock market trading has never been tested in the courts in Pakistan.

36. The role of regulatory institutions like SECP in Pakistan is to keep a close watch on insider trading. But in current times, SECP is grappling with larger issues like keeping stock market operations opaque and transparent to the public through financial disclosure requirements, and dissemination of timely information to the public. This is at the heart of issues of corporate governance. SECP has to go some ways before its regulations become a deterrent for insider trading.

Pump and Dump

37. One favourite technique of insider traders in manipulating stock prices is *pump and dump* practices of trading by large investors in Pakistan involving large brokerages as elsewhere. There have been a few formal cases against well-established brokerages in the past, though not much has come out of these proceedings. The typical *modus operandi* is to orchestrate buying of shares in huge quantities, thereby creating an impression that price of a stock is going to rise owing to imminent corporate sale, merger or acquisition, a takeover, hostile or otherwise, which may or may not be genuine.

38. Once the stock price thus manipulated begins to rise, speculators move in and the cycle of 'pump and dump' begins. When price of stock has been pumped up to some desired level by insiders, sometimes double or more than double the level it was before insider trading began, the insiders begin to unload quickly and in fairly large amounts before other participants

become aware of the sale and realize its impending outcome. This is the 'dump' phase of the cycle. It is well known, still works well for insiders in spite of all the warnings against buying stocks beyond prudent price levels, way above known corporate valuation levels. It seems that herd instinct or speculative motive is too powerful to contain events like this, both among advanced markets and developing markets.

39. In most countries, insider trading thrives in options trading rather than in simple stock trading. For one, insider trading through options market is much harder to pin down as illegal activity. Same is the case in Pakistan. A good part of trading in options market in Pakistan, particularly short selling, is done by those closer to stock trading business, namely brokerages via asset management companies, odd-lot investors, or those engaged in stock trading at OTC markets or at stock exchanges. They are a privileged group with information usually not available in public domain.

40. Access to options trading in Pakistan, are limited; it is a tiny market; it's trading and quotes are hardly seen in public. Small non-institutional private investors or individual investors are not privy to techniques and procedures of options trading. They hardly engage in short selling, so common in developed countries markets. Short selling mostly is online trading because of rapidity of bid changes where half a day is too long to catch up with market movements. Online selling has begun in Pakistan and is limited to a small group of those who have online access to stock trading. Therefore, options' trading in Pakistan is not a common phenomenon; though short selling is widely practiced by those linked up with portfolio managing.

Front Running

41. Front Running is an operational hazard, like moral hazard in banking. It occurs when a large order is likely to affect the market price of a security; the broker may take a market position in that security prior to executing the order, and then conduct a trade for his own position thus benefiting from price change. It is illegal activity; prohibited by rules of trading. It occurs when brokers or stock traders take position for their own account; i.e., to buy or sell stocks for their own portfolio on the basis of accumulated open orders of their customers conditional on price targets with defined timing for their execution, rather than spot sale orders, mostly lodged through online trading, called triggered trading.

42. This manipulation of timing of transaction is feasible only because brokerages know the state of open orders and the range of conditional or targeted price of a stock. Only they are privy to this information flow during day trading. Use of this information on price range, combined with knowledge of large volume orders, could be very useful and rewarding through trading on their account in volatile markets with unusual price swings which is not a rare phenomenon.

43. It is the knowledge of accumulated orders that makes the difference; provided market stays on the curve for a while, a day or so. It is difficult to enforce rules that would defy front running because as it is, brokerages always engage in trading for their own accounts, or for their mutual funds, though their main business is to execute orders for their customers and account holders. However, security dealers, floor traders, market makers or specialist do engage in trading for their own account, but given the information flow, a third party could do trading on their behalf.

44. In practice, it is difficult to establish the case against front running, and even more difficult to prosecute than insider trading because trading mechanisms in Pakistan have not altered much from early days of stock trading. The practices and procedures are time tested. However, in the frenzy of trading, the timing difference between accumulated and executed orders is wafer thin. It can be observed in online trading. The time difference is buried under mountainous volume of orders executed during a trading day if the market is in a feverish pitch of turnover. But front running occurs, and is not so uncommon a practice, be it a developing country stock market or an advanced and developed market.

Trading in Stocks - *the Mechanism*

45. Trading of stocks is usually done in a lot of 100 shares each, it is called a *round lot*, but if the order is not in multiple of 100s, it is called *odd-lot* trading and it may not get executed in one round; hence much trading occurs in round lots. Typically, investors in stocks or in mutual fund shares, be they institutional investors or ordinary investors, conduct their trading through a broker with whom they maintain an account. This account may not be their entire portfolio, because they may simultaneously hold accounts with other brokerage firms providing specialized services with a cost differential. Nonetheless, if they wish to execute a trade, they place a buy or sell order with their broker with whom they have their account.

46. Trading order may be of the following types.

Day Order: is an instruction by investor to complete the trade by close of market on the day order reaches the broker, and does not specify a price, because it is announced at close of trading. The day order is usually for trading of shares of an investment trust or unit trust or a mutual fund, whose net asset value, or the price per share is declared only at the close of the day; therefore order is executed at closing price.

Limit Order: is the instruction from an investor to the broker to buy a stock for *no more* than the *limit price*, or to sell a stock for *no less* than the limit price whenever the order is executed. Since stocks are traded usually in lot of 100 shares, a large order may not get executed in one attempt or in one round if market price variation is swift. Thus, under limit order, transaction price is assured, but not the *timing of trade* completion. Full size of order may not get executed by close of trading at the limit price specified by the investor; the limit price may not match with floor price, or even if does, there may not be matching sale orders available for the fleeting moment of execution. It is exciting to watch this happen in online trading sessions.

Market Order: is an instruction by the investor to a broker to buy or sell a security at the best price available when the order reaches market maker on the trading floor of stock exchange or OTC. Market order assures a prompt trading transaction but does not guarantee a specific price. In case of buy orders, the order is filled at lowest price any seller is asking at the time order reaches floor trader. Sale orders are filled at highest price available at the time order reaches market floor.

Stop Order: is executed only if market price reaches stop price specified by an investor to the broker. Usually it is a sale order set at a price lower than prevailing market price below which an investor is not willing to hold the stock to avoid loss of original capital invested. Hence, it is also called *stop loss order* and it is executed when price drop reaches stop price specified in the order. At that point, stop order becomes a *market order* and will be executed at next available price which may be the same as stop price, or may be lower than the stop price. This mode of selling is commonly adopted by investors in volatile market conditions.

47. As regards trading prices, a trading transaction is conducted at stock exchanges at floor price or spot price prevailing at the time of transaction; or in OTC market in *after-hours trading* at matching of bid and offer prices. Among these: *bid price* is the price a dealer is willing to pay for a security

and thus bid price is the sale price available to an investor; *asked price* is the price a dealer is willing to accept for sale of a security and thus it is the purchase price for an investor; and *price spread* is the difference between bid and asked price of a security and provides dealer a profit margin.

Trading Rules

48. These are a set of rules that are binding upon dealers and brokers as part of self-regulation or specified by regulatory authorities. This is a comprehensive regulation specifying conduct of trading which must be adhered to by traders at market floor in daily trading at stock exchanges. These are as follows in their encapsulated version; the full version is a challenge to wade through even for seasoned investors.

Best Execution is an assurance to the investor that in conducting a trade, broker will execute the order as intended by the investor, linking buy and sell orders with the most competitive bid or offer price available, listing the commission charged separately for each trade, that may be divided up in various round lots or odd lots if the order is large. Brokers are required to keep **contract notes** as evidence of deals carried out on behalf of investors logging the time it was conducted according to instructions of the order.

Trade Publication: trades are published for orders involving no risk if conducted through computerized on-line services, thus ensuring the investor that order was dealt at a reasonable price. In case where dealer or broker or market maker may have to assume a risk position, publication may be delayed and may not be issued within the trading day.

Trade Reporting is a requirement that all trades in stocks be promptly reported to stock exchange so that exchange is able to compare dealing price and stock size of the order with previous deals and quotations, and to ensure that trade has been carried out at the best price available.

49. There is much more to trading rules than this cryptic summary. Most of these originate from regulatory framework; and an equally large number are imposed by brokerages as part of their own procedures of trading called **self-regulation**. There is a continuous back and forth between trading rules originating from these two sources. In times of crises or when abuse of these rules get reported, there is a great deal of rumination about inadequacies or outright failure of self-regulation. But such rumination is not illuminating, entertaining though they may be. Hence there is need for periodic reviews of both these sets of regulations to determine their shortcomings and weaknesses as a process, not for enacting ad-hoc measures.

Section 3: Trading in Derivatives

Options, Futures, Swaps

1. As an instrument, derivative is a shell of an asset or a stock, represented by a contract between buyers and sellers which is being bought or sold, not the stock or security underlying the derivative, in expectation of future prices and their consequent expected capital gains or capital loss on the underlying asset. Underneath a derivative being bought or sold, there always lies a security, a stock of a company or a financial asset, or a real asset like major commodities on sale in international commodity markets. There are a variety of derivatives. For starters, it would be sufficient to acquire an understanding of basic types of derivatives and their mechanisms of their trading from any standard text book or guide book. It gets fairly complex soon after one learns basics.

2. In derivative markets, a fundamental element is the prevalence of a *pair of opposites* with regard to market behavior, expectations and future prices of the asset on which the derivative is based. The trading contracts, whether concerning options, short selling, futures or swaps, each one involves a pair of opposite expectations with regard to future price movements in the market. Each time a derivative is traded, one of the two parties to the contract is bound to suffer a loss, unless the position taken is closed before the expiry period of contract. The loss is equal to the gain of the other party; hence *it is a zero sum game*; a point that is not highlighted in discussions of derivatives, so mesmerizing to many not familiar with or exposed to trading of derivatives.

3. This observation is diametrically opposite to the folklore that trading in derivatives, somehow enables investors to transcend risks of investing, or opens up opportunities of capital gains not otherwise accessible to common investors. A mistaken view has developed that if only derivatives are sophisticated enough, they would enable investors to achieve better results thorough a better management of risks and returns. Hence, more obscure the derivatives are, the more appealing they are to some investors. For academics, much of the charisma of derivatives stems from complex math formulae that present a challenge to so many, well beyond the capacity of ordinary investors.

4. But once all the trappings are stripped away, a derivative is no more than a hulk of its former self; the underlying security, no matter how sophisticated the stripping is. True, one could enhance leveraging in

derivatives trade; for small amount of exposure one could garner significant gains, if only the bet placed is the right one. By the same token, if an investor ends up being on wrong side of the bet, it could mean leveraged loss of major proportions and it often happens. It is not a rare event. There goes one more myth, down the drain. That is why most derivative based funds have extraordinary turnover; some managers clean up their desk, meaning sell out and close their positions that they opened in morning hours.

Options Trading

5. An *Option* is a contract giving asset holder the *right* but not the *obligation* to sell or buy an asset at an agreed price called *strike price* or *exercise price* over a short period in future which is of critical importance in the contract. If the contract stipulates a fixed date for transaction in future, it is a *European Style option*. If the transaction can be done a number of times in future over the contract period it is *Bermuda Style option*. If the time of transaction is chosen by the holder any time up to maturity date of the contract, it is an *American Style option*. In securities market, this contract could be a call option or a put option as below.

6. There are two types of options: *call options* and *put options* and their trading have very different implications for buyers and sellers in a call option, buyer of option acquires the right to buy shares from a seller for a premium over the contract period at an agreed price, the strike price, usually in anticipation that market price of the stock will increase and will be higher than the strike price. If indeed it does, buyers' gain is excess of market price over strike price less premium paid to the seller, thus generating a gain since buyer's exposure is limited to the premium paid. That is, if market price does not exceed strike price, loss to the buyer is the amount of premium paid, and that may not be full amount if position is closed before expiration of contract.

7. This transaction represents an *open position* for both. In this case, buyer is going long, while seller is going short, and these positions remain open until the time contract is exercised or expires, thus *closing* the open position for both the parties. For the seller, by *going short* through call option, the gain is the *premium received* on an open position. This open position is acquired in the anticipation that market price of the stock will not increase; it will not reach strike price, much less exceed the strike price.

8. Further, option may not be exercised by the buyer in time; that is, it may expire before any price movement occurs. Even if it does expire, seller's gain is still there. It is the premium plus increase in the market price up to the strike price, over and above the original cost of the stock in seller's portfolio, if and only if it is a *covered call option*, that is, seller already owns the stocks. If seller does not own stocks and has issued an *uncovered call option*, then seller is exposed to risks, because seller will have to buy and deliver the stock at market price in excess of strike price in case option is exercised by the buyer during the contract period and *before* expiry date.

9. A *put option* is opposite of call option. It is a contract for a specific period of few months granting the buyer, for a *premium paid*; the right to sell a stock at an agreed price, usually in the anticipation that market price of the stock will decline and may be lower than the strike price before option contract expires. If it does, buyer's gain is excess of strike price over market price of the stock, less premium paid to acquire the option. This option is attractive to the buyers who acquired stocks beforehand, but now anticipate a decline in its price and want to limit their loss exposure, especially if the strike price is equal to or lower than their original cost of acquisition. But for the seller, the risk is significant, because if indeed market price does decline below strike price, seller may have to buy the stock at strike price higher than market price, less premium received for selling the option contract provided buyer exercises the option within contract period.

Selling Short

10. Short sale of stocks is a fairly common practice, though it is more of a speculative variety, and for that reason a very risky venture, where the expectation is that the price of a stock is likely fall in the near future. If the downward expectation of short seller materializes, a profit is made with the drop in stock prices, regardless of overall market trends; that is regardless whether it is a bulls market or a bears market. It does not matter. As long as investors' expectations materialize; that is, as long as there is a decline in price of the stock on short sale, short seller makes a profit.

11. Short selling is allowed in most countries, including Pakistan, and is an important mechanism available to *investor-traders* in securities market. In Pakistani context it would be rather odd to call short sellers and their buyer's serious investors. They are out there playing the market at opposite ends of expectations, more akin to betting than serious investing.

12. There is a belief that short selling keeps under check unwarranted optimism of investors, otherwise they may get carried away and thereby prevent the market from reaching quality standards of price-setting. The reverse of this view is that short selling breeds angst among investors and creates confusion, because many short sellers are not above engaging in all kinds of tactics to see that price of the stock does go down, and swiftly so. They are not passive, much less objective by-standers in the market, given their highly leverage stakes in the outcome, If price goes down, they stand to gain significantly ¹. Consequently, they engage in *stock bashing*, a term signifying spreading false rumors about the stock or its parent company, its management practices, and its profitability outlook.

13. For these reasons, short selling is highly regulated. There are strict rules of trading and there are margin requirements. Normally, investment in securities is undertaken in expectation of capital gain and a stream of dividend from dividend bearing security, though not always. Profit is to be made by buying securities that are likely to post gains in their prices in future in bulls market. Is it possible to make a profit on opposite side as well in the reverse, when price of a stock is expected to fall? It can be done through short sale, and it happens frequently.

14. A short sale occurs when an investor sells shares of stock at current market price, even though he does not own the stock in his portfolio, and that is an important proviso. At time of sale, broker of the investor arranges to borrow shares of stocks being thus sold either from his own portfolio or from portfolio of another investor, with a clear stipulation that short seller will return borrowed shares, the requisite number of shares that were borrowed. In the meantime, if price of stock does indeed drop down, the short seller purchases the requisite number of shares that were borrowed and returns them, thereby covering his short sale, and the open position is closed out. Profit on short sale is the difference between sale price of stock and its purchase price time's number of shares involved ¹.

¹ One of the entertaining download that you can ever do is to trace a stock on any of the major websites and see the flow of messages of the **shorts** and their opponents, the **longs**. It gets nasty sometimes, but remains entertaining. Besides you are likely to learn a thing or two about a stock, and you may also be misled. Still, you get stock information that you will not encounter elsewhere except may be in bulletins of paid advisory services. But those pieces are too expensive and are nearly always hopelessly outdated and therefore useless much of the time to ordinary investors. But you must follow a cardinal rule: never you any trade in stock market based on reading the stuff doled out by **shorts** or **longs** or these advisors, complete with their invectives, herding behavior, and jilted commentary.

15. Sounds simple indeed, but it is very risky. What if price of stock does not decline; or worse yet, the prices increases? The short seller has to buy the requisite number of shares that were borrowed at the prevailing price, no matter what it is, higher or lower than sale price, and has to return those borrowed shares. If the price rises, there is a loss to the short seller equal to the difference between original sale price and new purchase price, times number of shares involved.

16. Notice that short sale started when seller did not own shares of stocks, and if the investor did own the shares, it is no longer a short sale. In a short sale, investor is playing on price margin without committing own investment funds. If the expectation of price rise does materialize, a significant gain is to be made without investing own money in stock. Hence, returns on the venture are highly leveraged. By the same token, if there is an increase in the price of a stock then short seller is facing a serious loss, a leveraged loss on the short sale. The magnitude of loss depends on price differential and size of exposure involved in short sale. This also happens and frequently, wiping out short sellers.

17. Short selling has little to do with fundamentals of stocks or financial performance of the company concerned, but it has a great deal to do with something rather nebulous, called *market sentiments* regarding future trends of a stock price, and that also not across the spectrum of market participants; rather only a segment of it that believes in the *forked price* movements. This simply reinforces assertions made earlier. That is, in determining returns, what matters most are expectations of returns over the future, rather than past performance, or even fundamentals underlying security concerned. A short sale is not like derivative trading. If the open position is not closed before expiry date, the contract is called in and if this happens, sale and purchase of shares is eventually involved.

Trading in Futures - Hedging

18. Futures are contracts, binding on parties, buyer and seller alike, to perform according to the stipulations of trading contract specifying a price on a certain date or time in future, a quantity, and a date of expiry of the contract. There are several types of futures; common among these are *commodity futures* and *financial futures* and both of them are contracts to buy and sell at a future price quoted in the market for a future date. Commodities *futures* are mostly grains like wheat, metals such as gold or

silver, minerals like oil. Financial *futures* are mostly commodity *futures*, or stock index *futures*, or currency *futures* for major world currencies like US dollar, British pound, Euros, Japanese Yen. Meanwhile Chinese Yuan is catching up fast given the strength of Chinese economy; a very strong foreign trade balance in its favour; and massive accumulation of foreign reserves. This is not one time or a short term phenomenon as often mistakenly perceived. This trend has endured for nearly two decades; it is a long term structural change.

19. The size of global futures markets is very large and growing. Trading is done at well-established *futures* exchanges, worldwide, but mostly in developed financial centers. There are local or regional futures exchanges for commodities like sugar, cotton and edible oils. Their *futures* contracts are traded at OTC market, a computerized network of traders acting on behalf of buyers and sellers. Financial institutions also participate in *futures* trading.

20. *Futures* and *forwards contracts* are alike in that both are *hedging* operations. The main objective of incurring contractual obligations in advance is to hedge against unfavorable price movements in future, though what is unfavorable constitutes diametrically opposite expectations of future price movements held by buyer and seller. For a buyer, the purpose of entering into a *futures* contract or a forward contract is to lock in currently prevailing price of traded item at a future date; that is, to hedge against increase beyond a threshold in future price of whatever is being bought and sold. For seller, it is just the opposite; the purpose is to reduce possibility of a loss should future price decline against currently prevailing prices, which does happen quite often.

21. Forward contracts are mostly hedging operations in currencies through agreements to buy and sell at a specified future price, namely the exchange rate at a future date. The difference is that forward contracts are traded in OTC markets while *futures* are traded both at the exchanges and OTC markets. Further, there is a major difference with regard to performance. While *futures* contracts are subject to margin requirements and status of margin deposits both by sellers and buyers is daily adjusted at the close of the day that is *futures* are *marked to market*. Forward contracts do not have margin requirements; a performance risk, or a credit risk involved.

22. Hedging and trade in *futures*, however, is very risky for all, particularly for small investors who do not have access to timely information, or the wherewithal to be equipped for such trading. There is no way to avoid risks underlying *futures* trading. As it is, *futures* trading activities are a means to shift risks around, not to eliminate them, because risks underlying a security

cannot be eliminated; they can be mitigated or passed on. There is a significant financial impact of hedging on industry price level if undertaken on a large scale; both ways, upwards and downwards.

A case of Oil Futures

23. A typical example of commodities futures in our times could be crude oil, actively traded around the world in futures market. The quotes on oil *futures* are worthy news items prominently displayed in financial pages of even local news papers. The buyers and sellers of oil futures may be the principals, namely oil producers, small or large, multinational oil producing companies; or oil importers, users or their agents, mostly petroleum product companies, refiners; or in between entities like crude oil or petroleum dealers; or investors; or only a hair breadth away, plain speculators. It is a crowded global market. Buyers and sellers of oil *futures* come in all shades. Market does not discriminate against any one as long as they abide by established processes, rules, and regulations for *futures* trading.

24. Oil *futures* are contracts consisting of a number of lots of 1000 barrels each, stipulating a specific price per barrel in future, with typically three to six month delivery. The price-hedger buys the contract in the expectation that oil price will *raise* more than stipulated in the contract, and if indeed it does, the contract will help save cost of purchase at market price. The gain to price hedger, the *buyer* of the contract, would occur only if *future price* in the market is higher than price stipulated in the contract, the *contract price*, if indeed such market price comes to prevail at end of contract period. But if price rises but remains below contract price; or worse, if price falls, the buyer of contract, the price-hedger, ends up with a considerable loss on *futures* contract if this open position is not closed before the date contract expires.

25. But contract seller's expectations are just the opposite; that oil price will *fall* further and come down from present level of *spot price*; or it may rise somewhat, but future price may remain well below contract price. If this happens, the seller of oil *futures* ends up with a considerable *gain* on *futures* option and its trade. These gains and losses are mirror image of each other, and that is why they are called zero-sum game.

26. There were two types of hedging operations in full swing in oil *futures* in the fourth quarter of 2008. One was hedging by oil industry to reduce their exposure to further oil price increase in future. The other type of hedging

was to guard against exchange rate risk, since oil price was denominated in US dollars per barrel while the dollar was sliding in forex markets. The purpose of hedging operation was the same; that is, to buy oil *futures* to mitigate these risks, and that's where this case story begins.

27. Trading in oil futures in the US was restricted to oil companies and producers of petroleum products and was limited to trading at commodities exchanges, like Chicago exchange under strict regulatory controls. But it has been opened up, and anyone can buy these *futures*. Among them, the speculators and currency hedgers found trading at Chicago exchange restricting because of market regulations, so they opened up their own exchange, International Commodities Exchange in London, to bypass regulatory control of the US. Evidently, London exchange does not face the same restriction as applicable to Chicago exchange.

28. Oil *futures* in late 2008 were being traded at a time of price volatility never experienced before. Nevertheless, a trader could specify a *future price*, say of \$180 per barrel while trading a lot of 1000 barrels of oil, as opposed to the *spot price* of \$135 per barrel prevailing in the market at that time. In this example, the seller was agreeing to deliver one lot of 1000 barrels of crude oil at the future price of \$180 per barrel for a cost of \$180,000 in the last week of December, if the contract remained intact and the position was not closed out before delivery. In practice, a very small proportion of commodity *futures* contracts are settled through delivery; most are settled by closing open positions on *futures* exchanges.

29. The seller was being *short on oil*, and the buyer, maybe an airline or a thermal power generating utility, was being *long on oil*. Both of them were taking a position in *futures* market based on their expectations regarding future price of oil at end of contract period, where adversity of price movements meant changes in market opposite to their expectations. This needs some explaining, though for *futures* traders, its understanding is almost instinctive; for the beginners, it is complex and challenging.

30. For *the buyer*, the hedger, expectation was oil price will increase more than \$180, the contract price, and his gain would be the difference in market price in excess of contract price at the end of contract period. If the position remained open and contract expired, the *short seller* will have to buy at whatever market price prevailed in the future, perhaps more than \$180 per barrel, and sell back to the buyer at contract price of \$180 per barrel, below what it may have cost to purchase oil in open market. This price differential is gain of the buyer, and it is the loss to seller in exacta mount.

31. The *seller's expectations* were just the opposite; that the oil price will not rise as much as stipulated in the contract; or even if it did, it will never reach contract price of \$180 per barrel; in fact it may come down and be below \$135 per barrel. If his expectation were to materialize, at expiry of the contract, seller will buy at a market price anywhere below \$180, or well below it, but the buyer will have to pay \$180 per barrel as per contract, regardless. In this situation, buyer of oil *futures*, the price hedger, ends up with a considerable loss on *futures* contract, which is exactly the same as gain of the short seller on the contract guaranteeing him a handsome return. The buyer may not have been praying hard for oil price to go up because his costs will increase anyways, no matter how *futures* contract turns out; but the seller was praying hard for the price not to rise; if it goes down, even better.

32. As it turned out, oil prices came down significantly from a record high of about \$150 per barrel to \$130 barrel by end-December. The trend continued, reaching a low of around \$60 a few months later. What havoc was wrought by such volatility and the lessons learned will remain illustrative to *futures* traders. But the outcome of all this oil *futures* trading activity, by speculators and futures trades, was a significant increase in demand of oil *futures*, putting upward pressure on oil prices, aside supply-demand and other market pressures worldwide. How much of speculative increase in oil prices in late 2008 owed to this phenomenon is difficult to say but it was a contributing factor. How decline in oil prices impacted on futures trade? Clearly, it added momentum to a downward spiral that followed in 2009.

33. For speculators and currency traders, not so much the oil or petroleum companies, less stringent trading rules and regulations are most attractive, such as those concerning *margin cover* - the *cash collateral* - for borrowings to buy oil futures. A margin cover of as low as five percent needed at London exchange is fairly lucrative, as compared to margin requirement of fifty percent in stock markets and commodities markets in the US. This arrangement is even more risky if there were to be a substantial decline in interest rates to boost economic revival as happened in the US.

34. There is an extensive literature on short selling; signifying role of expectations in pairs of opposites. How market savvy traders end-up with such diametrically opposite ends of price movements is being debated, and this debate is quite instructive. The lesson one learns is that price movements in derivatives or *futures* market are utterly unpredictable, and this is not the arena for ordinary odd-lot investors. The prospects of loss are as high as prospects of gain. Is this serious investing to enhance corporate investing or corporate productivity? That remains an open issue.

Portfolio Management: Volatility- Managing Returns against Risks

35. A number of standard references are out there on this central topic of investing and managing a portfolio. It is not possible to summarize this literature in a few pages; but for its relevance to applied side, following is a rather cryptic review of essentials. The starting point is that risks cause uncertainties with respect to future returns, and hence an understanding of risks is vital to managing securities portfolio. Uncertainty is the rule; assured outcome is rare, an exception; be it in the context of securities market operations or any business engagement. How investors deal with uncertainty is an engrossing subject.

36. Safeguarding portfolio against risk and price volatility is a major concern for all investors, particularly portfolio investors, given prospect for loss of net worth because of decline in market value of assets held in the portfolio. The risk perception is rooted in the time horizon while prospects of volatility are hemmed within the time horizon. Price volatility is a short term phenomenon but has the potential of eroding net worth that may take years to recapture. Thus both risk and volatility are perceived in terms of adverse fluctuations in the market value of assets held in the investment portfolio over a specified time-period.

37. At the outset we need to distinguish between *security-specific risks* and general *market risks*. Security-specific risks pertain to financial and business strength and *expectations* of performance of the company issuing the security and affect the market price of only the security concerned, rather than spilling over to other securities, except if the company concerned happens to be a market leader. Much information concerning business and financial performance is common knowledge to security analysts and investors alike owing to disclosure requirements, and are figured in estimation of returns. These are called *internal risks*, because they pertain to company concerned and they can be mitigated, if not eliminated altogether, provided management takes corrective measures.

38. In contrast, there are market risks which affect the entire range of a class of security or entire market; for example interest rate risk discussed below. Most of financial market risks prevail outside of the frame of reference of any specific security and have little to do with the intrinsic quality and value of a given security as such, though affecting its price in the markets. Hence these are regarded as *external risks*; external to the firm

whose stocks are being traded. No amount of actions by a single firm can over-ride the impact of external risks on market price of its security.

39. The baggage of market sentiments is too heavy to be counterbalanced. There are just too many types of market risks to contend with, much less to take any evasive action even if advance indicative information is available which generally is not. Therefore, external risks are taken as given for all practical purposes across businesses. They define and mould business environment in general, but their impact is palpable, and they percolate down to financial statement of most companies and businesses. Further, external risks, though their impact is widespread, do not affect all firms in a similar fashion because there are differences among firms to the degree of exposure to these risks. For example, exchange rate changes, particularly devaluation is unlikely to affect all firms in the same manner compared to those who depend on foreign trade.

40. Perceptions of risks are intricately tied up with future returns, shaping investor's behavior in securities markets. What matters to investors is the *expected return* from investment in a security over a specific time horizon. Past returns are relevant, but past performance cannot be any guarantee to future performance. Hence, to what extent both internal and external risks affect *expected returns* on a security affect investment by individual investors or portfolio investors needs to be sorted out.

41. Likewise, we need to distinguish between risk-based *expected returns on a security* versus risk-based *expected returns on a portfolio* consisting of similar or disparate types of securities held by a portfolio investor. The portfolio risk is not a simple summation of individual security risks, because market conditions do not affect all businesses in similar fashion alike. The response to market changes embedded in expected returns of each security in the portfolio does not capture the impact proportionally. The reason is that underlying probabilities of response events is different.

42. Much of discussion regarding market risks and returns is with respect to a single security like a bond or a stock, not so much for a portfolio, consisting of a variety of securities with different prices, yields, dividends or periodic cash inflows and rates of return. But there are well developed and sophisticated methodologies to estimate features of both individual security and portfolio risks and returns. There is a good deal of theoretical and applied literature on these estimations and their results. Obviously, the two are not the same; that is, one cannot simply do an average of rates of returns for all types of security held to arrive at portfolio returns because the underlying risks and return are so starkly different. But portfolio managers

do this estimation all the same and they have to, whether it is back of envelop type calculation, or by employing elaborate mathematical models of risk and returns. For them it is a matter of routine, because returns are only yardstick of performance that matters to investing public, howsoever garnered.

Systematic versus Unsystematic Risks

43. Risks in securities investment is classified as *systematic risks* versus *unsystematic risks* and commonly used in the literature. Systematic risks emerge because of market upheavals and have little bearing on fundamentals of securities being trade in the market, like value of shares based on earnings. These market risks are not limited to economic or financial shocks alone. They could stem from political upheavals and be as forceful as any. Loosely defined, they are part of external risks but a sub-set thereof pertains to financial market operations. In this sense, their classification overlaps with others. They affect every segment of securities market; some more, others less; but are not specific to any group of businesses or class of securities. They are classified as market risks, interest rate risks, and exchange rate risks which affect business performance all around.

44. Systematic risks are *not diversifiable* for the reason that these are external to market. No amount of portfolio management can overcome adverse impact of systematic risks. Diversification would mean to sell off one's position and acquire another position, but to whom and how? There is no place to run. In contrast, there are un-systematic risks that are internal to the firm issuing securities in the market, either stocks or bonds and they vary greatly from one security to other. These are business risks particular to the firm, though they may have common features among a group of firms.

45. If one looks at it closely, there is hardly anything systematic as such to systematic risks in the applied realm. These are as random and as unpredictable occurrence as any, but have a great deal of impact when they do occur. These are market-wide or system wide risks that investors face and are similar to system-wide risks prevalent in the banking system at any time. In fact, these risks are the same as those called *systemic* risks in the context of banking credit operations. Similarly, there is hardly anything un-systematic as such for risks associated with the entity issuing securities at institutional level; or their counterpart, industry or sectoral level risks. These risks, attributed to an industry or a sector, or a company within the industry.

46. This is not an exercise in semantics; rather a matter of conceptual clarity. These are business risks pertaining to a single sector or sub-sector and are always changing in their contents and impact. Within a sector, business risks of a company can be pinpointed with a great deal of accuracy within the profile of overall risks being faced by the sector, whether domestically or abroad. This is standard fare of risk analysis of corporations.

47. *Market risks* cause changes in returns on securities via affecting investor expectations concerning business profitability over the short term, which affects earnings per share (EPS) estimates across the board. Investor expectations are a complex matter, shaped by not only economic and financial matters but are also affected by phenomenon which may have little rationale; like herd behavior, investor psychology, market sentiments, only if market could supposedly adopt human like qualities; '*irrational exuberance*', or overreaction. Once herd behavior or speculative attitude has taken hold, downwards or upwards, either ways, it is difficult to reverse until it has played out its momentum. All of these have a potential for explosive shifts of such a rapidity and force that is difficult to counter by sensible means by policy makers, regulators and large businesses.

48. Among systematic risks, *interest rate risk* is fairly well known because it is widespread and affects both systems of finance, direct and indirect, namely, banking and securities markets. Its impact on the banking system is far more pervasive and substantial. Interest rate changes affect market valuation of securities directly, particularly debt securities like bonds, and indirectly through changes in general price level, affecting expectations of inflation. This impact is more circuitous but equally significant for financial scenarios of businesses and companies whose securities are being traded in the market.

49. The direct impact of interest rate changes on the price of bonds is well recognized and so is the impact on stock markets. Generally, an increase in interest rates lowers the price of bonds; and vice-versa. This is fairly well established. It also adversely affects price of stocks because in part, a rise in interest rates makes it more costly to borrow on the margin and play the market as the pros frequently do. Business firms and corporations make heavy use of trade credits, not to say financing inventories and production lines from bank borrowings. A rise in interest rates raises their costs, and if there are no counterpart increases in their product prices, their profitability is hurt, as are their earnings, and hence share prices at stock markets.

50. Finally, inflation and price level changes are intimately linked with interest rate for reasons outlined above. Monetary authorities regularly use interest rate changes as a major monetary tool to curb inflationary trends.

Interest rate changes cause a change not only in the cost of funds, but they also affect levels of liquidity of financial institutions and their customers alike, causing a squeeze or relaxation in the expenditure outlays and purchasing power in the economy. This affects financial state of businesses and corporations causing changes in securities prices and thus adding to the uncertainties of expected returns to investors.

Asymmetric Information Risk

51. Asymmetric information risk concerns market conditions of a security that may not be widely known to investors except for a select group of people who may have better information owing to their privileged access. Worse yet, they may be privy to insider information not available even to those working in a company, such as latest changes in financial status, prospects of earnings, extra-ordinary production and marketing events, impending windfall gains such as award of a large contract, or financial setbacks to the company, like capital charges previously obscured by innovative accounting techniques. Often, insider information could cause significant benefit or damage to investors hence it is assiduously sought after in spite of all the injunctions and rules about it; and most often it works.

52. The deliberate nature of asymmetric information is more worrisome. It surfaces frequently, but after it has played out its innings. Hardly ever it is discovered *ex-ante*. Corporate executives are not unknown for withholding critical information from public which they are required to disclose by law, or paper wrapping them to appear innocuous, often misleading entries into financial statements. The indication appears when insiders, who are also major shareholders of a company, begin to trade their stock options or shareholdings in the company, which they have to pre-announce by rules of trading. By the time this news hits the market, it is too late for investors to take countervailing actions. In securities markets, even savvy investors ones may not have all the information concerning financial strengths, prospects or problems of a company whose stocks they are trading in, but insiders may have this information.

53. Asymmetric information problem is not exclusive to securities markets, affecting only the system of *direct finance*. Similar asymmetries prevail in financial intermediation for banking system, and those are equally inscrutable to the parties involved and those are well documented from applied experiences both in a country setting and comparative setting. If asymmetric information problem gets bundled up with moral hazard in

banking or insider trading in securities market, it could cause system wide financial crisis, including collapse of securities and currency markets. It has happened before, such as the East Asian crisis of late 1990s. The crisis cannot be pinned entirely on asymmetric information; there were other contributing factors as well.

54. There are a few theoretical concepts which need to be looked at a bit further. Among these, we need to refer to *efficient market theory* or its counterpart *random walk* theory, another name for efficient market theory. The theory states that pricing of an asset is based on comprehensive information about asset concerned and that there are no information asymmetries - a mighty leap of faith in the market mechanism; if and only if markets are functioning properly. All this will lead to correct pricing of securities in the market.

Operational Risks

55. There are several operational risks in securities markets. Some of these transcend to or from financial intermediation system such as borrower risks, industry risks and sector risks. There is hardly any difference among them. Others are specific to securities market operations; like insider trading, front running as discussed below. Among these, *borrower risks* are associated largely with margin finance. To the extent investors are using margin finance in expectations of quick gains; borrower risk converges towards interest rate risk. Besides interest rate risk, there are other risks as well, depending on the exposure and diversification of investor portfolio. If purchase of securities is financed from borrowed funds, it exposes the investor to risk of large losses if adverse price movement were to occur in securities markets, even if there were no interest rate changes, no undue exposure to risky stocks and bonds, and no concentration in a few lines of investment, or in a few sectors.

56. *Business risks* are tied with operations of businesses and corporations who are generally adept at keeping risks internal to the firm under control. But risks external to the businesses pose a threat, and they are systemic risks of economic and financial environment, instabilities and upheavals discussed earlier. Normally business risks are internalized among the well-established and well-managed companies. Fringe line businesses and those engaged in speculative ventures have difficult time to internalize risks. The monetized value of risks shows up in financial statements, causing changes in the value of securities issued and traded in the markets.

57. Similar is the case with *sector risks*. At times more risky sectors may attract investors because risky sector also promise larger returns, if expectations materialize. Quite often, the urge to make large gains, and quickly so, degenerates investment in risky sectors into pure speculation. Often securities of certain sectors would show persistent gains not warranted by industry fundamentals to justify substantial investment. But prudent investing requires identification of risks and their valuation in investment decisions. Similarly, risks originating from *insider trading* and *front running* are embedded in stock trading, and they could spell major losses to investor. But there is hardly much recourse to deal with these risks at investor's level. These risks are exogenous to market operations of a single investor.

Chapter 4: End

Chapter 5: Short Term Financial Markets - Pakistan Money Market, Treasury Bills

Thematics

Pakistan Financial Markets - Short Term Money Markets - Generic, and in Pakistan

Pakistan's Experience - A Historical Overview
Money Market - Reforms and Transformation
Components; Structure, Size, Relative Shares
Functions of Money Market -
System Liquidity; Interest Rate Determination- *Short Term*
Operational Environment - A Summary View
Interface with Monetary Management
Roles of Central Bank, Government
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Treasury Bills Markets

Role and Perceptions: *Central Bank, Treasury, Banks*
Treasury Bills, Size, Trends, Impact, *Comparative*
Government Borrowings; Floating *Debt, Revolving Credit*
Primary Market Operations; Auctions, Participation
Yields, Discounts, T-bill Rates and Interest Rates - *Short Term*
Markets and Government, SBP - Management
Markets and Banking Operations, Liquidity and Reserves
Operations, *Secondary Markets: Central Bank Funds Market*
Discount Window / 3-day Repos, SBP, LoLR
Interbank Funds Market, Repos, Call Money
Secondary Market - Trading, Discounting, Turnover
Interest Rates, Impact on Money Market Rates

Performance, Evaluation, Prognosis - A Summary

Short term Financial Markets - Pakistan

1. In Pakistan, as in all other countries, short term markets consists of money markets including market for Treasury bills (T-bills); short term funds market; currency markets, foreign exchange (forex) market; and commercial bills markets. Among *money markets*, the most significant one is Treasury bills (T-bills) market since its operations are fairly large. These operations are primary vehicle for SBP's intervention in money markets for monetary management and consist of what is collectively called open market operations (OMOs) which impact on money markets. SBP's discount rate, called *policy rate* or *bank rate*, is central to structure of interest rates and monetary management over any slice of short term period.
2. Money market operations affect market liquidity levels through their impact on banking system liquidity which is key factor in determining banking credit flows. This occurs partly in response to changes in banking system liquidity and changes in the structure of short term rates of interest prevailing in the economy, coming mainly from operations of secondary markets of Treasury bills. Therefore, an understanding of money market structure, its mechanisms and operations is important.
3. Money markets in Pakistan over the past decade have come a long way from their infancy. They are now fairly well established, with a meaningful and effective system of trading in their major instrument, namely T-bills, which also is a critical instrument of monetary control and market liquidity levels. Likewise, short term inter-bank funds market is also well established. It has enhanced its depth with regard to its size, participation, and market based interest rate determination since the advent of KIBOR in early 2000s. The foreign exchange market is well organised and has come a long way from what it was in the late 1990s. It is operating in an environment of reasonably free floating exchange rate and established linkages with global currency markets. Commercial bills market is also operating, but is fairly small compared to three major ones named above.
4. There has been a transformation of financial markets of all variety over the past decade, both short term and long term, owing to various initiatives taken as part of financial system reforms and restructuring that began in earnest in mid-1990s, and continued through the past decade. These efforts have been focused on reorganization of financial market, establishment of

their infrastructure together with leading institutions; an overhaul of their operational mechanisms; opening-up to global markets and establishment of linkages with them; transparency of market processes and procedures. This task is not over yet. A review of salient elements of reforms is essential for a study like this and is interwoven, to the extent feasible, in various sections of this chapter and also Chapters 6 and 9.

5. From the very start of revitalization of financial markets, SBP as the central bank has been pre-occupied with development of short term financial markets, specially money markets, T-Bills market, and foreign currency market. This is because entire apparatus of *transmission mechanisms of monetary control* and regulation depends on a smooth functioning of these markets and their operations. At the same time, SBP's involvement shapes operations of debt markets as well stock markets primarily through actions taken that affect the structure of bench-mark interest rates and their stability, both in the short term and long term. This evolution of long term interest rates is still ongoing. The role of SBP in this context is similar to those of central banks in other emerging market countries; that is, to promote conditions necessary for evolution of bench market long term interest rates through bond market development.

6. In tandem, Securities and Exchange Commission of Pakistan (SECP) has been pre-occupied with the development and operations of equity markets and stock exchanges, conceding to SBP a lead role in money markets, debt markets, that is, bond markets, interest rate determination, financial and economic stability. This *symbiotic* mechanism is similar to role of these two regulatory bodies, the central bank and Securities and Exchange Commission almost everywhere; whether among nascent financial markets of developing countries; or among *emerging markets*, the fast growing and more successful developing countries; or among well established markets of advanced countries.

Functions of Money Market

Liquidity Management and Monetary Growth

7. The primary function of money market as a conduit for short term financing is two-fold. *The first function* is to provide liquidity, and thus furnish funds for short-term liability management conducted both by government and private corporate sector. Operations of money market are not simply confined to buying and selling of market securities and funds

thus furnishing liquidity; rather more significantly, it involves determination of short term interest rates in the process of price discovery. This occurs in a complex and overlapping manner within prevailing market environment, and major economic and financial trends as forcefully exhibited by movements in interest rate, exchange rate and the general price level.

8. For instance, operations of treasury bills market mainly provide bridge finance to the government at *T-bills rate* to facilitate its budgetary operations during the course of a fiscal year, and to provide liquidity to Treasury for this purpose. For its investors, the banking system, T-bills provides decent returns in a risk-free security and a guaranteed income flow, together with a mechanism for discounting which ensures ready availability of liquidity to the banks, whenever the need arises. In the process, T-bill rate becomes the leading interest rate or reference rate in the money market. Similarly, operations of interbank markets provide bridge finance for short term liquidity to the banks in the private sector at *call money rates* or some variant thereof such as KIBOR, besides providing market based returns, though in a fluctuating market for short term funds.

9. The *second function* of money market is to act as conduit for monetary control and stabilization. Typically, central bank intervenes to regulate liquidity levels of the banking system, and it does so through markets for treasury bills and its Repo market. But from the vantage point of financial system operations, role of money markets is not limited to supply of liquidity, be it the government or the private sector. It is more substantial. Namely, money markets provide an operational mechanism to the monetary authority, the central bank, to stabilize interest rate and *price level* thereby keep inflation under control over the short term, where long term is perceived as a string of short term periods. These operations of central bank are vital part of its monetary control mechanism, affecting supply of banking credit to the economy, and thus affecting short term macroeconomic trends in line with objectives of short term stabilization.

10. Interventions of central bank in money markets are conducted through open market operations (OMOs), mainly through T-bills pegged to the *policy rate*, the discount rate of central bank, and only partly through trading of medium to long term government bonds. The transmission mechanisms of monetary policy instruments operate primarily through money markets. Therefore, monetary control and central bank's market interventions are deeply intertwined, guided primarily by objectives of short term economic management, by financing needs of money market participants, management of monetary overhang if it appears, and exigencies of stabilization.

11. A primary tool of monetary control is *interest rate*, where treasury bills rate serves as bench-mark rate for various financial instruments of short term maturity. To the extent treasury bills market is open and liberalized as it is in Pakistan, interest rate on Treasury bill is determined by the cut-off yield at *primary market* where periodic auctions of treasury bills of various maturities are conducted. This yield rate serves as a bench-mark in interbank market for funds and it affects call money rates, or its variant, the KIBOR, (Karachi Inter-Bank-Offer- Rate) which in turn is the peg rate for credit markets. In this fashion, money market operations determine structure of short term interest rates which is the main instrument of monetary policy control at any given time. How effectively changes in KIBOR are transmitted to weighted average lending rate of banking system is critical for monetary transmission mechanism. In Pakistan, past experience has shown that major swings in KIBOR are not translated in similar movements in the weighted average lending rate of banking system. If indeed this is the case which it appears to be, it adds one more twist to monetary management. *For details on KIBOR and interest rates in Pakistan, see Chapter 5, Volume I.*

12. At any given time, structure of short term interest rates prevailing in money market and the price level, together, affect *exchange rate* of domestic currency in *currency markets*. Close behind the nominal exchange rate are real exchange rates that profoundly affect both economic and financial outlook of an economy over the short run. One could argue that exchange rates are determined in global currency markets depending on net financial flows over a specific period, and have little to do with what transpires in domestic markets with regard to interest rates and the price level. This is simply not true; it is quite the reverse depending on the strength of the currency, and this strength derives from how healthy and strong is domestic economy. While it is true that exchange rate is determined in global currency markets, but it is primarily affected by rise in domestic price level relative to similar rise in price level of its foreign trade partners. Relative inflation rates bear down on real exchange rate, where price level, is sensitive to structure of interest rate prevailing at any given time, which in turn depends on the short run economic performance, growth and stability. That is the inter-linkage; it can not be circumvented. Such has been comparative experience.

13. Comparative experience has also shown time and again, that interventions in international currency markets to achieve a desirable level of exchange rates has only brought grief and stupendous losses to few central banks in the past, who tried to do just that, be they in emerging market countries or in developed countries. The reason is that global currency market is very large and its movements are so swift that it can hardly be swayed by intervention of a single central bank to materially affect exchange

rates of a local currency *vis-a-vis* major reserve currencies which are invariably tied together. Movements of their exchange rates have a dynamics of their own, independent of what some central bank is trying to accomplish in this immensely large global market.

14. This battle among giants - central banks, large financial institutions, a horde of currency traders, importers and exporters, large firms and other participants, is played out in international currency markets, while all others are assigned a seat as spectators. Past experience has also established that instability of domestic price level does impact strongly on exchange rate of the country concerned *vis-à-vis* reserve currencies. Interlink, the causal chain, is meaningfully traceable only that far, but is fairly well known. The direction of how exchange rate will behave can be discerned but it is impossible to predict what exchange rate will be on any given future date.

15. Comparative experience has also shown that a central bank can pursue only one objective or the other at a time, not simultaneously. That is, a central bank can pursue interest rate and price stability, but not exchange rate stability at the same time. If it pursues price stability, exchange rate stability cannot be ensured; likewise, if it pursues exchange rate stability then it compromises domestic price stability. Provided, and it is a significant proviso, financial markets are reasonably developed, are largely open and market-based; while both current account and capital account of balance of payments are reasonably open to foreign markets and capital flows. A very strong proviso indeed. How one goes about reconciling these conflicting objectives in a real world setting susceptible to global impact, is indeed a challenge for the monetary authority, specially in post-reform period of liberalized and open markets, open capital accounts, free floating exchange rate, market determined interest rates and market-based price level.

16. For these reasons, a review of short term financial markets is not meaningful if it concentrates only on market magnitudes and fluctuations therein, including changes in their components, leading or otherwise. Such review is a compendium of what went up and what went down, without furnishing an understanding of why these market magnitudes behaved the way they did; why these changes occurred in the first place; or what were the driving factors that shaped the outcome. These aspects are difficult to analyze without delving into monetary policy stance and macroeconomic exigencies which led to interventions of the central bank, which in turn caused these changes. Hence, an analysis of interest rates and their underlying factors is necessary to understand how money markets respond, what is the impact on monetary magnitudes, and how it shapes trading and holdings of various types of securities by the banking system at large.

Section 1: Treasury Bills Markets - Orientations *Mechanisms: Auctions, Primary Markets*

1. Money market in Pakistan consist of short term government securities, mainly Treasury bills, including a market for central bank OMO based funds; repo markets mostly for T-bills; an interbank market for very short term funds; call money markets for overnight funds; a market for foreign currencies, that is, foreign currency liquidity; a very thin market for short term commercial papers, IOUs and bills of exchange. There are no secondary markets as such for securitized loan instruments or deposit instruments like Certificates of Deposits (CDs). Except for T-bills market, and its interbank market for *repos*, all other markets are fairly narrow and are in various stages of development.

2. From early-1990s onwards, the government and SBP undertook a series of reforms and implemented various policies and procedures to *revitalize money markets* which have transformed markets in Treasury bills and other government securities such as Pakistan Investment Bonds, and have assisted in bond floats by large private sector companies mostly banks and other financial institutions. The interbank market operates on stronger footing after the introduction of KIBOR which now serves as bench-mark rate in money markets for short term funds. What reforms were undertaken, how were these implemented is now history, but it is germane to money and capital markets alike and is treated as called for.

3. In Pakistan, dominance of T-bills market over other components of money market is overwhelming. Therefore, money market in Pakistan is practically a market for one instrument, namely T-bills of short term maturities originated by government. Private corporate sector participation and origination of short term securities in money markets from trading business is limited to transactions of bills of exchange while bulk of trade financing is done through letters of credit. Money market development in private sector instruments, therefore, would depend on the evolution of corporate sector financing patterns and short term liquidity needs of banks and businesses, given alternative financing sources if available to the private sector. For all practical purposes, operation of T-bills market is what counts for money markets; hence an understanding of T-bills market is essential.

4. There are three parties to the origination, issue and marketing of Treasury bills. These are Treasury, the central bank, namely SBP, and banking system of Pakistan. Each one of them has their own orientations, objectives and approaches. That is, one could approach analysis of T-bills from any of these three perspectives though the focus has to be on market features, buyers and sellers of T-bills and interest rates on T-bills that prevail both in the primary and secondary markets.

For Treasury: T-bills as Instrument of Short Term Debt and Liquidity Management

5. For the Treasury, T-bills are an instrument of *short term debt and liability management* that Treasury has to issue to meet government's payment obligations as they arise, and are lumped together under the category of *floating debt* liabilities. Given their preponderance in short maturities of 6-12 months. T-bills are a *revolving credits* for the Treasury, hence a *floating debt*. In Pakistan as elsewhere, T-bills are issued by Treasury not by the central bank, SBP, as commonly perceived. Central bank, the SBP, as banker to the government buys T-bills directly – namely, lends to the government short term funds. SBP as agent of the government conducts sale of T-bills on behalf of Treasury, enabling the government to borrow from the banking system. These are short term securities issued in various maturities ranging between three to twelve months, with concentration in 6-month to 12-month maturities. The market is segmented over these maturities from investor's perceptions and preferences, namely the banks; otherwise it operates under the same monetary control and policy framework, and the broader financial regime which regulates these markets.

6. If T-bills are to be viewed as floating debt, management of debt requires that availability of short term liquidity to Treasury is ensured; its borrowing costs is low, and are within the parameters of overall domestic public debt management, separate from any other consideration over budgetary cycle of twelve months. This managing of floating debt has to be done over short slices of time during a given budgetary year. But debt management has its own exigencies, apart from factors that are operative in short term financial markets, such as in money market.

7. At close of the past decade, the size of floating government debt was about Rs 2400 billion. This was not the case always. In first of half of the decade, the amount of Treasury bills outstanding as floating debt declined

from Rs 738 billion in FY01 to Rs 516 billion in FY03, the lowest it ever has been. (see *Data Set 7.6, Floating Debt*) Thereafter, during second half of the decade, there was a substantial increase in T-bills denominated floating debt due to consistently large government borrowings. In FY05, this debt rose to Rs 778 billion, then it doubled in couple of years, and by end of FY10, it stood at about Rs 2400 billion. The average annual rate of growth of floating debt during FY05-10 was very high at about 25 per cent.

8. The floating debt has two parts. The larger part comprises of cash borrowings of government directly from SBP, not from the banking system, officially classified as *MTBs (Market Treasury Bills) for cash replenishment*, which is somewhat confusing for those not familiar with the intricacies of T-bills operations. These T-bills are held by SBP. Only if SBP were to use any of these T-bills in its open market operations with the banking system, these T-bills pass on to those banks doing transactions in OMOs, and can be traded further, thus becoming a part of secondary market. The amount of these MTBs declined during first half of the decade from Rs 467 billion in FY00 to an all time low of Rs113 billion in FY03, implying a good deal of retirement of floating debt at that time. (see *Data Set 8.1*)

9. Thereafter, government was back to borrowings from SBP and in very large amounts. These borrowings rose to Rs 325 billion in FY05 and kept rising at 35 percent per year through the end of the decade. By close of FY10, these borrowings stood at Rs1172 billion, representing a three and half times increase in cash borrowings against T-bills from SBP. Thus, T-bills have been a key instrument of deficit financing for the government in recent past, as well as an instrument of short term debt management by the Treasury.

10. The smaller part of the floating debt consists of marketable treasury bills (MTBs) held by banking system shown in *Data Set 8.1* as *MTBs Outstanding*. These MTBs outstanding, shown here as stocks at the end of the period, represent banking system credit extended to Treasury via the instrument of T-bills. These MTBs may or may not find there way into the market, eventually, depending on OMOs of SBP. Viewed this way, in FY00, this credit was Rs 106 billion in FY00, rising to Rs 411 billion in FY04, at an astounding rate of 40 percent per year; eventually rising to Rs 1120 billion in FY10, at a somewhat slower rate of 18 percent per year. No matter how past decade is viewed at, banking system lending to the government via Treasury bills, excluding lending by SBP with the same instrument, rose eleven times during these ten years, or at an average annual rate of 27 percent during the decade; a phenomenal increase by any standard.

11. These marketable treasury bills outstanding are held in investment portfolio of banks through their maturity, or for trading during their maturity, but are shown here as balances outstanding as of *last day* of fiscal year. A good part of these balances include rolled over maturities of 3 and 6 month T-bills held at the end of the fiscal year. It could be that banks held different amounts of outstanding T-bills during the course of a single year, but sold out during the last week of the year. Whatever it may be, the end-year stock figures need to be interpreted with caution. Average annual balances may be more useful as appropriate indicator.

12. The breakdown of MTBs' maturities held in banking system portfolio shows a preponderance of 12 month T-bills. Their proportionate share in total portfolio has been more than half for most of the period over past decade and rising. It was in the range of 35 to 44 percent in first three years of the decade; then it reached to more than 98 percent during FY06, and was around 78 percent during the last two years. In contrast, the share of six month T-bills towards close of the decade has fallen below 10 percent, while share of three month maturity is almost negligible. Therefore, T-bills market in Pakistan cannot be characterized as short term market as money markets are in most countries, advanced or developing alike. It depends on how one defines a short period in the context of money markets for liquidity and funds, where a 12 month period is considered too long; to treat them as instruments of short term liquidity is stretching the point.

13. Much of discounting, rediscounting and trading in secondary market in Pakistan concentrates on 12 month maturities of T-bills, regardless of time span that covers a transaction in secondary market or repo market, usually a few days or few weeks, not 52 weeks. Therefore, the approach of SBP in regulating market levels of liquidity has to be cognizant of longer maturity of T-bills market, where open market operations are geared to longer maturity structure, involving absorption of liquidity, known as liquidity mopping operation through sale of T-bills, or injection of liquidity through purchase of T-bills or bonds.

14. Considering this burgeoning short term debt of Treasury, together with long term debt accumulated via Pakistan Investment Bonds (PIBs) discussed in Chapter 8, the issue all along has been somehow to curb government's borrowing from SBP as well as from the banking system. But this issue is entirely separate from market operations and has great deal to do with government deficits and its financing. No amount of market based actions will have any impact on this picture. For one, raising the T-bill rate, if it can be done at all, will have little impact on the amount borrowed by the Treasury. It will simply raise cost of debt burden; no more.

15. Another part of the answer is offered from time to time in the context of how far SBP is autonomous in pursuing monetary management. Again, SBP's autonomy will not have much of net effect on the debt profile of the government. It may simply shift the borrowings and consequent debt burden elsewhere if at all feasible. A more important answer has to do with the sources of deficit financing. Currently, Pakistani legislature is considering SBP Amendment Bill 2010, where these issues are being thrashed out.

16. There is a move to put a cap on government borrowing through T-bills or bonds to 10 percent of revenues collected in previous fiscal year along with the requirement that debt stock of Rs 1200 billion should be retired in the next 5 years. If this cap is placed it will considerably restrict Ministry of Finance's access to borrowings from SBP and eventually the banking system. These issues are important and if the SBP Amendment Bill is enacted it will restore SBP's autonomy at policy making and monetary management and will materially affect T-bills market in Pakistan.

For Banks: T-bills as Instrument of Short Term Investment and Liquidity

17. For banks T-bills are a *key instrument of liquidity* as well as an attractive alternative for *short term investment* instead of lending, especially in times of rapidly rising rates of interest rates and volatile stock markets. The reason is T-bills are risk-free securities with nearly guaranteed returns except for adverse movement in discount rate. The discount rate is price setter indeed, but it does not begin to impact returns on T-bills portfolio within the maturity cycle, unless banks are forced to access discount window of the central bank to supplement their liquidity levels, beyond their routine liquidity needs which normally are well taken care of. The discount rate is a key element of investment portfolio management by the banking system.

18. Next, T-bills could be perceived like zero coupon securities with no periodic coupon payments, only redemption on maturity at face value, much like zero coupon bonds, though not a deep discount bond as junk bonds are, and this analogy ends here. At the same time, T-bills are central element of open market operations involving discount and rediscount, and trading among the banks during their short maturity period. At various times during the past decade, specially during its first half, banks in Pakistan preferred to park their liquidity in T-bills rather than risk lending to their clients for a myriad of reasons; primarily because of risk-free, high return feature of Treasury bills, relative to the costs of loanable funds given the depressed

structure of banking deposit rates that have prevailed throughout much of the decade, ensuring the banks fairly high returns on T-bills.

19. There were others reasons for preferring T-bills over lending, and more powerful. Among them: banks had just emerged from the shadows of nationalized banking system; a directed credit regime; a pervasive default culture; uncertainties of operations under a liberalized financial market with variable interest rates and exchange rates; unfamiliarity of the new owners and their new management with the fast changing banking environment, clientele network, inexperience compounded with uncertainties of open foreign trade, open foreign flows and open capital accounts.

For Central Bank, SBP: T-bills as Instrument of Short Term Monetary Management and Control

20. Third perspective of T-bills market emanates from short term monetary management of SBP with focus on banking system liquidity, hence financial market liquidity, together with interest rates deemed appropriate for ensuring price and exchange rate stability, hence economic stability. Given the position of T-bills as primary instrument of monetary management, SBP in Pakistan conducts T-bills auctions in the primary market as central banks in many other countries do. In the secondary market, SBP is very active and conducts open market operations, aimed at mopping-up or injecting liquidity in the banking system as per needs of monetary management, apart from routine discount window operations to augment liquidity needs of the banking system as they arise.

21. Thus, from the angle of monetary management, T-bills are major instrument of liquidity control in financial markets. From the angle of Treasury operations, T-bills are a major instrument of short term borrowing by the government from banking system as part of its short term liability management. This is done not only in Pakistan, but in all other countries as well, and it is a fairly routine operation. In between, the central bank, SBP, as agent of Treasury, conducts auction of T-bills in primary market and its discounting and rediscounting in secondary market involving absorption and injections of liquidity through OMOs or cash accommodation for a few days in the repo market. This is apart form overdraft lending to the government against T-bills. In the process, SBP ends up holding sizable amount of T-bills as short term lender to the government; and these T-bills are held back by SBP and used for SBP funds trading discussed earlier.

Treasury Bills

Market Operations

22. Over the past decade, operations of T-bills markets have greatly improved because T-bills of all three maturities offered, namely 3 month, 6 month and 12 months, are favored short term instruments since these are risk free investments for banks, with fairly high T-bill rates that have prevailed during most of the decade. The infrastructure of this market, rules and regulations governing participation in auctions by designated banks, their trading and transactions of treasury bills in secondary markets, all have worked reasonably well throughout the past decade.

23. There are *two layers of treasury bills market*. The first one is auction market, which is *primary market* for T-bills; the next layer is *secondary market*, the *repo market*, including a 3-day repo facility of SBP, and an interbank repo market. The auction system was introduced in early 1990s, but at that time only 6-month T-bills were being offered; auctions of 3-month T-bills and 12-month T-bills came later in 1998. In this sense, T-bills market is barely a decade old. What's more, currently, it is a market mostly for one year maturity as discussed below alongwith the reasons why banking system has come to prefer longer maturity T-bills, whereas in practice, T-bills market in most countries is a market for three to six month maturities; truly a short term market.

24. Prior to auction system, nationalized banks were simply allocated some quota of T-bills that they had to buy, regardless of their portfolio concerns. It was a system of forced lending by banks to the government. Auctions introduced the market mechanism, and that could only be done after privatization of nationalized banks; because in the days of nationalized banking, banks were simply 'contributors' to government borrowing. Banks were allocated the amounts that they were supposed to tender via T-bills as and when government needed funding. It was no different from involuntary lending found in private banking system where if a bank's client's back is against the wall facing the specter of formal default, bank decides to bail out that client in the hope that its financial position will turn around. But in this case, it is the sovereign borrower instead of a private client; and nationalized banks had no option but to oblige; they did not have any other option.

25. This situation continued until most banks were nationalized. Two of the largest nationalized banks, namely Habib Bank and United Bank which together account for nearly half of the banking system, were privatized during 2002-04, as late as that. Without privatized banking there could not be

a meaningful auction system. Auctions for all three maturities of treasury bills are a recent phenomenon. Initially only T-bills of 6 month maturity were being traded between SBP and banks; T- bills of 3 month maturity and 12 month maturity were introduced later on. Treasury bills of longer maturities have come to dominate the market, but Treasury bills market in Pakistan is still young. It is remarkable it has taken such firm footing over a short period of a decade, or slightly more. It has not been in full operation until recent years. As the Chinese proverb says it is too early to tell.

26. In early years of T-bills primary market, there was a significant difference between the targets of T-bills operations and offers made and accepted. That is, the amounts that the government or SBP wanted to raise from T-bills auctions were much higher than what the banks were willing to tender in their bids and eventually to buy. A number of times, SBP had no option but to reject bids and close the auction without accepting any bids. It is not necessary that every auction be successful; but for reasons of monetary management or because of market vicissitudes, SBP had to reject bids and close some auctions. As T-bills market matured, rejections were less frequent, and acceptances increased in terms of amounts and frequency of auctions.

Treasury Bills

Primary Market

27. The primary market of T-bills is the auction system that was introduced as far back as early 1990s, but only 6-month T-bills were being floated at that time. It was only at the close of the decade that 3-month and 12-month T-bills were issued and included in the auction. The participants in the primary market auctions in current times are a group of 12-14 lead banks from amongst 36 commercial banks operational as of FY10 designated as *primary dealers* who are authorized to bid in auction. These primary dealers were selected on the basis of their participation in secondary market trading, expertise in treasury operations, and exposure in money market operations. The main motive however was to avoid large differentials at auctions in bids and yield rates on the fringes of auctions tendered by small banks for inconsequential auction amounts. The auction system is orderly and well participated by primary dealers with nearly predictable outcome, thereby helping SBP to reduce market volatility and avoid gyrations or wild swings in yield and amounts offered.

28. Note that SBP is not a participant in auction, neither the public, nor banks and financial institutions at large except for those designated as primary dealers. SBP is the *auctioneer* on behalf of Treasury. After introduction of auction in early 1990s, SBP consolidated primary market by early 2000s; established a successful auction system; and developed it as an efficient and low cost source of government borrowings. This does not mean that auction or bids are orchestrated by dealers or SBP with regard to offers or their underlying yield structure, and hence T-bill rates that prevail in the market. It is not a rigged auction as some would prefer to believe. True, SBP occasionally scraps an auction if it decides bid rates tendered are out of line. The cut-off yield rate is an outcome of auction which establishes short term bench-mark interest rate in money market and banking system; the same way as T-bill auctions do in other countries.

29. For T-bills market what matters is the amount of MTBs traded at auctions in primary market and subsequently in secondary market that signifies size of the market. T-bills directly sold to SBP by the Treasury for cash replenishment are outside of the market until they are traded by SBP for liquidity absorption and injections as discussed below. In a typical year eight to ten auctions are conducted, sometimes less, but frequency of auctions has been on the increase over the past years. Likewise, amounts tendered and accepted, both have substantially risen over the past decade. Each auction invites bids from primary dealers for all three maturities, namely 3-month, 6-month and 12-month T-bills with notional targets of auction amounts. Offered amounts accepted at auction have consistently been below amounts offered; that is, offered amounts by the primary dealers at auctions have routinely outstripped accepted amounts by SBP by a margin of 27 to 41 percent over the past years.

30. The size of primary market depends on the number of auctions conducted during a year. It's size can be gauged by amounts of offers accepted by SBP at cut-off yield rate, even though they include a fairly large amount of rolled over T-bills, specially those with 3 month and 6 month maturities. In secondary market, as discussed below, there is a considerable amount turnover of T-bills during the year, largely through injections and absorptions of liquidity by SBP, emanating from its OMOs and its 3-day repo facility which is the alternate for discount window operations. Strictly, the turnover is not the size of secondary market as such, but in some sense it can be interpreted so given the amount of trading over a designated period, In part, this trading also depends on operations of repo markets which have grown enormously over the past years.

31. In the early years of this decade, the size of primary market was fairly small and stayed there until FY04. But thereafter there was an explosive

growth in the size of primary market as the frequency of auctions increased along with the amounts offered and accepted. The *amounts offered* at auctions conducted during FY00 were Rs 468 billion for all maturities; while *amounts accepted* in FY00 were Rs150 billion (*Data Set 8.1*). Later on during FY05, amounts offered at all auctions were Rs 1591 billion, more than three times the amounts offered in FY00; and amounts accepted were Rs 1033 billion. This frenzied activity subsided during next couple of years, but then restarted in FY10 when amounts offered at all auctions during the fiscal year was about Rs 3664 billion and amount accepted was Rs 1447 billion. That is, the trend continued unabated up to close of the decade.

32. The average annual growth of amounts accepted during FY00-10 was nearly 26 percent, which is fairly high for the decade as a whole. The amounts borrowed by the government over past couple of years through Treasury bills is more than the amount borrowed in previous 8 years of the decade, reflecting unprecedented levels of deficit financing not witnessed before; amidst all the claims about responsible economic management.

33. In short, T-bills market has matured from what it was in mid-1990s when as part of financial reforms, auction based market was introduced at a time when banking system itself was in transition. Prior to reforms during the period of nationalized banking system, T-bills were allocated to nationalized banks who were obliged to buy T-bills at the rates and in the amounts prescribed by SBP as part of the then prevailing *directed financial regime*. They had no other option. If one were to look at T-bills market at end of the decade, it represents a leap from what it was just a decade and half ago. The transition from directed financial regime to a *market based* regime as applicable to T-bills market was quite eventful during the decade.

34. A few observations concerning T-bill rates are in order here. Overall, in the primary market, changes in interest rates on T-bills show a complex picture for the past years. Distilling a trend form these is difficult and hazardous owing to significant fluctuations in T-bill rates between auctions within a single year and also from year to year. As a general observation, in earlier years up to FY04, T-bill rates were on the decline from late 1990s to their lowest 1.2 to 2.7 percent for all maturities in early FY05. Thereafter, entire structure of Treasury bill rates began moving upwards and before FY05 was over, the rates had risen to the range of 7.5 - 8.4 percent for all maturities.

35. The drop in cut-off yield rate of amounts accepted in the auctions market during FY01-05 happened not because of low borrowing needs of the government, repayment or retirement of part of debt which was a factor

indeed; but it happened because of a more aggressive policy of SBP and efforts of the government to lower the entire structure of interest rates from its historic high level that prevailed during much of the 1990s. In addition, another important concern was the significant distortion that prevailed in the structure of interest rates on the deposit side both on the short term and long term instruments which prevented development of deposit instruments and deposit markets as well as bond markets in the country.

36. At that time, the view prominent among the policy makers as well financiers and bankers was that if the borrowing rate structure remains effectively in the range of 18-20 percent, it will choke-off new investment specially in balancing, modernization and rehabilitation (*BMR, as dubbed in the literature*) type of activities, prevent greater utilization of existing capacity, and thus thwart economic revival. The policy succeeded in its objectives, though SBP was subsequently criticized for continuing with expansionary stance and not paying enough attention to rising inflation during FY05-07 years. As it were, there was a significant decline in the interest rate structure, starting with a substantial decrease in borrowing rates of government's unfunded debt, namely the NSS instruments of savings, from 18-20 percent to 12-14 percent. Eventually pressures built up to raise interest rate structure in response to inflationary trends that began in the second half of the decade and it coincided with government's needs for larger borrowing.

37. This brief overview points out complexity of interpretation concerning different yield on T-bill. The foregoing discussion points out that for practical purposes, interest rate on T-bills, in primary market is weighted average yield rate of *accepted amounts* for each maturity in each auction, not the yield on *offered amounts*. The weighted average yield for *each* of the three maturities of T-bills varies widely from auction to auction, not to mention during a series of auctions within a year. For example, the weighted average yield on *accepted* amounts for 3 month T-bills in early FY05 was very low at 2 percent in first couple of auctions (*Data Set 8.1*). Then it began to rise steeply. At the 12th auction of FY05, weighted average yield had risen to 7.5 percent. Similarly, in early FY05, weighted average yield for six month maturity were slightly higher than comparable yield on three month maturities; about 2.5 percent, and for 12 month maturity, it was 2.7 percent. The inter-relationship between yields tendered at auction, their weighted averages, and discount rate as perceived in the short term money markets and their impact can be discerned from presentation in the Box on the next page.

Treasury bills: Price, Discount, Yield Quote, Interest rate

It may be useful to do a numerical exercise to understand how market price of any security such as T-bills is arrived at, based on yield quotation at auction, the discount involved, interest rate and return on T-bills, and why yield rate is broadly interpreted as interest rate of T-bill.

Suppose a participating bank quotes a yield of 9% for 3 month maturity Treasury-bills with a face *value, F*, of Rs 100,000, then the bank discount can be calculated as follows, given a maturity, *t*, the number of days, but keeping this number even at 30 per month for all 12 months; hence 360 days in the year, not 365 days; thus avoiding peculiarities of solar calendar and lunar calendar of 355 days:

$$\text{Discount, } D = y \times F \times t / 360 \quad (90 / 360) = 0.90 \times 100,000 \times 0.25 = \text{Rs } 2250$$

Hence *market price*, $P = 100,000 - 2250 = \text{Rs } 97,750$, or Rs 97.75 for each T-bill with Rs 100 denomination; their face value. Conversely, if the bank discount of Rs 2250 is known for the *face value* investment of Rs 100,000, the yield on T-bill will be as follows:

$$y = (D / F) \times (360 / 90) = 0.0225 \times 4.0 = 9.0 \%$$

If this yield quote of 9 % is accepted, it becomes *cut-off yield rate* at the auction, and eventually yield rate in the market for that auction period. This yield rate is also *discount rate of T-bills*; and both are the same. But strictly speaking, it is not interest rate on T-bill as such, because it is based on *face value* of investment of Rs 100,000 by quoting bank; instead, interest rate on T-bill is to be computed on *actual value* of investment cost which is smaller; it is Rs 97,750. Now suppose you were to deposit Rs 97,750 for 3 months and you receive interest amount of Rs 2250 over the quarter; quarterly interest rate will be 2.30 percent; and annualized return for 12 month period will be slightly higher and will be 9.2 percent. Similar is the annualized rate on *actual* investment in T-bills, close to yield rate, but not exactly the same because invested amount is less than face value of investment to acquire the T-bill. That is why weighted average yields on T-bills are *interpreted as a proxy* for *T-bill rate* in market jargon. Finally, higher the quoted yield on T-bill, higher is the discount amount being asked by the quoting / bidding bank, hence lower the price of T-bill; and vice-versa. Such is the elementary mathematics of finance.

38. For money markets FY05 was unusual year, with dramatic rise in T-bill rates. Normally difference in yield rates over all auctions held during any fiscal year is fairly narrow to about 2 percent. For example, in the first auction held in FY10, weighted average yield on accepted offers of 3 month T-bills was 12.1 per cent; for 6 month maturity, it was 12.2 percent; and for 12 month T-bills was 11.47 percent. (*Data Set 8.1*) Towards the end of FY10, after 24 auctions, the weighted average yield on 3 month T-bills was 12 percent; for 6month T-bills 12.3 percent; and for 12 month Treasury bills it was 12.38 percent. That is a fairly narrow range for weighted averages of Treasury bill rates during one year period.

39. Since then T-bill rates have been slowly rising. By early FY10, they ranged from 11.3 on 3 month maturities to nearly 11.5 of 12 month maturities, and by close of FY10, these rates ranged between 12 percent for 3 month maturities to 12.4 percent for 12 month maturities. These are *auction based rates*, not those prevailing in the secondary market, the discount market for T-bills. The weighted average yield rates on 6-month maturity and 12-month maturity carried a premium of about 40 to 100 basis points in all auctions. Their structure closely followed the 3-month T-bill rates.

40. Until recently, SBP decided upon cut-off yield rate which eventually ended up being T-bill rate until next round of auction. Beginning 2009, Ministry of Finance took over; now it decides cut-off rates for all government securities, largely for cost considerations of domestic borrowings, including cost of floating debt. Targeted amounts to be raised at auction are being declared for each quarter of fiscal year before auctions take place, while targeted amount to be raised at auction is the driving concern rather the cut-off yield rate. SBP believes that both these changes better convey monetary policy stance to those concerned, and will thus enable SBP to sharpen its focus on monetary management.

41. The point is that there are at least three T-bill rates derived from weighted averages of yields *accepted* by SBP, one for each maturity, and they vary from auction to auction. Averaging these is not very meaningful outside the context of their auction period. Nonetheless, these T-bill rates impact on other short term market rates, not only in Pakistan but in most countries. They are market-based interest rates and variable, tendered by the primary dealers, the banks participating in auction; reflecting financial and economic trends prevailing over the auction period which may be as low as couple of weeks. In current times, SBP is regularly conducting auctions on almost fortnightly basis and the outcome can be easily gauged by the participants, the primary dealers and their bids.

42. A striking feature of both primary and secondary markets is the preponderance of T-bills of 12-month maturity rather than 3-month maturity. Contrary to popular notion widely held, T-bills of three month maturity are a negligible proportion of MTBs both in the auctions market and also in secondary markets as shown by their amounts outstanding and held for trading. Three month T-bills have not been an important part of T-bills market. Their share in auctions for most years has been between 16-25 percent except for FY05 and FY09. In contrast, share of 12-month T-bills in auctions market has been on the rise from 26 percent in FY02 to an all time high of 73 percent in FY07, though it is not a smooth trend.

43. There is a good deal of volatility from year to year. (see *Data Set 8.1*) Clearly, banks prefer 12 month T-bills over other maturities. Their share started at a high pitch; around 40 percent of all treasury bills outstanding, and from thereon began to rise, reaching 80 percent by the close of the decade. This increase in relative share of 12 month maturity T-bills was primarily at the expense of three month maturity T-bills, whose shares plummeted from about 20 percent in early years of the decade to a minuscule 2 to 3 percent. Similarly, the amount of six month T-bills in the auctions market were fairly high in early years, around half of total amounts accepted, but have been declining since FY04 and have ranged between 10-12 percent of total amount of bills accepted in auctions.

44. A part of explanation for preference of 12-month bill is high cut-off yield rates, meaning T-bill interest rates, relative to the yield rates available on three or six month maturities. For banks it represents a high risk-free return over a short period. There are no comparable securities in the market with those characteristics. Lending to clients is even more hazardous. Yet, the premium on 12-month bill is not out of line. The entire structure of rates has moved in tandem with routine type of premium paid for higher maturities of about one percent over the rate for 3 month T-bills. This is particularly true for second half of the decade, where premium on 12-month T-bills can almost be predicted in clockwise fashion on the eve of the auction. During FY08-10, T-bill auction rate for 12 month maturity has been fairly high in the range of 11.7 to 12.4 percent.

45. In principle, the relationship between maturity of instruments and their yields defines the term structure of interest rates. Over the short run, if yield curve slope upwards, meaning that long term interest rates are higher than short term rates on the same instrument, the normal course of events, banks would then prefer to hold long term maturity over short term maturities of the same instruments, or their clones, i.e., similar types of

instruments. That is, they would normally prefer higher yielding but higher maturity bonds over lower yield and short maturity securities, namely treasury bills.

46. Consequently, banks would borrow in repo market to invest, the only market available to them for extra liquidity. Such borrowings would raise the repo rates eventually, flattening the yield curve in the process. But the issue remains why banks would borrow short term to invest in long term securities, when their returns on short term securities are already fairly decent and the spread between short run and long run returns is narrow enough as it has been for most of the time.

Section 2: Treasury-bills *Secondary Market*

1. There are three components of *secondary market* of T-bills. One component consists of marketable T-bills held by SBP and used in its **OMOs** for absorptions and injections of liquidity as per monetary policy stance of the time. In these OMOs, T-bills are used along with other government securities, but proportion of T-bills is the largest. This is a market of central bank funds via government securities primarily T-bills, with its own structure of interest rates which are quite different from those prevailing in the primary market. The second component is SBP's 3-day *repo* facility operated for cash accommodation in lieu of old discount window operations with its own 3-day *repo* rates. Both these secondary markets of T-bills are led by SBP and are discussed below.

2. The third component is a fairly large interbank *repo* market collateralized by government securities in which T-bills are predominant. This interbank market in *repos* straddles both the secondary market of T-bills as well interbank funds market, where one segment is government security-based repo trading, mostly T-bills in short term bank funds, while the other segment is *call money* market. This overlap does not impair market operations, though it causes confusion among those not familiar with these markets.

3. For the banks in their routine operations and to meet liquidity needs, interbank fund market is fairly important and is large to obtain overnight funds or liquidity for a few days. Both interbank repo and call money markets operate in tandem with other secondary markets of T-bills. However, *interbank repo rates* are slightly different than those prevailing in SBP led three-day repo market, and are most of the time below call money rates.
4. As discussed above, most T-bills are of 12 month maturity, more than maturities of typical short term instruments, when traded in primary market at SBP auctions. But their trading in secondary markets is driven by the need for funds for short term liquidity, spanning a few days' time or a few weeks. This trading involves discounting and rediscounting both by banks and SBP, which does lower effective maturities for new buyers at successive layers of discounting. Considering the role of a central bank in ensuring adequate levels of liquidity in financial markets, while keeping interest rate structure in line with monetary stance of the time, trading in secondary markets assumes added significance than just a mechanism to replenish dwindling amounts of bank liquidity at hand.

OMO-based SBP Trading *Injections and Absorptions of Liquidity*

5. The open market operations of SBP involving sale of government securities is undertaken for absorption of banking liquidity known as liquidity mopping operation; or injection of liquidity from SBP's own funds through purchase of securities from banks. Hence, it should be designated as trade in central bank funds, which it is, or *SBP funds*. This OMO based trading of government securities, mostly T-bills, involving SBP funds, is separate from old discount window trading or its alternate, the three-day SBP repo facility established as far back as early 1990s. These two are *separate* market operations.
6. Since price of instrument traded is different, interest rate on the instrument is different, and sources of funds are different, therefore it has to be classified a market on its own grounds. It is called *central bank funds market* in most countries; in Pakistan we may call it SBP-funds market, though it is known as a market for OMO-based funds. Why this market needs to be thus distinguished from others? Because secondary market trading under OMO targets, to start with, is fairly large and trading in this market is done on rates different from those prevailing in primary market or the 3-day repo market,

though close enough to the rate structure established by primary market in the auctions. The size of OMO based *absorptions*, meaning sale of securities to the banking system by SBP have grown significantly over past years from Rs76 billion only in FY00 to Rs1368 billion in FY09, the highest it has been in the previous decade. There has been a considerable volatility in absorption trading on annual basis.

7. During FY00-03, annual levels of absorptions of liquidity were modest in the range of Rs56-103 billion; then in FY04, absorption amounts shot up to Rs 411 billion, and beyond FY04, these absorptions have risen significantly during FY07-09 period, eventually rising to Rs 1368 billion in FY09. At the opposite end, an injection of liquidity through purchase of Treasury bills has been even more volatile throughout the decade during the second half of the decade. (see *Data Set 8.11*) During FY01-06, injections of liquidity, meaning purchase of securities from banking system were in the range of Rs 35 to 77 billion except during FY02. Thereafter, purchases, meaning, injections of liquidity shot up to Rs 3621 billion in FY10.

8. It must be pointed out that one is not seeking stability of OMO based secondary market operations; a smoothly rising trend is not the focus of attention nor the objective of interventions; rather it is monetary stability which is paramount which requires such interventions if needed. The intervention level has little to do with smoothness of long term trends because volatility of OMO based secondary markets is not the overriding concern; rather monetary stability is the key concern. If maintaining monetary or exchange rate stability requires injections or absorptions, it has to be undertaken; considerations regarding smoothness of trend aside.

9. The interest rates for SBP funds involved, the OMO rate structure, in absorption and injections of liquidity have also been volatile. The sale rate started off around 9 percent in early years; then plummeted to 1.3 percent in FY04, the lowest in the decade, and rose back to 9 percent during FY08-09. The purchase rate followed a similar trend, but with a premium of about one percent over sale rate during most of the years. This premium or the spread between purchase rates vis-a-vis sales rate was always there in these years; it was slightly more than one percent for many years, but then shot upto 3 percent in FY09. This means that when SBP is injecting liquidity in the banking system and buying T-bills, it does so on higher T-bill rates than when it is mopping up liquidity by selling T-bills to the banks.

10. In early years, purchase rate was around 10 percent; then it plummeted to 2 percent in FY04; and since then it has been rising and was back to about 10 percent in FY08, and 12 percent in FY09. Thus, secondary market of

treasury bills has been more volatile than primary market if one were to look at the yield rate of auctions and interest rates of this secondary market. Further, interest rates of OMOs of SBP act as reference rate for various money market operations; they do not translate into corresponding changes directly into short term deposit rates or lending rates of banking system.

11. The frequency of SBP's intervention has also increased over the years, though these interventions were called for by market situation at hand, together with evolution of monetary control mechanisms that shifted from credit based controls in the early reform years to targeting money supply and liquidity levels in the post reform era. This shift in targets of monetary expansion, M1, required that SBP must ensure adequate amount of *non-borrowed reserves* with banking system. This could be accomplished through absorptions and injections of SBP funds as noted above; not through discount window operations. These factors have contributed to volatility in OMO trading of SBP as observed over the past years.

12. Often the issue is raised why SBP has pursued a certain type of monetary stance. The answer is to be found in the analysis of monetary overhang as it has persisted in various time slices during the decade. But this is technocratic answer and it does not mollify the concerns. It is woefully inadequate. Ground reality is that no government can survive pursuing 'no growth' policy just because it will add to monetary overhang. The government wants to chart out performance of growth; monetary overhang calls for the reverse. That is the dilemma. This requires more explaining; but that will run into pages than paras done here. Further, and moreover, that is for SBP to articulate.

Discount Window

SBP 3-day Repo Facility

13. Access to *discount window* operations of a central bank are commonly seen as overlapping part of secondary market operations in government securities, primarily T-bills. This is the classic function of a central bank as the lender of last resort (LoLR), though it has its own implications. This access occurs if banks are forced to access discount window to maintain requisite levels of reserves as a last resort to replenish liquidity over and above what they are able to obtain from other secondary market sources. This access is not seen kindly by a central bank; it invites a closer scrutiny into bank's liquidity position and therefore it is avoided. These amounts

obtained from discount window operation are regarded as *borrowed reserves* of banking system. Such borrowed reserves emerge in parallel to whatever central bank is trying to do by regulating supply of non-borrowed reserves through OMO operations involving central bank fund trading.

14. The SBP operations of three day cash accommodation as repo facility involving all government securities, T-bills and bonds, have been operative for quite some time. The annual amounts extended through this facility have been rising but they have been volatile from year to year. For example, from a low of Rs 47 billion in FY04 they increased to an astounding high of Rs 1973 billion in FY08 (*see Data Set 8.11*). Their volatility aside, these annual amounts show the need of this three day cash accommodation facility as an adjunct to all other secondary market trading for supplementing liquidity levels as needs arise.

15. The daily averages of borrowed amounts outstanding are more meaningful as they indicate that above all other sources of liquidity available to them, banks do have to resort cash needs on the margin through such arrangements. There has been a significant amount of variation in *repo* rates on this short term facility as shown by monthly figures; yet these rates have been close to T-bill rates that have prevailed in secondary market discussed earlier. The pattern of variations in these *repo* rates have roughly been the same as observed in T-bill rates.

16. There is a need to clearly distinguish between OMO based secondary market in government securities and this 3-day repo facility, which essentially is a discount window operation with another name. This 3-day repo facility has its own structure of variable discount rates, called 3-day repo rates, which is different from the discount rate of SBP, called the bank rate. The discount rate of SBP on this facility ranged between 7.5 to 9.5 percent during FY02-07, then shot up to 12 percent in FY08 and at close of decade it was 14 percent (*see Data Set 8.11*).

17. This discount rate of SBP is the policy rate discussed earlier. It is the anchor to interest rates for money markets, but no trading transactions are done on this rate in any market, though the rates are close enough. Changes in discount rate are most keenly awaited by all, especially money market participants and banking system, because it signals a shift in monetary policy stance of SBP in response to short term financial and economic trends and needs for stabilization. Hence, by itself, the size of discount window operations of SBP is not much meaningful unless linked to monetary management of any slice of time period under review.

18. Notice that the discount rate is generally lower than OMO rates of SBP. This is deliberately done. The result is a small spread between OMO rates and discount rate of SBP. This means that cost of non-borrowed reserves are higher than those of borrowed reserves acquired from discount window operation. The relationship between this spread and the discount window operations is normally fairly stable. Whenever banks are accessing discount window instead of relying exclusively on OMO's trading, in the process, they are also lowering their cost of additional reserves. But frequent accessing of discount window simply to lower costs of reserves is not favored by any central bank, SBP included, because such access is a last resort activity.

19. It also depends upon whether the central bank is targeting M1 levels or interest rates on T-bills under its OMO operations for monetary management. If the central bank is targeting M1 levels, it has to rely more on non-borrowed reserves. But if the central bank is targeting interest rates, then a central bank may use the interest rate arbitrage between OMO based and discounted window based rates to force banks to borrow at discount window in a bid to make up for the shortfall in reserves supplied through OMO trading operations in SBP funds.

20. The volatility of T-bills secondary market has spilled over in inter-bank money market, driven by banking liquidity levels. SBP has been trying to calibrate its OMO interventions in response to estimated liquidity levels but this has not reduced volatility, because the objectives of OMO and auctions is to maintain components of money, especially net domestic assets of SBP, within a target of its own, independent of the interbank market rates and operations.

21. More importantly, there has been a substantive change in the role of SBP with the elimination of credit plan in the middle of the decade, that held sway in the days of *directed credit targets*, layer by sectoral layer, and mandatory credit ceiling that were significant element of administered financial regime during nationalized banking years. Interest rates were liberalized and credit ceilings eliminated much before the elimination of credit plan in FY06. In the absence of mechanisms that provided levers of direct control to SBP, central bank was left only with indirect control of liquidity via open market operations.

22. Since the main participants in T-bills market are central bank on one side as the regulator, and banks on the other side as financial intermediaries, the focus has to be on how banks respond to various concerns of liquidity management in the framework of statutory liquidity requirements stipulated in statutory liquidity ratio (SLR) and cash reserve ratio (CRR). Central bank

periodically changes these reserve requirements, or changes the composition of items that are regarded as reserves mainly to control liquidity of financial system in general, and liquidity of banking system in particular in its efforts to affect supply of credit to the economy. At the same time, central bank alters bench mark rates through its interventions in T-bills market, and thereby affects other short term markets as well. This interplay needs to be analyzed carefully and can be done so only through focus on a case study of a selected time period.

23. Banks are always alive to asset liability management concerns. In tandem they also have to respond to portfolio concerns. These considerations overlap with liquidity management concerns. Hence, behavior of banks ought not to be seen primarily through the window glass of what transpires in T-bills market alone, and certainly not what transpires in one or the other layer of T-bills market. For example, if banks wish to augment their liquidity, they have access to four markets. One is the secondary market of SBP funds, or what is the same, OMO based trading. Then there is the 3-day repo market, the variant for discount window operations. That is a separate market with its own repo rates.

24. The third market is interbank call money market where banks can borrow very short term funds without discounting government securities; this is money on call for overnight or for a maximum of 14 days, and it has its own volatile rate structure. But it is not the repo rate, though call money rates shadow repo rates. In call money market, banks could borrow from other banks or participating financial institutions, but it is not collateralized lending in practice. For overnight, if a bank in need of quick liquidity were to get involved in tendering a securitized collateral, by the time all the procedures are done, it is too late to avoid penalty for shortfall in liquidity level for the day. The contingency is over.

25. The fourth market, and largest one of all, is interbank *repo market* involving discounting of government securities on its own rate structure. When a bank is strapped of cash, it could access any of these markets, because the 3-day repo facility, the discount window of SBP, is last option involving a scrutiny by SBP as to why a bank has to resort to this option. Banks may switch over to forex markets, though the latter option is far more risky than domestic financial markets.

26. In short, behaviour of banks in response to monetary or market stimuli is a fairly complex phenomenon, and attempts to generalize it is rather inappropriate. At the system level, this evaluation and assessment is constantly being done at central banks, including SBP by those responsible

for calibrating monetary policy instruments. Central banks routinely intervene in the market according to their perceptions of how markets are likely to respond. At that level, it is more an art than a science of maintaining stability in financial system.

Interbank Market - Repos

27. In Pakistan as in other countries, interbank market for *repos* is a market in government securities, mainly treasury bills. It has grown very fast at the heels of development of auctions market of SBP funds through OMOs. The size of interbank repos market has grown very large. It is a truly short term market based on the maturity of repurchase agreement, consisting of borrowing for as short a time as a day, called *overnight repos*; or a few days, but hardly more than couple of weeks, called *term repos*. The market provides a mechanism to banks to raise funds through sale of securities to an investor/buyer under a repurchase agreement with the buyer/lender. This market is accessed mostly by banks and other institutional investors, not by retail private investors; the *odd-lot* investors discussed earlier.

28. The banks and SBP both are engaged in large transactions in interbank *term repo market* of a few days to couple of week. The size of repo market can be gauged by the amount of repo purchases and sales as shown in *Data Set 8.11* for the years FY04-09 by primary dealers who participate in T-bills and bond auctions by SBP and non-bank institutions. The largest amount of repo trading is done in treasury bills; hence, repo market in Pakistan is practically a secondary market of T-bill outside of SBP funds market of OMOs. As for participation, bulk of trading in interbank repos market, ranging between 80-85 percent, of is done by primary dealers, the banks. SBP is next largest participant with roughly 10 percent of share in repo market. Non-bank institutions comprise rest of the interbank repo market.

29. SBP's participation and trading is done as follows. On its part, SBP agrees to buy securities from an authorized dealer, usually a bank, under contractual arrangement at a price prevailing on the day of transaction. SBP agrees to sell back the same securities on a future date at a specified price which is higher. The price differential between the two dates is the *implicit* interests charge that dealer agrees to pay SBP inclusive of the repurchase price. The dealer bank is doing repo while for SBO it is a reverse repo. This in effect is a very short term bridge loan from SBP to the dealer bank, mostly three day cash accommodation, called 3-day repo facility discussed below, to furnish liquidity to the dealer who happens to hold securities in his

portfolios which have not reached their maturity date yet, say Treasury bills or bonds, and in between the dealer is strapped for liquid funds. His options are to discount T-bills with SBP, or hold on to them until their maturity if it is profitable even after the *repo* transaction costs are considered. The *repo* market thus has its own discount rate implicit in the repurchase contract.

30. One component of the size of interbank *repo market* is T-bills, the largest one, followed by bonds, mainly PIBs; not TFCs issued by private companies. Another segment is called money trading. The size of T-bills trading in interbank repo market is largest. In Fy05, T-bills trading in the repo market, the turnover, amounted to Rs 4184 billion, and kept rising over the second half of the decade, until it reached about Rs 16,000 billion by FY10; nearly four times FY05 level. In contrast, repo market trading in BIBs nosedived; from Rs 3722 billion in FY04 to Rs 793 billion in FY10. For all practical purposes we are left with repos in the interbank market whose rates are now a key element of short term interest rate structure. This rate does not involve SBP trading of its own funds as part of OMOs. These are short term market based interest rates prevailing in Pakistan, reflecting market swings more faithfully than they did before and these interbank repo rates are the shadow rate of KIBOR (*For details see Chapter 5 in Volume I*). In this respect, secondary market environment of T-bills through interbank repos has improved, and is no longer the same it was at start of the decade.

Call Money Market

31. For immediate liquidity needs, banks routinely borrow from each other, and it is termed money market. This market has multiple maturity segments including: an overnight market for interbank funds that is most volatile of all markets in terms of daily rates and volumes of transactions; followed by next layer, call markets for one week to three weeks; thereafter call money market for one month to three months. Each layer of call money market has its own interest rates, and these rates are always slightly higher than average repo rates for maturities up to one month prevailing in interbank market. Interbank call money rates are higher than interbank repo rates, because to do repo trading banks must have MTBs or PIBs, and engage in discounting and rediscounting, whereas access to call money market the borrowing bank does not require any collateral as mentioned earlier. There is no discounting or rediscounting of securities involved as in repos or reverse

repos. Call money market is a market for meeting liquidity needs of banks; it is an interbank market for borrowing and lending cash, *on call*.

32. In such circumstances, it does not make much sense to try to elicit long term trends from 3-days interbank repos market and call money market. All we can observe are volumes of funding and yield rates that have prevailed in these two markets. SBP has always kept tabs and has closely monitored these two markets, and intervened as warranted. The data for these two markets is available from FY04 onwards. A cursory look at this data by day, by week and by month, clearly shows that it is impossible to draw any meaningful long term trend. These are very short term markets indeed.

33. As for volume of trading and corresponding yield rates in interbank call money markets, for example; during FY04, monthly averages of overnight call money trading amounts have varied between Rs 40-146 billion, and the corresponding yield has been going up and down from a low of 1.13 to a high of 6.95 for overnight rates. In FY08, the average monthly volume of overnight call money trading has risen to a range of Rs 65-298 billion, and corresponding call rates have ranged over 10.5 percent to 12.9 percent. Simultaneously, rates on interbank overnight repo borrowings have ranged over 8.2 percent to 12.5 percent.

34. Large banks are key players in this market and its offer rate is a good barometer of cost of liquidity particularly since the spreads between lending and borrowing rates in this market are much narrower than in credit market. Interbank call money market is beginning to consolidate with the advent of KIBOR, since its market level reflects the balance between supply and demand of short term funds. In early years of start, KIBOR was expected to serve as bench-mark rate, mainly for short term corporate lending through pricing of private sector debt instruments which until recently have been based on 6-month Treasury bill or repo rates. This attribute of KIBOR has been achieved. Beyond this, KIBOR provides market signals to SBP to facilitate its monetary policy decisions regarding timing and size of sale or purchase through open market operations to manage banking liquidity, amidst concerns for monetary stability.

Chapter 5: End

	Treasury Bills, Secondary Market										End Period, Rs billions												
	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	
4																							
5	SBP Open Market Operations \ 1																						
6	Absorptions (Sale)	214	148	298	122	488	646	1073	1008	1479	2600	4111											
7	at T-bill Rate, %	76	103	56	67	411	611	644	936	1247	1368	490											
8	Injections (Purchase)	8.8	9.2	8.1	3.6	1.3	3.4	7.8	8.4	9.0	9.1	10.9											
9	at T-bill Rate, %	138	45	242	55	77	35	429	72	232	1232	3621											
10	SBP's 3 Day Repos \ 2	10.0	10.9	7.8	6.5	2.0	5.8	8.3	9.0	10.1	12.6	12.1											
11	Average pr month	737	1557	828	689	47	522	762	687	1973	874	834											
12	Average Repo Rate /Discount Rate	61	130	69	57	4	44	64	57	164	73	70											
13		13.0	10.0	7.5	7.5	7.5	9.0	9.0	9.5	12.0	14.0	14.0											
14	Interbank Market of T-bills \ 3																						
15	Purchases					4626	4576	6930	9040	12030	14349	17822											
16	SBP - Repos					876	403	529	703	1623	1501	3921											
17	Banks - Primary Dealers - Repos					3331	3735	5909	7690	9331	11309	11581											
18	Banks - Primary Dealers - Outright					338	270	332	432	398	1186	1186											
19	Non Banks - Repos					67	46	44	95	502	127	517											
20	Non Banks - Outright					14	122	116	120	176	226	617											
21	Sales					4630	4576	6930	9039	12030	14360	17864											
22	SBP - Repos					821	539		926	1247	1311	1092											
23	Banks - Primary Dealers - Repos					3314	3600	5943	7228	10076	10923	14193											
24	Banks - Primary Dealers - Outright					394	374	419	518	481	1376	1680											
25	Non Banks - Repos					63	45	540	285	190	727	734											
26	Non Banks - Outright					38	18	28	82	36	23	165											
27	Annual Rate of Growth						-1	51	30	33	19	24											
28	Share of banks in Market					72	82	85	85	78	79	65											
29	of this: Repo Market					4274	4184	6482	8488	11456	12937	16019											
30	SaF Data Set,	Source: SBP Annual Reports, Data Annexes 03, 07, 09, Monthly Bulletin 07, 09																					
31	\ 1 SBP: OMOs with banks: only accepted amounts of absorption and injections; bid amounts are much larger.																						
32	\ 2 SBP discount window facility: repaced with 3-day repo facility; 3-day repo rate is effectively discount window rate.																						
33	\ 3 Overlaps with Interbank Repo market in government securities, T-bills and PIBs, Table 8.12; source, various ARs of SBP, for FY05-09, see Table 5.8, AR09.																						

		Treasury Bills, Secondary Market		End Period, Rs billions	
34					
35	Data Set 8.11a				
36					
37					
38					
39					
40					
41	Interbank Market of T-bills \3				
42	Purchases	FY05-10		FY00-10	FY05-10
43	SBP - Repos	31.2%		34.4%	17.9%
44	Banks - Primary Dealers - Repos	57.6%		20.5%	44.8%
45	Banks - Primary Dealers - Outright	25.4%		38.6%	-4.3%
46	Non Banks - Repos	34.4%		1.2%	152.9%
47	Non Banks - Outright	62.2%			9.8%
48	Sales	38.3%			
49	SBP - Repos	31.3%			
50	Banks - Primary Dealers - Repos	15.2%			
51	Banks - Primary Dealers - Outright	31.6%			
52	Non Banks - Repos	35.0%			
53	Non Banks - Outright	74.8%			
54		55.8%			
55					
56					
57					
58					

Average Annual Growth Rates

Average Annual Growth Rates

Chapter 6: Foreign Currency Market – Short Term

Thematics

Pakistan Currency Markets – Short Term ----- TBD

Market Structure: Participants; Operations, Modes, Size

Formal – *SBP; Interbank; Currency Dealers;*

Informal Markets; Parallel Market, *havala, hundis*

Undocumented, Underground Flows

Overseas Global Markets; Domestic Markets – *Linkages*

Comparative Experiences; Contrasts

Evolution of Domestic Market – *Historical; Reforms, Opening up*

Trade & Exchange Rate Regime; *Historical, Transition*

From administered regime to *dirty float, to clean float, to 'free float'*

Transformation; Impact on Interbank, *Kerb Market*

Foreign Trade, Remittances; Impact on Economy

Foreign Currency Market – *Pakistan*

Size and Trends, *Estimation, Procedures, Implications*

BoP based; Inflows, Outflows of Foreign Exchange

Outflows: Demand Side, *Components, Size, Relative Shares*

Imports; Service Payments; Time Series Analysis

Capital Flows; *Comparative Experiences- a Preamble*

Foreign exchange Reserves – *Size, Trends, Shifts, Comparative*

Management of Reserves; Domestic, Comparative

Interlinkages with Exchange Rate Regime – *an Outline*

Dollarization vs Sterilization; *no exigencies in Pakistan*

Foreign Currency Markets and Money Markets

BoP Gap Financing; foreign loans, long term, short term

Implications: Foreign Debt Burden

Chapter 6: Foreign Currency Market - *Short Term*

Section 1: Market Structure - *Pakistan*

1. Foreign currency market is primarily an interbank market in foreign currencies in most countries; so it is in Pakistan. The participants are SBP, mainly commercial banks and foreign currency trading companies. The foreign currency market has been revamped in the wake of liberalization of foreign exchange and trade regime that gradually occurred during mid-1990s through the past decade, culminating into largely market determined and free floating exchange rate. In parallel, development of inter-bank market in foreign currencies occurred by empowering banks to keep foreign exchange proceeds of their customers such as exporters and traders in their own portfolios with proper reporting to SBP. But banks were to manage these foreign exchange balances in their portfolio on their own, instead of surrendering it to SBP as was required in early years. Simultaneously, there was a gradual overhaul of currency trading system, documentation and registering of foreign exchange companies as foreign currency traders almost on the same footing as commercial banks.

2. Currently, there are two *formal markets* for foreign currencies in Pakistan. One is the *interbank market* comprised of participants as above; the other is the *kerb market* discussed below, though it is a misnomer, mainly consisting of foreign exchange companies, duly licensed, documented, registered and supervised by SBP under a set of rules, regulations, directives and periodic SBP circulars, governing trading of foreign currencies. Salient elements of regulatory framework are common to both segments of formal markets, but a good number of rules and regulations are specific to mode of operations of these two markets. This is the *domestic currency* market of Pakistani rupee vis-à-vis foreign currencies.

3. In addition, there is the *informal market*, the parallel market, or the underground market of foreign currencies in Pakistan, undocumented and unknown in its size and reach. Yet it exists; its presence is palpable. Its impact on the domestic currency market shows up in pressures on exchange rate from time to time, which gives some clue of its size and presence as

discussed below. On top of it all, there are *overseas markets* of Pakistani rupee in money centers of advanced countries; but even larger market in gulf countries. There are only notional estimates of these overseas markets for Pakistani rupee; but in terms of their size, linkages and impact on domestic foreign exchange markets, gulf country markets at Dubai, Bahrain and other Emirates are perhaps more significant than any, considering that Pakistan is a large, if not third largest investor in real estate market in Dubai. It is one of those anomalies that we live with in Pakistan.

4. In short, foreign currency market in Pakistan is diverse and is not confined to interbank market, not by any means. Interbank market is only a part of combined size of active currency market for Pakistani rupee on any given day; how big is not known. These markets are not insular: they are interlinked and changes in anyone of these markets affect other ones. However, focus of attention in this chapter is on interbank market for analytical purposes concerning foreign currency trading operations within the country, because it is the only market well documented and visible. The undocumented market is invisible, but it exists. The analysis concerning exchange rate trends and its policy dimensions, together with rationale and instruments of intervention of SBP are done with reference to operations of interbank currency market.

5. Foreign currency markets in Pakistan began their life barely a decade ago amidst all the chaos and socio-political upheavals that have been briefly alluded to in Chapter 1 of **Volume I** and in Preliminaries of Chapter 1 in this volume. We seem to get carried away in our expectations to see a modern and gleaming market in existence in Pakistan without realizing where it is coming from. It has taken advanced countries much longer to arrive at the present configuration of currency markets, with all the resources at their disposal, an institutional infrastructure far more sophisticated and elaborate, with a depth and reach than never existed in Pakistan together with a system of checks and balances that never seems to get off the ground much less have teeth in accountability and effectiveness.

6. This process was somewhat compressed among front line developing countries; notably East Asian and Latin American countries. All along, both in advanced countries and leading developing countries, the historical process was punctuated, often times derailed by various financial crises that occurred notably during the 1990s at a time when the success of paradigm shift to liberalized markets was thought to have taken root. These crises were eventually overcome with massive counter-flows of financial resources, and cooperative effort, often led by international financial institutions. In Pakistan, we are quickly disappointed if currency markets are not as well

performing as others are. If market trend shows sliding exchange rate, if not averted, it is interpreted as failure of currency market as though an administered regime will be able to do the bidding. We need to have some realism between what we think markets ought to be; what they are, and what they can accomplish. A sliding exchange rate is an outcome, far more complex than is commonly understood; it is not a machine phenomenon.

7. Currently, we are on initial segment of a rising learning curve about ways, means and functions of financial markets and that is a positive development. At least we have come to accept that liberalized currency markets with floating exchange rates are here to stay; that the era of administered exchange rate regime is over for good after decades of rudderless ad-hocism and a penchant for interventions that prevailed before, mutilating processes of market operations, be it market for sugar, cement, currency or any other item. Going back to the past era of interventionist streak is not going to resolve the enigma of sliding exchange rate, if it is still an enigma after decades of experience behind it.

8. The current state of foreign exchange market is a result of a series of reforms whose main thrust was a move from controlled economic, financial, and foreign trade regimes to open and market based regimes. These reforms were introduced in various stages over a period of 15 years and more, from early 1990s to mid-2000s. The reforms that directly affected foreign exchange market included opening up of foreign trade, removal of trade barriers, liberalization of export and imports, and most important of all, a shift from dual exchange rates to unified exchange rate based on free float, and opening up of capital accounts.

9. In parallel, financial system reforms, privatization and financial market reforms also played a significant role in the development of foreign exchange market. It is a complex *structural change* that has unfolded over reform years from early 1990s through early 2000s. This structural change was unlike any Pakistan's economy and its foreign sector underwent before. It is not possible to present here a chronology of these developments in a satisfactory manner; it is voluminous; but in outline these developments are discussed in relevant sections of this Chapter.

10. Besides the main strands of reforms concerning foreign exchange market, there were a number of supportive elements in the reform process that unfolded during the reform years as enumerated below.

- a. liberalization of foreign trade regime, both exports and imports; reduction in import protection accorded through tariffs; removal of licensing; elimination or reductions of controls on trading;
- b. liberalization of transfers; removal of the premium on exchange rate between informal and formal transfers;
- c. opening up of capital account, liberalization of control regime on capital flows specially removal of restrictions on FDI and FPI flows;
- d. enhanced integration of domestic financial markets with global markets.

11. Foreign exchange market of Pakistan has gone through a roller coaster over the decade, but it bears no resemblance to what it was in the late 1990s when it was liberalized. The exchange rate remained volatile and foreign exchange market did not stabilize due to large and persistent current account deficits, a precarious foreign exchange reserve position, anemic foreign exchange inflows, and the onslaught of self-fulfilling expectations of devaluations. The ensuing volatility in early 2000s had severe repercussions on the economy, bolstering incentives for dollarization, encouraging exporters to keep their foreign exchange earnings away from banks and outright under-invoicing, enlarging *kerb* market premium, and enhancing remittance inflows through informal channels.

12. All this changed after 9/11 events. The international drive against *hundi* and *parallel* market activities largely eliminated the segmentation of the market between formal and informal markets, and segmentation between interbank and *kerb* markets that prevailed before. The inflows picked up and as foreign exchange rate stabilized, it generated its own momentum as exporters and speculators both began to intensify their positions in the interbank foreign exchange market. The *parallel* market became a side show as their margins evaporated. The shift of inflows of foreign exchange to interbank market resulted in appreciation of rupee and helped accumulation of foreign exchange reserves to historic high levels by 2005.

13. The strength of newly established foreign exchange companies and forex market allowed SBP to take further liberalization measures such as lifting of restrictions on authorized dealers for interbank transactions, reduction of special cash reserve requirements for importers, and freeing up rate of return on foreign exchange currency deposits. Banks were authorized to extend realization period for export earnings. They were also authorized to extend foreign currency loans to domestic and foreign companies and to make remittances against import documents. SBP allowed prepayment of foreign private loans, and took measures for the development of forward cover market.

14. These steps would not have been sufficient without bringing in the fold foreign currency traders. This was done by giving them a seat on the table, when SBP began to buy foreign exchange from the trading companies as the first step, and this extra-ordinary change in SBP's stance, led to documentation and restructuring of currency trading companies. These changes in the structure of foreign exchange markets allowed build up of foreign exchange reserves in the wake of substantial foreign exchange inflows, which together with modest foreign deposit growth and enhanced banking liquidity helped the surge in financial markets observed over the last five years.

15. This was a historic move. In Pakistan for decades, keeping foreign currency was a crime like a contraband item, not to speak of its trading, conducted in clandestine ways, lest the parties to transaction get caught and end up in jail. After this, the same currency traders who until then were unsavory non-entities ended up sitting across the table as trading partners of reputable banks and SBP as well, in foreign currency trades worth millions of US dollars. That is how foreign exchange reserves were built up in early years of the decade and thereafter. This is not so well known. It was just not a change of the rules for currency trading; it was of a shift of a paradigm, symbolic of the sea change in mind-set, attitudes, outlook and business conduct that has occurred throughout developing countries one after the other over the past three decades.

16. It has given a boost to international trade that would not have occurred otherwise. Alongwith, it has helped to mitigate the syndrome of infant industry for protection behind tariff barriers and artificially high exchange rate, the staple of Pakistan's policies for nearly half a century. Will there be a reversal? Chances of this happening are very unlikely. There are those who would argue that all this opening up was not all that beneficial, but this digression will take us far away from the theme at hand.

17. At the close of decade of 2000s, foreign exchange market of Pakistan is well along the way in its transformation that began in late 1990s. The market is stable as it could be in an environment of free floating exchange rate, low but sufficient levels of foreign exchange reserves, a liberalized foreign trade regime, a deteriorating balance of payment position, and not very sound macroeconomic fundamentals. Pakistan is back to seek IMF led programs of foreign assistance, which are mostly short period inflows to paper over symptoms of liquidity squeeze, no the cure for its causes. Dollarization and capital flight, which appeared to be stemmed in mid-2000s, resurfaced after stock market crash of 2008, seem to have reappeared. Speculative pressures

on exchange rate remain a threat to the stability of foreign exchange market as they were before. The market is sensitive to foreign assistance levels and their anticipated inflows. But how long will this sustain; we will discover.

18. The issue is no longer how exporters manage outstanding export bills withheld by banks, and do not have the incentive to hold back their foreign exchange earnings, or to play the market in hopes of spectacular gains as they did earlier. Hence, foreign exchange operations of banks are more stable; and the mount of foreign currency loans extended by banks and their liquidity levels remain at prudent levels. The linkages between export earnings, foreign exchange reserves, banking credit have strengthened, without concomitant increase in net foreign private investment inflows, owing in large part to crisis atmosphere of past few years and the intermittent ongoing warfare. Interbank foreign reserves are not phenomenal, but its levels are adequate for the needs, in part owing to dampening of imports that has occurred over the past year, with significant increase in remittances through banking system of around US\$ 10 billions and still rising. That is the escape valve for the pressures, built up through large current account deficits requiring recourse to IMF borrowings.

Foreign Exchange Regime

19. For development of a market in foreign currencies, there has to be liberalized but documented and regulated inflows and outflow, together with a market driven mechanism for price determination of currencies, namely the exchange rates. This fundamental factor can not be subverted if a market has to emerge. The same had to be done for development of interbank market in foreign currencies. Without an operative interbank market, there can not be a market based foreign exchange regime. This eventually happened in early years of the past decade, starting in mid-1990s. This market did not emerge out of a box; it had to be implanted and nurtured. It took years for interbank market to be what it is like in current times. This is all historical but not irrelevant; its brief recounting is not out of place.

20. Before reforms of 1990s, foreign exchange regime was administered by SBP where the exchange rate was determined by SBP and was fixed but underwent periodic changes, mostly devaluations when pressures on Pakistani rupee could no longer be sustained. All through this period until start of reforms, SBP was sole repository of foreign exchange and its trading through a complex system of controls, rules and regulations. It was a crime

to carry foreign currency, much less trade it. There was nothing even remotely close to something called a *market* as such; if it could be called a market in the sense the term market is understood. It was an elaborate system of acquisition and allocation of foreign exchange by fiat that conferred upon those an economic rent with import licenses. As a result, there developed an extensive parallel market, undocumented and well established, with its vast underground network and trusted by public at large, called *havala* market, literally 'reference' market where no records were kept; no trace of transaction; and no recourse in case of non-performance by any of the parties concerned.

21. Yet the system prevailed over all odds; it operated for decades on *trust*, amazing though it seems, until a concerted drive was launched against it following 9/11 events. It thrived on remittances of overseas Pakistanis; massive currency transfers, all informal and undocumented, at foreign exchange rate premium arising from the difference between official exchange rate and parallel market rate with a guaranteed and timely delivery.

22. With reforms of foreign exchange regime and periodic campaigns against money laundering, informal and undocumented foreign exchange market has been reduced but not eliminated. It still exists and is very large, operating as *havala* or *hundi* market, not so much for retail transactions, rather for large transactions, involving massive inflows and outflows, simultaneously interacting with formal foreign exchange market. The exchange rates on major currencies that prevail now in the formal market are a *combined outcome* of operations in both the markets, not solely the formal market. The difference is that the premium between the two markets that prevailed before has substantially narrowed down. In current times at the close of decade of 2000s, we have a meaningful foreign exchange market, transformed and installed within a span of about a decade – from late 1990s through current times.

23. In the early part of reforms and opening up, Pakistan had moved from a complex system of controlled exchange rates to a dirty float; while SBP was tinkering around with a slew of controls and restraints on foreign currency market. By late 1990s it had moved towards relaxation of interventions and admitted operations of authorized money exchangers, later turned into foreign exchange companies where buying and selling was freed up. But it had to do so while keeping an eye over money market movements, banking system liquidity and forex market operations. The surrender requirements of foreign exchange proceeds of banks were withdrawn whereby banks had to sell their forex proceeds to SBP at official rate, not *kerb* market rate.

24. Simultaneously SBP began transferring chunks of market to interbank operations, like pawning off oil import payments to banks, selling foreign exchange in the interbank market while replenishing it from purchases from *kerb* market, and at the same time maintaining a band around exchange rate movements, while keeping an unofficial ceiling on the exchange rate. The dirty float was slowly being laundered into clean float in a market based regime, disbanding the currency rate band, ceilings and interventions though carried favourable circumstances post 9/11 events with crackdown on *havala* or *hundi* based transfers.

25. When the time came to turn to clean float, SBP had to draw down banking liquidity levels to prevent a run on currency market and inevitable impact on exchange rates in the inter-bank market. This mopping up of liquidity was essential. Thereafter exchange rate was set on clean float amidst rumors of a major devaluation. Speculators had gotten wind of it and were buying up US dollars; rupee began to slide in *parallel* market from around Rs 60 to one US dollar and kept sliding to around Rs 67 to a dollar. The speculative street rumor had it that it may slide to Rs 70 and beyond. This slide never came; it did not occur on that day, neither the next day of trading, nor after that. Instead, rupee began to strengthen against US dollar in open market trading, and saw *appreciation* back to around Rs 61 to one US dollar. In this round of runaway speculation against rupee, the contrarians won; the speculators took a beating for betting and pledging for devaluation.

Development of Interbank Market

26. Foreign currency market as it prevails now began its advent in mid-1990s with the establishment of a network of trading between SBP, a small group of authorized dealers in foreign exchange dealers, mainly large commercial banks; and authorized money changers. The realization that foreign currency market has to be restructured crept slowly during mid-1990s onwards. The government took several steps in fits and starts for development of interbank market in currency given the precarious foreign exchange reserve position that prevailed for most of the time, arising out of chronic excess of imports over exports and overall imbalances in foreign currency earnings and expenditures. The parallel system, the *havala* market kept thriving. It was not until 1998 that SBP abolished mandatory controls on exchange rate determination; that is until then foreign exchange rates were in effect determined by SBP.

27. This was a selective measure. A multiple exchange rate system came into being, whereby authorized dealers as well as all banks participating in the interbank foreign exchange market were permitted to determine their own rates for all foreign currencies except US dollar, the reserve currency. The US\$ to Rs rate remained a prerogative of SBP determination. Since this rate effectively determined cross rates in the domestic currency market, so indirectly, SBP still controlled currency rates. The authorization extended to banks to determine their own foreign exchange rates was a crack in the administered regime that prevailed for a long time.

28. In tandem, a series of steps were taken in late 1990s to liberalize foreign exchange regime, lifting or easing of controls on foreign trade and foreign currency transactions and transfers, such as more liberal rules for forward cover, especially to exporters; more incentives to foreign investors and foreign banks to invest locally by liberalizing rules concerning repatriation of dividends and profits overseas; permission to domestic private companies to obtain foreign currency loans on their own without involving government guarantees. But PSEs could borrow overseas with government guarantees, a proviso that saw much abused. These relaxations in foreign exchange regime, however, did not constitute open foreign exchange market.

29. In mid-1998, everything seems to have gone back to square one. A number of controls on outflows and debt servicing had to be re-introduced, given precarious financial position that resulted in the aftermath of nuclear detonations, most notably freezing foreign currency deposits of non residents, suspension of licenses of money changer, and sanctions imposed. The freezing-up of deposits wiped out whatever market based foreign exchange regime had helped nurture thus far; a setback to public confidence, a violation of trust, that will take a long time to recover from. Subsequently the government relented, but the damage was done; no matter what pledges were tendered after the event. SBP had to resort to dual exchange rate system. The two tier exchange rate regime returned; one official exchange rate set by SBP, the other interbank rate, set by trading in interbank market for foreign currencies. SBP also imposed severe restrictions on foreign currency trading and access to markets, culminating into a dirty float system operating under an unofficial but effective band of acceptable exchange rate.

30. Foremost, SBP authorized commercial banks to hold on to their foreign exchange balances arising from foreign currency deposits, export proceeds, transfers, like remittances, instead of surrendering them to SBP. This was a lynch-pin of reforms. Subsequently, SBP abandoned two tier system of exchange rate, abolishing official rate and replacing it with interbank rate.

This decision was most difficult for authorities to undertake, but it had to be done in a bid to move away from *dirty-float* to a *cleaner-float* system to usher in market-determined exchange rate. This step was accompanied by overhauling the system of trading in foreign currency through allowing banks to engage in public trading of foreign currency and also interbank trading, thereby providing the foundation for interbank market in foreign exchange. Further, banks found themselves facing challenges of managing multi-currency portfolio, something they were not used to nor prepared for. When finally the moment arrived to assume risks of multi-currency portfolio, they ruefully recalled good old days when they would surrender their currency balances to SBP at going official rate of exchange.

31. SBP eventually moved to a clean float of rupee thereby converting currency market to open but supervised trading after ensuring that market liquidity levels are just barely enough for routine needs, and market participant will not be able to launch a speculative attack against rupee *vis-à-vis* US dollar or other foreign currencies. At that time *parallel rate* was hovering around Rs 63-67 to a dollar, and market rumors were that once rupee is allowed to float it will depreciate swiftly to Rs 70 to a dollar and beyond. That did not happen. If anything, rupee appreciated in the *parallel* market. It found its moorings in the inflows and outflows. The exchange rate finally came to be seen driven by market based inflows and outflows. Slowly the idea took hold that SBP is no longer fixing up the exchange rate as it used to do all along. This was incredulous for many. They thought that SBP will have to interference if devaluations get out of hand. If it did intervene in the market, it will do so through interbank operations, and if needed through foreign exchange companies.

Foreign Currency Accounts (FCAs) and Interbank Market

32. A reliable source of sustained supply of foreign currency to the interbank market could be foreign currency deposits lodged with the banking system, not with finance companies or exchange companies, both by residents and non-residents alike, given the liberalized rules currently in place for opening and maintaining such accounts. Potentially they could impart depth to the domestic interbank foreign currency market. However, these deposits, held in Foreign Currency Accounts (FCAs) are sustainable only if exchange rate remains relatively stable, and if interest rates on these

deposits have an edge over others. Otherwise, these deposits could potentially be a source of massive foreign liquidity shortage, in case of mass withdrawals, degenerating into a financial crisis of severe proportions as it happened in Turkey in late 1970s, and in Pakistan in late 1990s briefly outlined below.

33. One of the legacies of past was advent of Foreign Currency Accounts (FCAs) in early 1970s, but became significant only after financial institutions were allowed in with large institutional deposits in mid-1980s. Subsequently, in early 1990s, residents and non-residents were allowed to hold FCAs; no questions asked. This amounted to legalizing underground flows of foreign currency into formal deposit inflows. FCA scheme was intended to bolster sagging inflows of foreign currency into interbank market thereby heralding entry of Pakistani banks into foreign currency business, apart from their involvement in foreign trade-based transactions. Under FE-45 and FE-31 schemes, banks were allowed to hold foreign currency deposits, but were required to surrender foreign exchange to SBP with guarantee of withdrawal in foreign currencies. Banks were authorized to provide limited forward cover, partly subsidized by SBP that proved very costly to SBP and the banking system. Technically these FCA deposits were liability of banks, but effectively, the counterpart foreign currency ended up being liability of SBP. By mid-1998, FCA deposits were \$9.7 billion, a staggering amount similar to unfunded debt liability, like deposits of NSS, but this time in foreign exchange without acknowledgment on external debt accounts.

34. On paper, banks appeared to be deep into foreign currency markets in those days via overseas deposits, but they were not; because there was no market for these deposits as such. The foreign exchange proceeds of FCAs were eventually used to finance trade and services deficits, the same way as interbank supplied foreign currencies are being used in current times, but no market process was involved. Banks were simply a conduit to supply foreign currency to SBP at prevailing exchange rate through surrender requirements, without regard to liability side of these deposits. The inflows were deemed practically irreversible. In the aftermath of 1998 nuclear detonations, imposition of sanctions, fear of massive withdrawals for FCAs, the drumbeat of a failing state nearing insolvency, followed by strong urgings of IFIs, the decision to freeze FCAs was taken in a cavalier fashion. The most peculiar argument for freezing was that depositors have already made a bundle because of devaluations. FCAs were frozen along with other similar instruments of foreign currency liabilities for fear of a run on banks, with meager foreign exchange reserves. The authorities did offer rupee conversion but at exchange rates below *kerb* market or parallel market rates.

35. Subsequently, these old FCAs were resolved, were paid off in several ways, or were converted into a new facility under FE-25. Slowly FE-25 deposits began to rise, and increased from \$978 in FY00 to \$3881 in FY09, much of it was conversion of old FCAs into FE-25. These are deposits in US dollar, British pound sterling, Euro, and Japanese Yen. However, the largest parts of FE-25 deposits are in US dollars, about 75 to 80 percent. These deposits are integrated with interbank market of foreign currencies. Banks are authorized, subject to some limitations, to extend foreign currency loans using these balances. These foreign currency loans are usually self liquidating, if they are borrowed to service export orders. Traditionally, there is not much demand for foreign currency loans owing to exchange rate risk, even though the dollar based rate of interest rate is much lower than rupee based borrowings. A rise in these foreign currency deposits is consequential to total foreign currency balances at hand with the banking system.

Kerb Market

36. In current times, *kerb market* is not a footnote to currency market as it appears to be in Chart 1 of Chapter 1. It is not parallel market or black market either, as this term is widely understood. It is not informal market either, though such a distinction was blurred until the free float of exchange rate. It is now a documented market in Pakistan. It is mainly operated by foreign exchange companies under present rules and regulations which are quite liberal where the distinction between formal and informal flows, both ways, is rather opaque with regard to transactions carried out on retail basis. The foreign currency rates are floating and are readily accepted by the public.

37. The size of operations of foreign exchange companies (FECs) are not widely known; though they report their transactions to SBP in compliance to disclosure rules under a watchful eye with regard to rules and regulations concerning foreign exchange transactions and their business conduct. Apparently the turnover is fairly large on any given day at wholesale level, Retail transactions are also fairly large; but the size of total inflows and outflows are not publicized. Whether these transactions do get captured in financial accounts of balance of payments.

38. The *kerb* market came into existence in early 1990s with licensing of authorized money changers (AMCs) who were registered under company law with usual requirements of base capital, compliance with company rules and regulations; together with rules of SBP concerning trading in currencies; declaration and reporting requirements. By 2000 their number had grown to

more than 400. Most of them however remained small outfits, dominated by half a dozen large ones. In FY03, AMCs were required by SBP either to transform themselves into Foreign Exchange Companies (FECs) or become franchises of newly established FECs. When these FECs were established, they took over business of AMCs. The FECs were also licensed and registered companies as regular stakeholder in foreign currency market.

39. AMCs of the past or FECs of the present, these are non-bank financial institutions, who engage in bank like activities related to foreign currency transactions, except that they have no license for doing banking business as such; they are restricted only to foreign currency trading and transfers. They are not supposed to take deposits, but they do engage in deposit like funds at their disposal, for howsoever short that period may be. They are not supposed to be in lending business in any currency, Pakistani rupee or US\$ or the British pound sterling. They do not do lending, but may extend credit like facility for currency transaction for a day or two. Does this happen? There is no way of knowing it, formally.

40. They are not black market operators as some would like to interpret the term *kerb market* in a literal sense. These companies and their trading transactions are officially designated as *kerb market*, a nomenclature that has stuck thus far. They are not *kerb* operators; they are in the mainstream. These developments enhanced depth of formal foreign exchange markets in Pakistan and injected a stronger market discipline. These FECs conduct their business like authorized dealers, the banks, with the caveat that their market rates have a premium, and their exchange rates are always slightly higher by 40 to 60 paisas per US\$, British pound or Euro, than rates prevailing in the interbank market. They operate at a small market premium.

41. This premium has always existed; the difference is that in pre-reform era, this premium was much larger, several rupees higher than the official rate of exchange prevailing at any time. The premium has narrowed considerably, but it will be impossible to eliminate it, given the sources of foreign liquidity these companies mobilize. The general impression remains that these companies mostly tap informal sources of foreign liquidity that would otherwise have found its way via unauthorized channels like *havala*, *hundi* or *badla* system; that is, their transactions are no more than money laundering operation in reverse. This is not the case. Whatever the source may be, there is a market now; it is out in the open; it operates on a premium, and this premium is not going to disappear.

42. There are several views regarding source of premium and most of them derive from the misconception that they arise from operations of formal market versus parallel market. The *kerb* rate has more faithfully reflected the

balance between demand and supply of foreign currencies in the market more faithfully than SBP rate which has been overvalued because of restrictions placed on uses of foreign exchange received through SBP for only approved list of items. The *kerb* rate has been closer to the pulse of market because of overvaluation of official SBP rate has all along but that is no longer the case. The differential has nearly disappeared. Simultaneously, shift of remittances inflows from informal channels to formal channels, has provided a significant boost to foreign currency market.

43. From the start, foreign exchange inflows channeled through AMCs were tapped in several ways by SBP into mainstream supply from early days, mainly through the buildup of foreign currency accounts (FCAs) on the strength of remittances of overseas Pakistanis. A good part of these remittances were being channeled through *hundi*, not simply because of hundi rate premium, but to maintain anonymity, avoid documentation and tax implications. The AMCs also offered premiums but slightly lower than *hundi* operators, but were preferred by remitters for their documented accessibility. After the freeze placed on FCAs, in early 2000s, SBP began direct purchases of foreign currencies from AMCs for reserve build up, and continued this practice with their successors, the FECs.

44. This was a good move to bring FECs operations in the mainstream and represented a break from the control mentality that had prevailed for so long to a symbiosis based on open market mind-set. The same people, who until that time were considered shady and unreliable and were vilified as black marketers, were given a seat by SBP across the table as trading partners. This was indeed a milestone in the process of liberalization and reforms; apart from simply being a mechanism or a tool for currency purchase operations. As trading partners of SBP, FECs gained a respectability and trust that they never had before. These signals did not go unnoticed.

Informal Market

45. The informal currency market is not a footnote either. It is called *parallel* market. It is no longer called black market. It does exist; but it is not *kerb* market either discussed above. Howsoever it is perceived, its presence in Pakistan's currency market is palpable. But a review of this informal market is not possible concerning its size and operations because it is undocumented or underground market. There is no way to determine its flows or size beyond anecdotal estimates if they can be called estimates. Those privy to its

operations, place its flows somewhere around half or over of formal market, and that is very high. The flows occur through same age old methods of *havala*, *hundi*, or cash carry. Occasionally, some FECs are caught in blatant parallel transfers and those are well publicized. Many are never known.

46. For example, purchases of Pakistani group of investors in Dubai real estate market are very large. Pakistan is believed to be the third largest investor group which is rather ironic. A third world country raked with crisis, with severe balance of payments problems and pressures on its currency, being touted one of largest investor in the Gulf, amidst oil rich countries all around. It defies common sense, but so are estimates of real estate investment. These estimates were widely publicized in the wake of crash of real estate market in Dubai, where a major holding company had to declare moratorium on repayments of real estate-tendered borrowings, sending the market in a tailspin.

47. Occasionally, there are similar indications of transactions occurring in parallel market or *kerb* market. For example, in the wake of stock market collapse in Pakistan, a few transactions of FECs were apprehended and publicly announced, amounting to several billion dollars destined for Gulf countries. Nothing much came out of it beyond wrist slap of cancellation of license of foreign exchange companies involved. These outflows were massive coinciding with speculative real estate bubble in gulf emirates. The source of inflows to parallel market have not dried up in spite of all out efforts in post 9/11 period to eliminate *havala* transactions, suspected of money laundering or financing terrorist organizations. The main source still remains under-invoicing of exports or over-invoicing of imports; or illegal money balances held abroad, or foreign currency balances of Pakistani businesses overseas which are out of local tax net.

48. In late 1990s, government announced that foreign currency balances could be brought in legally, *no questions asked*. That was tantamount to accept that there is no way to extend writ of formal currency regime on these underground flows. It was a realistic approach and has worked well over the past decade. At that time, those steps were ridiculed. Currently, in these times, Italy, Poland and Greece, faced with severe financial crises of their own, have announced same facilities to their ethnic diaspora in rich countries to bring in their funds, *no questions asked*, no taxes levied, and no restrictions on their transfer out. Same in the US, as long as these inflows are properly declared; but *no questions asked* as to their origin or *bona fides*. There does not seem to be any way to restrict informal operations, much less stamp out. That is the lesson of recent history of currency markets and flows.

Section 2: Foreign Currency Market

Size and Trends – Two Approaches

1. The *size* of the market is typically associated with demand for or supply of a commodity, but not both. Same has to be the approach in estimating size of currency market. Sometimes size is also alluded to by consumer group, domestically or abroad, if there is an export market for the item concerned. Business corporations always do an assessment of demand in fairly sophisticated manner to determine prospects of their entry in the market. Their focus is demand for their products, not supply, aided by powerful advertising campaign to grab a market share. The same is true for currency market except that there is no media blitz by any foreign currency dealer; it is other way round; the dealers would like to keep their currency trading shrouded in secrecy. This is as basic as one could get, trying to ascertain the size of currency market. Somehow it eludes many, or remains an enigma except for currency traders delving into it on regular basis.

2. The size of foreign currency markets is typically referenced as the value of *turnover* per day or per week, but seldom per month. The global currency market is often described as trillions dollar market per day. This is the turnover of global currency markets, where currencies are continuously being bought and sold or resold. That does not mean that somehow supply of these currencies has doubled or tripled in the frenzy of trading. Hence, turnover is trading, *circulating* in the market, not the size of currency market. If market is caught in speculative binge, or if it is volatile and unstable for whatever reasons, turnover could be very large on any day. Otherwise, in routine times, the turnover could be modest for the *same quantity* of foreign currency, driven mainly by payment needs of those buying foreign currency. Turnover, therefore, exaggerates size of the market.

3. Hence, size of market for foreign currency has to be gauged in terms of either demand for foreign currency or supply of foreign currency over a given period of time, but not both. Supplies of currency are inflows both on current account of BoP and its corresponding items as shown in financial accounts; whereas demands for foreign currency are outflows over a period of time, lodged in current accounts and corresponding items on financial accounts of balance of payments (BoP). This has to be done in *ex-post* manner not *ex-ante* manner.

4. The reason is that in ex-post sense, demand and supply are always in balance at a *market clearing price*; the market exchange rate. There are two transactions, one at the time of inflow, say, for export earnings when exporters or their banks sell receipts of export earnings in currency market largely through their banks in the interbank market. Likewise, at the time of outflow, say for payments for imports, when foreign currency is bought by banks for their clients for payments, again in the interbank currency market. But the estimation of the size, namely quantity of foreign currency in accounting value terms, has to be based on one or the other, not both.

5. Following this approach, there are two ways to estimate size of foreign currency markets. One way would be to add up all *inflows or outflows* recorded as credit/debit entries in the balance of payments (BoP) accounting identities that occurred during a year. We have followed this method as discussed below in detail. The reason is that in applied sense, all items that constitute demand or supply of foreign currencies are lodged in the balance of payments accounts. All foreign trade transactions involving exports and imports of goods and services, or receipts and payments of factor incomes; inflows and outflows on all transfers both on private and government accounts; all of these are captured in *current account* entries. Therefore, a first approximation of the size of currency market in Pakistan is the aggregate of outflows that represents *demand* for foreign currency in a given year. How this demand is met, and how it is eventually financed is an ancillary matter for the time being.

6. Current account of balance of payments has been in deficit in Pakistan since FY04 through end of FY10. The counterpart financing entries of these deficits are lodged in *capital account*, consisting of autonomous inflows and outflows that occur regardless of financing needs of deficit on current account. But a much larger part of counterpart financing entries are lodged in *financial accounts*, such as disbursements on foreign borrowings, both short term and long term, some of them borrowed specifically to cover these deficits, if draw downs of foreign exchange reserves turn out to be insufficient which has been the case in Pakistan. These financing entries of current account deficit are not to be added to outflows lodged in current account, because it will be double counting. Following this approach we have concentrated on aggregate outflows on current account and interpreted them as the size of foreign currency market in Pakistan.

7. Another way would be to add up all transactions conducted by three major parties to trading in foreign currencies; namely SBP; authorized dealers (ADs), mainly banks and foreign exchange companies as discussed in detail here. We have not followed this method because of intervening entries

of turnover lodged in aggregates of sales and purchases by banks or foreign exchange companies during a year and shown as end year aggregate. As it is, trading transactions in foreign currencies conducted by SBP, authorized dealers and FECs, that is, their sales and purchases represent total **amount of transactions** conducted in the market in any time period one may select to do estimates of foreign currency market. But *turnover* is trading reported on daily basis; it does not represent size of the market.

8. Private individuals also undertake currency trading on their own, but in the formal currency market this retail trading is done through banks or exchange companies. These private retail transactions are captured by sale purchase figures of banks as authorized dealers (ADs) or FECs. As for SBP's sales and purchases of foreign currencies, since domestically this trading is done with ADs or FECs, these transactions are captured in the trading volume of ADs and FECs, and therefore adding them up leads to double counting size of the market. This is regardless of whether SBP is buying for reserves, or selling reserves to augment supply of foreign currencies in domestic market with an eye on exchange rate movements over short periods. Therefore, to arrive at estimate of size of market, we need to log-in sales and purchases of ADs and FECs. This data is around and can be discovered.

9. The trading by ADs and FECs can be classified in two categories. One category consists of trading between financial institutions, be banks or exchange companies, which are lodged in credit/debit entries on *nostro* accounts of trading partners held overseas with their correspondent banks, or any bank with whom ADs or FECs may be dealing with at any time. The second category is that of cash trading on the window, but this is mostly done by FECs, not so much by banks. Therefore, one may seek out sales purchase data of ADs and FECs under these two categories to get a fix on the size of currency market in Pakistan. Purchases of currencies by ADs and FECs represent incoming supply of foreign currencies, and sales represent demand for foreign currencies whosoever sellers or buyers maybe doing trade with ADs and FECs in any given time period.

10. It will be interesting to see whether inflows and outflows on balance of payments accounts match-up with trading data of ADs and FECs foreign currency trading. Chances are they will not, because there are problems of translation of multicurrency balances into accounting currency, exchange rates and their cross rates at the time of translation, and their aggregation. This is why foreign liabilities data does not tally between creditors and borrowers, no matter how diligently accounting and translation of currencies is done. In this data, demand side of foreign currency market is the outflow, and it is always larger than the inflows on current account items like foreign

trade, transfers, incomes and services accounts. The shortfall of the current account is financed by counterpart flows on financial accounts including capital flows, both short term and long term.

11. Therefore we have followed the first method, namely payments, debits or outflows as lodged in the current account of Pakistan's BoP, representing outflows of foreign currencies. These are comprehensively reported by SBP on quarterly flow basis, and are verified by counterpart entries with financial institutions abroad, who are a party to these transactions, particularly the IMF and the World Bank. Their main concern is with financing BoP deficits as they emerge; our main concern is estimating and analyzing *size of domestic currency* market based on outflows conducted during a year.

The Size of Currency Market

12. No matter what approach is followed, or how it is done, the size of foreign currency market in Pakistan has grown significantly over the past decade, regardless of how one proceeds to do the estimates. As shown in *Data Set 6.5*, there are three categories of current account balance transactions registered, where receipts are inflows of foreign currencies, and payments are outflows, representing demand for foreign currency. These categories are: merchandise foreign trade plus services, both items shown here separately; factor income; and transfers. Details of these categories of current account transactions for Pakistan are to be found in BoP statistical tables given in the Annual Reports of SBP.

13. Financial accounts entries of inflows and outflows are mostly compensating financial flows to cover the deficit on current account, primarily trade deficit plus deficits lodged with services, income and transfers. The deficit on current account, since it is net of all inflows such as export earnings, remittances and other inflows, it has to be covered by inflows of foreign loans, trade credits, foreign direct investment and portfolio investment, use of foreign exchange reserves held by SBP. Besides, there are a number of small items of inflows and outflows tucked under financial accounts. All these transactions on financial account occur separately from transactions that are lodged with current and capital accounts of BoP, and these are included in estimates of size of currency market.

14. Given the above, all receipts or inflows are to be interpreted in *ex-post* sense as *supply of foreign currency*, whereas all payments or *outflows* are *demand for foreign currency* at prices prevailing in currency market, namely the exchange rates both in interbank market and *kerb* market. Both inflows and outflows of foreign currencies occur as a stream of receipts and payments based on trading in goods and services, or factor income and transfers during the year. The aggregate of stream of inflows or outflows represents *size* of currency market for the reporting year. But trading in currencies is going on all the time on any given day, or during the week or month of the year which is currency market *turnover*.

15. If market turnover could be ascertained, it will be much larger than aggregate values of inflows or outflows for the reporting year because it contains multiple counting of same quantity of foreign currencies that are circulating in the market and being traded. Therefore, turnover is not included in estimates of the *size* of currency market; rather size is represented by aggregate values of streams of inflows and outflows for the reporting period; but for some reason such confusion is commonplace.

16. An analogy may help explain this difference between *transactional balances* of inflows or outflows outstanding at end of the period and *turnover* within a period. Take the case of stock market in any year as discussed in Chapter 9. On the starting day of the year, size of stock market is represented by market value of stocks as at close of last trading day of the previous year. Trading goes on everyday throughout the year and daily turnover is known. Suppose there are no new listings on stock market and no new shares are floated, hence, number of shares outstanding and in circulation in the stock market remains the same throughout the year. Now, aggregate of daily turnover values could become very large if stock market is in the grip of speculative trading. This aggregate of turnover does not represent the size of stock market. At close of last trading day of the year, the size of stock market is interpreted as market value of capitalization.

17. For that matter what is the size of gold market in Pakistan is even more intriguing, and would test the mettle of anyone trying to estimate it from daily turnover, which is not reported and is not known. The frenzy of trading is visible; the aggregate value of trading is invisible, because informal gold market is undocumented. It is just too large and defies any estimation.

18. Similar considerations apply while estimating size of foreign currency market in Pakistan. At the aggregate level, these inflows and outflows on balance of payments accounts of Pakistan are shown in Data Set 6.5 attached. Both inflows and outflows have grown significantly during FY00-10. Total

receipts or *inflows* of all foreign currencies have grown from \$15.8 billion in FY00 to \$49.4 billion in FY10, while total *outflows* increased from \$18.3 billion in FY00 to \$49.6 billion in FY10. Notice that the two are not exactly the same but very close. They have to be in ex-post sense as per accounting identities except for differences owing to translation of currencies at cross rates prevailing in the currency market at any given time. These cross rates are too volatile to permit a tight reconciliation at aggregate level.

19. These are formal market flows through banking system; the remainder occurs through foreign exchange companies. Since *total outflows* are demand for currency, growth of demand for foreign currencies in ex-post sense increased at an average annual rate of about 10.5 percent during the decade; so has the size of formal currency market in Pakistan. Overall, this is a high rate of increase in demand for currencies over the past decade, but this average hides significant fluctuations even some anomalies over this ten year period. During FY00-05, growth of outflows was 12.4 per cent; then it dropped to 8.6 percent during the second half of the decade, FY05-10.

20. The demand for foreign currency has been volatile; for example in one year growing at about 29 per cent as in FY05, while just one year back, it was down by 6.2 per cent in FY04. During FY06-08, growth of demand for currency kept rising fairly rapidly at about 17 percent per year, but this rate of growth stopped as abruptly as it had started, and in FY09 there was a decline in demand for currency by 7.5 percent in FY09 and again by about one percent in FY10.

21. Note that total outflows during FY08 were highest in the decade at \$ 54 billion. In FY10, total amounts of outflows declined to \$49.6 billion, suggesting that formal currency market of Pakistan shrank over these years. This is rather hard to believe that foreign currency demand in the last two years, FY09-10 has been on the decline; but this is what the data shows. This fly in the face of intuitive understanding that size of currency markets always increase. It may be so if somehow informal or undocumented market is gauged to some degree of accuracy and added up. Such gyrations from year to year can not be explained in terms of routine economic factors and entail serious implications for exchange rate and monetary stability. The fundamental elements of economic or financial causality does not make turnabout and run in reverse directions over such short periods, counter to both *a priori* constructs and received wisdom of conceptual frameworks, established over long periods of observation in applied realm. That is why explanations of annual variations in demand for foreign currencies in terms of key economic and financial variables at macrofinancial level are difficult to articulate and comprehend.

22. The largest component of inflows and outflows of foreign currency emerge from *merchandise foreign trade* and that is understandable. Export earnings, that is, export receipts or inflows, have grown from \$8.2 billion in FY00 to \$ 19.6 billion in FY10 at average annual rate of about 9 percent. Imports, foreign trade outflows, are the largest component in the demand for foreign currency, and these have grown much faster from \$9.6 billion in FY00 to \$ 31.1 billion in FY10, at average annual rate of 12.5 percent over the past decade. (*Data Set 6.5, 6.5a*) Again, these decade long averages are deceptive. During FY00-05, growth of foreign trade outflows was about 15 percent per year; but during the second half of the decade, FY05-10, this growth was lower, about 10 percent per year.

23. Current transfer inflows including remittances showed even more volatility. For the entire decade, the growth rate of inflows of current transfers was 12.4 per year; but during first half of decade, growth was much higher, about 16.7 percent; while during the second half of the decade, this growth reduced to about 8 percent per year, in spite of banner increases in remittances reaching to about US\$ 9 billion in FY10, presenting a challenge to intuitive understanding of how such dependable inflows could show so much variation, so commonplace in international financial flows.

24. To top it all, the combined outcome of all and outflows was a decline in the amount from \$54 billion in FY08 to \$49.5 billion in FY10, leading to the conclusion that over the past couple of years, currency markets of Pakistan shrank by the amounts as shown. At a first glance, such observations are difficult to believe; yet, that is what transpired. What inferences can be drawn from this observation is even more difficult to say.

25. Having thus arrived at some estimates of size of *formal* currency market of Pakistan some observations on comparative level are in order owing to their implications for exchange rates that prevail at any given time in the domestic currency markets, and exchange rate sensitive inflows and outflows. Among these, note that domestic currency market in Pakistan is almost an invisible fraction of global currency market, and only a tiny fraction of Asian currency markets. Clearly, Pakistan's currency market is not a destination for large inflows and outflows on merchandise trade account; or transfer account, or autonomous capital flow account, like foreign private investment; nor it is an off-shore market for currency trading like those in some Gulf countries. This is discussed in Chapter 11.

26. The domestic operations of currency market are largely beholden to domestic factors; though this has to be said with a pinch of salt, given fluctuations in exchange rate and cross rates, overseas demand for Pakistani exports, underground flows, capital flight and investments of Pakistanis in

foreign countries; in the US, UK and gulf countries. Remittances are by now flowing through formal channels, but what part remains informal is not known. The magnitudes of investments overseas by Pakistanis are fairly large as shown by anecdotal coverage of financial media, but there is no way of confirming those, much less coping with them in a formal analysis.

27. For payments of imports, importers buy foreign currencies from their own banks directly, or through import LCs opened with them. Their banks, in turn may supply foreign exchange from their own currency portfolio, or buy from ADs or from FECs. A good part of imports are bought on short term trade credit from overseas suppliers, but when these payments fall due, eventually the local bank has to come through with the needed amounts of foreign currency from its own reserves; short of that from purchases at interbank market, or foreign currency dealings from other sources.

28. Outflows on services and factor income accounts, both are significantly large relative to their inflows and by a wide margin for most of the years and have added significantly to the shortfall as registered on current account balance. Outflows on both services and factor income accounts were \$15.5 billion in FY08, nearly three fourth of all inflows from exports, thus contributing significantly to current account deficit of about \$14 billion in that year. Two years later, outflows on services and factor incomes were \$10.6 billion, thus helping to lower the level of current account deficit in FY10. Transfers are next largest item. Their inflow, the supply side of foreign currency, has grown from US\$ 4 billion in FY00 to US\$13 billion in FY10, mainly owing to inflows of remittances of Pakistanis working abroad. These remittances have grown nearly eight time from about one billion dollars in FY00 to \$9 billion in FY10, considerably mitigating somewhat pressures on Pakistani rupee during this period. The rising trend has continued, and if it sustains, remittances are likely to surpass \$ 11 billion mark in a year or so. Any long term forecast would be too hazardous.

29. The largest part of remittances originates from US, Saudi Arabia and Gulf countries, in that order. Growth of remittances has been in the lime line but it is routinely attributed to anti-money laundering efforts, clamp down on *havoala* or *hundi* transfers, or campaign against illegal transfers at the point of origin, specially US and European countries. But this does not explain the rise of remittances close to \$10 billions by end of 2010, and it is still rising. If it countries to grow at this rate, the day is not far when Pakistan will be earning more by exporting its talented, educated and bright people overseas, which speaks volumes about socio-economic conditions that prevail in the country in current times. In relative terms, the country is earning less from merchandise exports, because its export base is not diversified enough to

support sustained growth. In current times it appears that exports have picked up, but whether it is a short run phenomenon or a structural shift is not known.

30. However, main reason of the increase in remittances are rising incomes of Pakistanis overseas, but at the same time, *visibility* of remittances has increased because of a shift from informal inflows to formal flows together with liberalized rules of taxation and accountability. The much maligned policy of 'no questions asked' has found some degree of respectability after Italy and a few other countries embraced the same rules to attract larger inflows from their people living in diaspora mentioned earlier. Remittances are being increasingly transmitted through formal channels, the banking system or FECs, because of narrowing differential of exchange rate between formal market and parallel market and a world wide crack down on money laundering and shady transfers. Informal channels are getting to be too hazardous for such transfers.

31. In such circumstances, the role of a small exchange rate differential has been diminished if not sidelined, originating from different exchange rates prevailing in formal interbank market or FECs market and informal market of *havala* or *hundi* system. This differential has been eroding over time; it was substantial during the late 1990s, but now it is fairly narrow. It still exists because of undocumented inflows and outflows of foreign currencies in Pakistan. For foreign currency transactions, Pakistan is an open country, far more than it is officially acknowledged.

32. Given size of BoP deficits that emerged over this period, the compensating inflows to finance this deficit are lodged in financial accounts, bolstering supply of foreign currency in domestic markets. This supply of foreign resources on financial accounts *on net basis*, increased from US\$3.7 billion in FY00 to US\$ 13.6 billion in FY08 to finance record outflows on net basis of that year. In FY10, net inflows were down to \$3 billion. But in estimation of currency market size since we are concentrating on outflows, these have been fairly stable on financial accounts year after year and were in the range of \$6-7 billion and are included in total outflows discussed above.

33. Much of inflows on financial accounts are disbursements from foreign loans, both short term and long term. A good part of short term loans are trade credits extended to finance imports. But these are self liquidating credits, in the sense that they have to be cleared within a short period of 90 to 180 days. At end of the year, their outstanding balances could be vastly different from balances that prevailed during the year. The medium to long term loan disbursements therefore, account for supply of foreign liquidity,

net of amortization, the repayments, where interest payments are lodged in current accounts as outflows on factor income; while repayments of principal amount are lodged in financial accounts. These transactions eventually show up on external debt of Pakistan and what matters is net inflow of medium to long term loan disbursements in any time period.

34. Therefore, to analyze trends of currency market and exchange rates in Pakistan, one has to focus on foreign trade balances, payments for imports, services and factor incomes, transfer receipts and payments, capital inflows or outflows via foreign direct investment and foreign portfolio investment, short term foreign trade credits and their disbursements, medium to long term loans mainly from international financial institutions and their disbursements, and overall external debt position of Pakistan. The intricacies of balance of payments position have to be analyzed to gauge size of foreign currency markets in Pakistan. This is a tall order for those just starting to learn rudiments of foreign currency markets.

Foreign Exchange Reserves -Trends

35. The shortfall of supply of foreign currency, no matter how it is counted, as a last resort, has to be financed by *draw down* of foreign currency reserves after all possible sources of financing have been exhausted. These draw downs are lodged in financial accounts as flows for a single year, and should not be confused with the total value of such reserves, held by SBP, banking system, and non-bank financial institutions like FECs as stock of foreign currency reserves during any period. These draw downs are financial outflows during the year, and are treated as credit item on financial accounts of balance of payments.

36. The largest part of foreign exchange reserves are held by SBP. Its share ranged between 75 to 85 percent of total reserves for most years in the past decade. The remainder has largely been held by authorized dealers, the banks, and even smaller share was held by foreign exchange companies; their shares ranged between 15 to 25 percent. (*Data Set 6.5a*) This is in line with experience of nearly all central banks in developing countries partly for historical reasons. During pre-reform period, central banks in most developing countries were the final arbiter of exchange rates, not currency markets, and they were also main source of foreign currency to banking system domestically as repository of foreign currency reserves.

37. Comparative experience also shows that most banks, except large money center banks, generally shy away from maintaining a portfolio of foreign currency reserves. The main reason is that for them it is a risky exposure to vast global currency market. While holding reserves, opportunities for exchange rate arbitrage demands expertise at currency portfolio management which is too expensive for smaller banks to obtain and maintain, given relatively small size of their foreign currency needs arising from domestic banking operations. Instead, most banks rely on the market to obtain foreign currency as needed.

38. Foreign exchange reserves in Pakistan have grown significantly during the past decade, starting from their lowest level of \$1.1 billion at the end of FY98 to \$2.1 billion couple of years later at the end of FY00. Thereafter, there was a steep growth, as foreign exchange reserves increased to \$12.0 billion in FY-04 at an average annual rate of 53 percent during these four years never achieved before, nor thereafter. (see *Data Set 6.5a*) The reserves stayed at this level for a year, and slowly began to climb to \$17.5 billion by end of FY07, the highest level recorded in the past decade. That is, during the nine year period of mid-1998 to mid 2007, there was a 16 fold increase in foreign exchange reserves in Pakistan. This rate of growth is unlikely to be surpassed again in future, starting as it did in the backdrop of lowest reserves at the end of 1990s and early 2000s.

39. In parallel, current account balance which was positive during first four years of this decade, turned negative in FY05, resulting in net outflow on foreign trade and services account. The net outflow of reserves was in line with deficit on current account which began rising at an alarming rate in years after. The deficit was \$6.9 billion in FY07, and then doubled to about \$14 billion in FY08. As a result, there was a heavy draw down on foreign exchange reserves which declined from \$17.5 billion in FY07 to \$11.5 billion in FY08. Since then reserves have grown back to \$15.3 billion by FY10.

40. But what these long terms trends do not reveal is why foreign exchange reserves behaved the way they did over the past decade, what were the underlying reasons, how reserves were tuned to prevailing short term needs; what actions were taken to deal with the sources of change, and so forth; these are just trends. These aspects have to be discussed together with exchange rate management, interest rate and monetary management, demand management and overall economic management.

41. As a single country experience, rise in reserve balances was indeed very fast to levels much higher than before. But it is not the absolute level that is significant; rather it is *adequacy* of reserves relative to outflows that

matters most. Reserve adequacy is often referred to as size of reserves good enough for so many weeks of imports. In the first couple of years, reserves were precariously low; good enough for 11-16 weeks of imports as shown in the Data Set 6.5a, but this ratio increased to 48 weeks of imports in FY03, the highest it has ever been. It has been hovering around 20-27 weeks for most years. Is that a comfortable level in times of open capital accounts and mostly free trade? The answer is in the negative, because a slight shove in the wrong direction and country would slide back to foreign liquidity shortages, forcing recourse to expensive short term borrowings, or recourse to IMF. That is what has happened to Pakistan over in recent years.

42. These reserve level movements occurred in Pakistan in the backdrop of massive reserve build up by India, China, Malaysia, and other front line emerging market countries. Their currencies strengthened vis-a-vis US dollars, but did that also lead to a comparable appreciation of their exchange rates? That needs to be assessed. More importantly, the persistent rise of foreign reserves accumulated by China, Brazil and India over a period of nearly decade and a half, together with persistently large foreign trade surpluses is harbinger of realignment in the balance of international financial position and reconfiguration of their presence on the table at IMF. In part it has already occurred; the G-7 group was enlarged to accommodate Russia, then it became G-8. There is talk of including BRIC countries and others to make it G-15; but it is unlikely that G-8 would relinquish its role. This realignment is being discussed and may lead to changes in international financial with major implications for all, especially developing countries.

Dollarization

43. From time to time, concerns are raised regarding dollarization of Pakistan's economy causing a good deal of anguish among many not privy to what dollarization means, and what has transpired in the past. Various scenarios are outlined or anecdotal evidence are cited in testimony thereof. Most often, dollarization is associated with foreign currency holdings of Pakistanis at home or abroad. In its extreme, dollarization is taken to mean flight from domestic currency to a strong foreign currency for transaction purposes or for deposit holding preferences with the banking system. This is a myth; flight from domestic currency to foreign currency has not occurred in Pakistan and is unlikely to occur, simply because it has not happened in the post-war period in any country except those handful ones suffering from symptoms of Dutch disease; and even among them it is difficult to find a case of full dollarization.

44. Full dollarization, if it were to occur in its extreme, it would force a country either to withdraw its own currency or issue a new one. That is an extreme case. Short of it, new currency has been issued by a handful of countries, including Pakistan following its truncation in 1971; but in spite of all the economic and financial crises the country has suffered over the past four decades, public at large has not forsaken rupee for dollars or pound sterling for transaction purposes or for deposit preferences. True, domestic price level is keenly aligned to devaluations owing to dependence in key areas like petroleum imports. In popular expression, even among ordinary citizens, it is referred to as another reduction in rupee value. But that is not dollarization; end of this myth.

45. Short of myths, for the financial system as a whole, dollarization has to be interpreted either as asset dollarization or liability dollarization by the public through banking and financial system at large in financial markets; specially loan markets or deposit markets or both. If exchange rate is stable, it is likely to encourage foreign currency loans, *ceteris paribus*, which is interpreted as liability dollarization, provided the differential between domestic and foreign currency loan rates stays close enough. But if exchange rate becomes unstable and there is a likelihood of devaluation, it would encourage increased foreign currency deposits, and a move away from foreign currency loans even if domestic currency interest rates are higher than foreign currency interest rates.

46. Asset dollarization occurs when foreign currency deposits rise faster than domestic currency deposits; while liability dollarization occurs when foreign currency loans rise faster than domestic currency loans. Asset dollarization has occurred in some countries including Pakistan, but more so among those countries whose financial systems are better integrated with global financial markets, with strong inflows of FDI and FPI and accumulation of foreign currency reserves. But this happened only when there were clear financial advantages to hold foreign currency balances in contrast to domestic currency balances. Pakistan is not among this group of countries.

47. One indicator of dollarization often used is the ratio of foreign currency deposits to M2 or to total banking system deposits. In Pakistan, long term trend of both these ratios has been downwards from FY01 through FY10. The ratio of foreign currency deposits to M2 had fallen from a peak of about 16 percent in FY01 to about 6 percent by FY10. Much of this decline occurred during FY02-03. This swift decline had a great deal to do with liquidation or conversion of old FCAs to other domestic assets. Similarly, foreign currency deposits to total deposit ratio was about 19 percent in FY01;

by FY03, it was reduced by half to about 9 percent; thereafter this ratio further decreased to 7.2 percent by FY10. In the wake of stock market collapse and massive capital flight mainly through underground channels, there was a slight increase in both the ratios, but that does not matter for long term trends.

48. These long term trends of the two ratios implies the opposite; namely a decline in dollarization of the economy. Hence, even though there has been a significant increase in FE-25 deposits from \$978 millions in FY00 to \$4509 millions in FY10, much of it was conversion of old FCAs into FE-25. These are deposits in US dollar, British pound sterling, Euro, and Japanese Yen. The largest part of FE-25 deposits is in US dollars, about 75 to 80 percent. A rise in these foreign currency deposits has been inconsequential for dollarization; a slight upward tick in this ratio in FY08 notwithstanding. But for banking system credit in foreign currencies, uses of FE-25 deposits have been significant over the past years. (*See Data Set 6.5a*)

49. Whatever asset or liability dollarization has occurred through financial system in Pakistan, it occurred before liberalized and open foreign currency market came into being in this decade, combined with capital flows after opening up of capital accounts. Later on, it slowed down even with inflows of new foreign currency deposits, lodged under FE-25 scheme since its inception in early 2000s and its subsequent growth over past years.

50. In parallel, Pakistan economy's palpable link with underground flows, both ways, have continued unhindered, in spite of efforts towards documented economy, but there is hardly much evidence of asset or liability dollarization through banking system to cause a concern for dollarization of Pakistan's economy. Whatever dollarization had to occur, it has already occurred; there is no clear trend now for further dollarization of the economy. Currency markets are open; capital accounts are open; undocumented flows keep occurring; and not much is left for dollarization motives.

51. Often dollarization is alluded to rising domestic prices of critical imports like crude oil and petroleum products in energy short countries like Pakistan; prices of machinery, raw materials and key manufacturing inputs; and lately domestic prices of imported food items like wheat and sugar. Domestic prices of these imports have risen sharply both because of domestic market vicissitudes; world price trends and also because of changes in exchange rates, mostly devaluations as they became more and more market based depending upon foreign currency market trends. True, with the opening up of foreign trade, sliding import tariffs as a result of GAAT

agreements or bilateral agreements, domestic price level has risen in step with the import content of domestic consumption and investment.

52. But this rising differential between prices of domestic tradables and non-tradables and prices of imported items is a result of exchange rate movements in the first place; which in turn reflects the underlying structure of foreign trade vis-à-vis domestic production structure; but this is not dollarization of the economy. This was bound to happen once domestic economy got increasingly integrated with global economy. Its social implications are undoubtedly unsavory, and have raised a great deal of public outcry; but this phenomenon is not limited to Pakistan; it is happening in other developing countries as well.

Exchange Rate Movements

53. A review of exchange rate movements over a long period of a decade is not very meaningful for operational purposes because currency markets transactions are hinged upon spot rates prevailing at the time of trading on the day transaction occurs, rather than some notion of what they were in the distant past or what they are likely to be on some future date. Likewise, annual averages of exchange rates are an indicator of what transpired during the year; no more, and these annual averages have to be interpreted with caution. This may help to orient policy responses, but it is not adequate enough to cope with aftermath of changes that occurred during the year.

54. In open markets largely free of interventions, prices are mostly market clearing in ex-post sense, but if they are not, there could be an overhang of excess demand in the market which spills over in next rounds of trading, thus affecting market clearing price in subsequent periods. Roughly the same happens to exchange rates if markets are reasonably open. Therefore, the following is more a chronological review of what transpired in Pakistan's currency market over the decade of 2000s, rather than a blow by blow review of changes in exchange rates and policy response over this period.

55. Given these reservations, three distinct phases of movements of exchange rate over the past decade can be discerned from figures given in *Data Set 6.5a* during FY00-10 period as measured by interbank market rate. These rates reflect demand pressures in currency markets emanating from various sources, though these pressures by themselves do not account for all the underlying factors that affected exchange rate. In the *first phase*, FY98-01, in the aftermath of May 1998 events and consequent turbulence in external

financing position of Pakistan, there was a sharp devaluation of about 47 percent as shown by interbank rate in rupee terms which shot up from Rs 43 to one US dollar in June 1998 to Rs.63 to one US dollar by June 2001. In the *second phase* that lasted from FY01 to FY07, exchange rate appreciated or remained stable around Rs 60 to one US dollar, except for zig-zag of periodic moves. In the *third phase*, during FY07-10, there was a major devaluation, from Rs 61 to Rs 83 to \$1.0, or by 36 percent over the three year period.

56. There has been much discussion of how exchange rate eventually gets determined in Pakistani currency markets. In early years of reform period, *kerb* market rate was ahead of interbank market foreshadowing where official exchange rates were going to be. Subsequently, by middle of the decade as interbank market took hold, the thinking reversed; in that *kerb* market rates follow the lead of interbank rates. This view prevails now and with some justification as size and reach of interbank market has grown.

57. The key element has remained the same throughout; that is, massive outflows both formal and informal have all along been precursor of devaluations in the past as well as in current times as happened in the wake of stock market crash in Pakistan in 2008. Much of stock market boom was speculative as discussed in Chapter 9, way beyond threshold of corporate earnings signified by stock market KSE index of around 7000, though there is no consensus as to what this threshold was then, and what it is now. There is no way of determining what multiple of earnings to share prices ought to be, speculation aside. Asset pricing models are not much of help or guide; neither in advanced markets nor in developing markets.

58. Stock market boom was being funded in large measure from liquidity of underground flows; because interbank liquidity was being regularly fine-tuned by SBP in various ways in an effective manner. Often SBP interventions were made in foreign currency markets to keep exchange rate stable. Once the threshold was crossed and there was flight of capital both through formal and informal channels, exchange rate came under severe pressures. Domestic market liquidity controls were no match to destabilizing foreign currency outflows and demand for foreign currency in both formal and informal markets.

59. A good deal of formal outflows occurred owing to open capital accounts. Hence, the observation frequently tendered that foreign currency rate are a complex outcome of what all three markets eventually do; the interbank market, the *kerb* market and the informal market. No one way causation can be established, beyond an imbalance in the supply and demand of foreign currency, regardless where they are originating from. Often in Pakistan, there have been speculative attacks on Pakistani rupee, but

during administered exchange rate regime or during times of dirty float, not much happened, even though 'black market rate' went out of kilter. In the open market regime with relatively clean float over the past decade, there was no sustained 'raiding' by speculators to push down exchange rate. Devaluations did occur, but most were plausible and rooted in the known imbalances of supply and demand of foreign currencies in the market. This is a positive change that has occurred along the learning curve.

60. In spite of these efforts, given the size of current account deficits, currency market in Pakistan have been under severe pressures during past decade resulting in devaluations. But whenever Pakistani rupee gets devalued involving market forces, a great deal of hue and cry is heard from all quarters, and reasonably so because it means yet another round of inflation led by imports, specially oil and petroleum imports. What is not discussed where these pressures are coming from; or is there any reprieve in sight. The news of rising cost of imports is prominently displayed along with some data on oil imports; what is not in limelight are imports of high value items, not essential for the economy, how their imports are being financed; and why debt servicing on foreign liabilities is so high.

61. In a country saddled with endemic foreign currency shortages of vast magnitudes recurring over long periods, it is difficult to talk of stable exchange rates. In a society where attitudes towards 'imported' are routine; where ordinary consumer items are bought if they are labeled 'imported'; where it is chic to be seen at imported hamburger joints; not to speak of essential imports like crude oil and petroleum products, food items, and other essentials; pressures on exchange rate are unlikely to be mitigated. Meanwhile planeloads of officials travel frequently abroad to arrange financial assistance, mostly foreign loans; thus adding to short term obligations. The larger the commitment tendered to borrow overseas by these delegations and accepted by lenders, the more successful is deemed the foreign trip, displayed in headlines as though it is a salutary achievement.

62. Such is the folklore; without much awareness that soon calls for belt tightening will follow to repay these debts. The conditions that give rise to devaluation together with their implications are not discussed, except among a small segment of public. Instead, the media portrays conditionalities of international financial institution that force Pakistan to devalue its currency time and again. That currency markets determine exchange rate, is not emphasized, though this realization is slowly creeping in among the home beneficiaries of remittances, frequent interface on the bank counter, travels abroad and emigrant experiences. Given all this, it is hazardous to venture opinions about exchange rate stability in Pakistan.

Foreign Currency and Money Markets - Revisited

63. Over the past decade, SBP has managed large inflows of foreign exchange by purchasing foreign currencies in the market; often sterilizing rupee injections of these purchases by shifting government debt held by SBP to the commercial banks; and leaving ample liquidity with banks to keep interest rates stable in line with trends of yields on 6-month T-bills. The interlinks between foreign exchange market and money market have grown strong over the past decade, functioning under a free floating exchange rate regime and market-based interest rate regime. Financial market now have greater depth than they ever had, and are responsive to economic and financial trends more than they were in earlier times of reform era. Currency market swings occur for a variety of causes; and if swings become volatile, they compromise monetary and exchange rate stability.

64. Hence monetary management has to be done alongwith foreign exchange management; and this is not new. This has been the practice all along. The starting point is how sensitive is the exchange rate in free floating regime to domestic interest rate changes. Suppose there is a differential between interest rates on rupee based funds versus US\$ based funds; say, if interest rate on rupee funds are higher than interest rates on US\$ funds and customers are allowed to switch their credit source, they may shift their borrowings to low interest currency, provided exchange rate remains stable.

65. If this differential were to drop; and if interest rates on rupee loans are lower than on US\$ funds, and exchange rate is perceived to remain relatively stable over the short term, conceptually, borrowers are likely to shift from US\$ based loans to rupee loans, thereby draining liquidity from interbank funds market and also from interbank foreign currency markets in the process of US\$ repayments to accomplish the switch over. This is likely to create pressure on domestic currency, causing an appreciation of exchange rate or a rise in domestic interest rates or both, upsetting monetary stance of the time. If central bank wants to maintain its monetary stance, it will have to curtail its purchases of foreign currency in interbank market to accomodate this shift. Central bank will have to ensure that heavy access to debt markets is contained to avoid signaling a rise in interest rates, both short term and long term; in other words to maintain interest rate stability. It did happen in Pakistan and SBP was often confronted with this situation in previous years.

66. The key factor for exchange rate stability is the level of current account surplus or deficit in the balance of payments. If the current account is in surplus as it was in the few years early in the decade, it would permit the central bank to ease pressure on domestic currency by allowing domestic

interest rates to rise within certain limits besides accumulating foreign exchange reserves to further strengthen the domestic currency to withstand future pressure on exchange rate. If the current account were to go in deficit it may eventually cause devaluation and upset a functional balance between domestic and foreign interest rates arrived earlier. In times of fast eroding current account balance, if central bank were to try to hold exchange rates to some desired level, the central bank may not succeed in holding the line given large size of foreign currency market. In due course, the central bank may end up with fast draining foreign exchange reserves; a thoroughly unwelcome result indeed.

67. Just about when the upbeat outlook for foreign exchange markets was beginning to filter through, lately signs of old ailments have re-emerged in force at end of the decade. The domestic borrowing and spending by the public sector is the main cause of this malaise, and this is quite well known. The excess of government expenses seem to post anew record each time they are reported and there is no end in sight. Exchange rate has been under pressure for the past three years, but the rupee did not slide much in the market because of remittances and inflows of borrowed funds from abroad.

68. The pressures on exchange rate were sometimes perceptible; at other times incipient. But if we look at exchange rate trends beyond the usual time frame of a quarter, the slide in exchange rate can not be treated as market corrections. Far from it; it is a persistent depreciation of rupee which is reminiscent of the past decades; any decade will do. There is balance of payment pressure once more which has far exceeded anticipated levels, owing to rising imports *over the long term*, a tiny drop in FY10 notwithstanding. Over the long haul, exports have shown a lackluster performance, and in spite of a substantially increased inflow of remittances, current account deficits have been very large when compared with historic levels of the past. The interlude of foreign exchange stability of FY03-07 seems to be long over.

Chapter 6: End

Data Set 6.5											
Foreign Currency Market: Inflows, Outflows											
End Period, US\$ millions											
	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10
4											
5	All Inflows, Receipts \1	15796	17074	17760	26072	25349	32888	40238	53910	49874	49392
6	Annual rate of growth		8.1	4.0	46.8	-2.8	29.7	22.3	16.9	-7.5	-1.0
7	All Outflows, Payments \1	18327	17592	21760	27215	25519	32834	40445	54032	49997	49596
8	Annual rate of growth		-4.0	23.7	25.1	-6.2	28.7	23.2	16.5	-7.5	-0.8
9											
10	Current Account Balance	2207	1549	1213	4070	1811	-1534	-4990	-13874	-9261	-3495
11	Foreign Trade Balance	-1412	-1269	-360	-359	-1279	-4514	-8441	-14970	-12626	-11423
12	Foreign Trade: Exports, Receipts	8190	8933	9133	10974	12459	14482	16553	20427	19121	19632
13	Imports, Payments	9602	10202	9493	11333	13738	18996	24994	35397	31747	31055
14	Services: Inflows, Receipts	1274	1351	1922	2712	2644	3319	3769	3589	4106	5148
15	Outflows, Payments	1588	2332	2226	2714	3960	6612	8199	10046	7487	6825
16	Factor Income: Inflows, Receipts	110	94	111	170	186	437	784	1613	874	562
17	Outflows, Payments	166	130	2422	2381	2393	2823	3451	5536	5281	3831
18	Current Transfers: Inflows, Receipts	4043	3898	4255	6714	6713	8768	10655	11618	11256	12984
19	Outflows, Payments	54	63	67	72	100	109	107	142	103	110
20											
21	BoP, Capital Accounts	-371	338	-442	1133	82	685	241	121	455	184
22	Capital A/C: Autonomous Inflows	118	762	872	1133	85	693	250	128	460	189
23	Capital A/C: Autonomous Outflows	489	424	1314	0	3	8	9	7	5	5
24	BoP, Financial Account \2	-3878	-1981	-3457	-6346	-2060	911	4551	13638	8688	3112
25	Financing Inflows, Receipts	2550	2460	2781	4369	3265	5197	8236	16542	14062	10882
26	Financing Outflows, Payments	6428	4441	6238	10715	5325	4286	3685	2904	5374	7770
27	SaF Data Set										
28	\1 These inflow / outflow entries are based on accounting identities as in BoP accounts ; including, Current Account, Capital Account and Financial Accounts										
29	\2 For FY03-10 data, Financial A/Cs as per SBP classification consist of credit/debit entries for foreign loans, the largest item.; forex reserves as of end-year,										
30	direct investment, portfolio investment, deposits, trade credits, and other assets/liabilities n.i.e. For FY00-01 data, see SBP AR01, Table 9.14.										
31	\3 Foreign exchange rates as prevailing at end-fiscal year; not averages for the whole fiscal year.										
32	\4 Foreign exchange cash or near cash reserves, excluding gold; all currencies in US\$, excluding gold reserves and SDR balance with IMF, Table 9.8, AR 2010, col 14										
33											

Data set 6.5

Source: SBP Annual Reports, various issues

Data Set 6.2		Foreign Private Investment										End Period, US\$ millions			
		FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10			
4	Foreign Private Investment (net) \ 1	-77	174	-5	532	1220	2079	4436	8309	5367	2622	2145			
7	Foreign Direct Investment (FDI) net	472	323	486	771	906	1459	3450	5026	5335	3695	2209			
8	FDI Inflows	472	360	488	798	951	1525	3521	5140	5410	3720	2209			
9	of which: equity investment				674	763	1211	2925	4229	4144					
10	FDI net as % of total net inflows		206.9		150.0	78.0	73.4	79.4	61.9	100.8	141.9	103.0			
11															
12	Foreign Portfolio Investment (FPI) net	-549	-149	-491	-239	314	620	986	3283	32	-1073	-64			
13	FPI Inflows			0	22	314	620	986	3288	37	0	0			
14	of which: equity market, stocks	73	-140	-8	22	-28	151	351	2310	20					
15	Memo Items:														
16	Total Foreign Private net Inflows \ 1	544	182	475	820	921	1678	3873	6960	5429	3210	2789			
17	Foreign Direct Investment, net	470	322	485	798	949	1525	3521	5140	5410	3720	2201			
18	Foreign Portfolio Investment, net	74	-140	-10	22	-28	153	352	1820	19	-510	588			
19	Foreign Currency Accounts, (FCAs, \$) \ 3	3920	3796	3292	2598	2878	3436	3646	3838	4238	3940	3940			
20	of which: FE-25	978	1542	2098	2296	2671	3282	3543	3755	4168	3881	4509			
21	FCAs Rs Value, billions	204	241	198	150	167	205	219	232	289	319	336			
22	Foreign Currency A/Cs (old FCAs, 1990s)	2942	2254	1194	302	207	154	103	83	70	59	51			
23	M2, Rs billions	1400	1526	1761	2078	2486	2961	3407	4065	4689	5137	5777			
24	Total Deposits Rs billions	1140	1276	1421	1682	2002	2428	2817	3373	3812	4138	4693			
25	FCAs / M2 %	14.6	15.8	11.2	7.2	6.7	6.9	6.4	5.7	6.2	6.2	5.8			
26	FCAs / total deposits %	17.9	18.9	13.9	8.9	8.4	8.4	7.8	6.9	7.6	7.7	7.2			
27															
28	Exchange Rate, Interbank, Rs/US\$	52	63.4	60.1	57.8	58.2	59.7	60.2	60.4	68.2	81.0	85.3			
29	SaF Data Set	Source: SBP data series in table 9.4 through 9.9 in various issues of Annual Reports.													
30	\ 1	These data taken from BoP financial accounts data in tables 9.4 of various Annual Reports.													
31	\ 2	FDI and FPI data for FY02-10, taken from Table 9.9 of various SBP Annual Reports; for FY00-01 from table 9.1 in AR 01 report. Do not match with BoP data used here.													
32	\ 3	From Table 9.8, AR 10 and others, data on Reserves in US\$, converted into Rs at exchange rates shown. Includess balances held with the banking system													
33		Includess balances held with the banking system in old FEs 45, 31, and new FE-25 started in FY99; resident and non-resident; institutional, non-institutional													

Chapter 7: Capital Markets

Long Term Debt and Equity Finance

Thematics

Capital Markets – Direct Finance, System of
Investors; *Institutional and Private non-Corporate*
Instruments and Markets; Bonds and Stock
Capital Market Development: *Preview of Comparative Experiences*
Reforms, Restructuring; Transition to Market-Based, *historical*

Capital Markets–the Fundamentals, Internal to Markets
Markets: Bonds, Debt Financing; Stocks, Equity Financing
Growth, Size, Trends; *in Outline*
Organisation and Structure; Primary, Secondary Markets
Participation and Mechanisms; *An Outline*
The Stakeholders; Role vs Perceptions
Supportive Framework, Infrastructure; *Institutions, Operations*
Roles of SECP, SBP, *the Uneasy Twins*; Regulatory Framework
Comparative, *Asian Experiences, Evolutionary Process*

Capital Markets–the Fundamentals, External to Markets
Economic and Financial Stability
The Corporate Sector – Pakistan; *the episodes and expectations*
Regulatory System, Governance – SECP
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Foreign Investors; *Role and Experiences, a summary*

Chapter 7: Capital Markets

Long Term Debt and Equity Finance

Capital Market Structure - Revisited

1. We begin with a brief recapitulation of structure of capital markets. Long term financial markets, commonly known as *capital markets*, consist of *debt markets* and *stock markets* for debt and equity financing of business corporations and government long term borrowing needs. Operationally both these markets serve very different type of financing needs of private and public sectors. Their infrastructure and participation, their regulatory and oversight system, their rating system, their payments and clearing system - all these elements together constitute the *system of direct finance*. At the macro-financial level, the hall- mark of system of direct finance is transfer of resources, mainly savings, from surplus units within the economy mostly households, or from abroad, to the so-called deficit units, namely those seeking long term capital, both in the public and private sectors. This is discussed in Chapter 3 in generic terms and from the angle of participating investors in Pakistan, namely banks and NBFIs, along with their growth trends as given in *Data Sets 8.7 and 8.71* and discussed in Chapter 3. *(These attachments of data sets are being repeated here as annex.)*

2. The private sector needs long term finance. For established businesses and corporations as going concerns, demand for long term debt or equity finance depends on financial management strategies and approaches to modernization or expansion of their exiting business or recapitalization. For new businesses or corporations, long term financing is needed as equity finance or borrowed, but it would be very difficult for them to obtain it from the market at the inception of their operations except as venture capital. In between, private corporations also need long term debt financing for acquisitions, mergers, and buy-outs. In short, the demand for long term finance in private sectors originates in various forms, depending on the business operations contemplated. The public sector also needs long term finance mainly through debt markets but not from equity markets, for investments in public sector enterprises or public infrastructure, or to finance budget deficits.

3. Debt financing is primarily sought after by public sector for its varied financing needs, mainly budget deficit financing; and also for shoring up finances of public sector companies and enterprises. Equity finance is not so critical for public sector. For the private sector it is in the reverse. For private sector companies, equity finance is critical at the time of inception and in early stages, but they can not access market based equity finance unless they are ready to launch their IPO in OTC market. These new ventures, typically can not contemplate a bond issues on their own unless they happen to be a subsidiary of a large corporation and also because debt markets are in their initial stages of development in countries like Pakistan. These are operational limitations on growth of debt and equity finance.

4. At macrofinancial level, in most developing countries the size of both debt and equity finance markets, taken together, are larger for private sector than for public sector. Likewise, growth of debt markets in these countries, including Pakistan, has originated first mainly from public sector, not private sector, while growth of equity finance has originated mainly from private sector depending on growth of domestic corporate sector. Evolution of this structure came about from the demand side of long term investment financing needs and its progress has been remarkably similar across developing countries.

5. Comparative experience among developing countries over the past few decades has shown that efforts at promoting growth of capital markets has been to create a long term market for financing investment needs of private sector, whether debt instrument based or equity instrument based, or both. The preference has been to develop equity market first, and to await development of debt markets via government bond markets, before private sector begins to access bond markets for debt financing. This approach was adopted partly to lower overwhelming dependence of corporate sector on banking system credit for credit financing needs. Banks on their part, given their business orientations, preferences and lending practices, bunch short term revolving credit through overdraft lending mechanism. They are not so concerned with creating an alternate mechanism to meet capitalization needs of private sector businesses and corporations, irrespective of their access to stock market and its capabilities to cater for equity financing. It is not in their business interests to do so.

6. Another consideration for developing capital markets has been to pull out savers from the straitjacket of either depositing their savings with the banking system, or look for investment in stocks of a fairly narrow number of listed companies, as has been the case in Pakistan. Development of NSS instruments have been very effective in providing government with debt

financing, unfunded at that. But for bond market growth, NSS operations have been an aberration because it segmented financial savings, distorted long term rates of interests and turned out to be a very expensive source of debt financing for the government. Growth of capital market usually provides domestic savers a range of investment opportunities and helps them to diversify their portfolio, as happened with emergence of mutual funds in Pakistan. But capital market in Pakistan remains fairly small relative to financing needs and narrow in terms of instruments available for investment financing.

7. A step ahead, growth of healthy capital markets is spurred by motives to attract foreign investment, mainly foreign portfolio investment (FPIs); and also foreign direct investments (FDIs), though FDIs are outside the orbit of capital markets operations as such. Nonetheless, FDIs provide direct funding and investment for corporate growth that may not otherwise be available owing to shortage of equity finance or venture finance domestically. This has been the experience of emerging market economies who have succeeded in garnering a hefty share of global FPI flows during 1990s and 2000s, not in Pakistan, as discussed in Chapter 11. FPIs are seen not only a source of equity finance but FPIs also improve prospects of direct investment and foreign trade owing to linkages strung along with inflows of FPIs.

8. Restructuring and reforms of private sector have significantly enhanced needs for recapitalization of local corporations and financial institutions. These requirements are well beyond the capacity of banking system to cater through credit financing and that only for short term, because banking system is not geared for contractual long term lending. Often domestic banks themselves are in need for recapitalization. In absence of well functioning capital market, especially private bond markets, there is hardly any other mechanism to channel private savings into instruments of financing long term corporate recapitalization. Therefore, bond market development is deemed a first step towards broadening equity markets if indeed recapitalization is needed to reinvigorate corporate growth.

9. As discussed in Chapter 8, for reasons of establishing standardized market benchmarks, bond market growth begins with growth of government bond markets first, and private bond markets later. This has been the case in most East Asian, Latin American and Eastern European countries and this pattern is well established. Therefore, growth of capital markets occurs on both fronts. Since, most governments are indulging in deficit financing of one kind or other, it is easier to focus on growth of bond markets, and once this segment is sorted out, it lays the ground for private bond market growth. This is happening in Pakistan.

Capital Markets – The Fundamentals

10. There are a myriad of factors that are critical to the *operations and performance* of all types of financial markets across the board, particularly for bond and stock markets. These could be categorized in two broad sets of factors, though this is not a watertight classification of either-or variety. There are considerable degrees of overlaps that must be dealt with.

11. *One set* of factors are shaped outside the framework of capital markets, and hence are considered external to capital market processes and operations, though they materially impact on performance of all financial markets, not only capital markets. Prominent among these are factors that influence macro-economic and financial stability, shaped by interest rate, exchange rate and general price level stability. Stability such defined, is deemed critical for operations and performance not only money markets, but also capital markets. At the same time, since these elements are central to monetary management and they overlap with economic management, these are discussed in detail in Chapters 12 -14 in **Volume I** of this book. Besides promoting stability and economic growth, interest rate and exchange rate are key elements that impact on financial markets. These interlinkages need to be analyzed to discern behavior of financial markets.

12. Conceptually, regulatory framework of financial markets and corporate governance is deemed responsibility of SECP (Securities and Exchange Commission) of Pakistan. But in practice there are two regulators in almost all countries. One is the central bank, SBP in Pakistan, which is the regulator of banking and money markets; the other is SECP, which is more involved with regulating debt and equity markets; stock exchanges and OTCs and the corporate sector. But SBP's monetary management stance at any time has significant impact on both money and capital markets as well. Overlaps and duality of governance function, therefore, has to be dealt with.

13. Next is financial performance of corporate sector, which in turn depends on its productivity, competitiveness both in domestic and foreign markets involving trade and exports. In parallel, investor orientation and attitudes towards investing in capital market are equally pertinent, given their impact on investment in instruments of long term debt and equity financing of corporate sector. A good familiarity with these factors is critical to understand what size of operations and levels of performance one could expect from these markets, and in general, why capital markets behave the way do; i.e., in what ways corporate sector affects depth of capital markets.

14. The *second set* of factors are internal to capital markets. These are: structure, size, organisation and operations of various segments of capital markets; and participation of various types of institutional investors and also private individual investors in capital markets. Much of attention in reviews of capital markets is focused on these aspects. Once this is dealt with, attention shifts to regulatory framework consisting of rules and requirements concerning operations of capital markets; rules and regulations of financial disclosure for promoting transparency and accountability. This is essential to foster public's confidence for investing in capital markets.

15. This is how far subject matter of most reviews would cover; so does this one. Since analysis and assessment of size, structure and organisation of capital markets, market participation and growth trends are central to applied analysis of debt and equity markets of Pakistan, these are dealt with separately and discussed in Chapters 8 and 9 of this Volume.

16. Equally significant is analysis and evaluation of development of *market infrastructure* consisting of stock exchanges, over the counter markets, listing and trading, network of brokerages, dealers and market makers; rating system of corporate bonds and stocks; payments and settlements system; central depositories and its role and functions concerning registration, records and their authentication, needed for transactions of corporate securities entrusted to them, thereby facilitating payment and settlement of trades. In addition, margin finance is not a part of market infrastructure, it is part of financing mechanism, but it can not develop without parallel development of supportive infrastructure mentioned above.

17. Ideally, these topics need an adequate treatment to establish their current status and performance capabilities which has not been possible here. Much of capital market infrastructure was not in Pakistan until recently. Institutions like rating agencies, central depositories, and related services are fairly new, facing long learning curves ahead of them. The same is true of their regulator, namely SECP as discussed below in some detail.

18. The key factors for capital market growth are the size and growth of corporate sector and its interface with debt and equity markets. These in turn are based on corporate investment, its dynamism and expansion, its competitiveness, entrepreneurship and culture of corporate sector. In Pakistan, we do not have adequate cognizance of these layered elements except for size and operations, the nuts and bolts of corporate sector, and that also among a small group of professionals engaged in capital markets. Hence treatment of corporate sector as a participant in capital markets remains rather superficial, limited only to routine observations. For long term,

corporate entrepreneurship and corporate culture is as significant factor as any. It has taken advanced countries couple of centuries to develop their corporate culture. Most East Asian and some Latin American countries have done the leapfrogging; and having given their best efforts and an unwavering resolve. It has still taken these countries about four decades to develop their indigenous corporate sector oriented towards debt and equity markets. In Pakistan, corporate sector has recently been resuscitated from the throes of nationalized structure. It has not reached that stage where it can lead growth of capital markets. It may well take a few decades before the corporate base of capital market and its infrastructure is well established and is ensconced in the processes of self generating growth along modern lines.

SECP: *it's Evolution, Role and Functions*

19. Across most countries, capital markets are regulated by securities and exchange commissions or some version thereof. In Pakistan, it started with the establishment of Corporate Law Authority, which was reorganized into Securities and Exchange Commission of Pakistan (SECP) more than a decade ago by parliament as an autonomous regulatory authority. The very name *corporate law authority*, betrays what its originators thought of its role in Pakistan – a law authority to ensure compliance with regulations for establishing and registering companies; not much more. That its mission could be development of financial markets was not on the radar screen; much less its role to steer capital markets through turbulent times.

20. The law authority always existed, but there was no place for such a regulatory body in a nationalized financial system that prevailed during 1970s through late 1990s. Therefore, this authority languished as others, limited to its concerns with compliance to compendium of corporate rules; but without much meaning to its role, because most enterprises were government owned. There was no private corporate sector to look after. Towards the end of 1990s, law authority was elevated in its successor organisation, SECP at behest of ADB and other IFIs. In its present form, it is a relatively new organization and faces a daunting challenge of squaring with a corporate sector always on the lookout for weaker spots in governance often without much regard for public interest over corporate interests.

21. As regulatory authority concerning capital markets, SECP is responsible for charting out and implementation of laws, rules and regulations concerning operations of bond and stock markets; also rules of

trading and participation by brokerages, trading companies and their client corporations whose bonds stocks are listed and traded at stock exchanges. This regulatory, governance and oversight function of SECP is vital for sustainability and growth of stock markets. The focus of SECP, however, is primarily on stock market of Pakistan and on the corporate sector, not so much on debt markets, namely bills or bond markets because operations of these markets are effectively controlled and regulated by central bank, SBP, as is the practice in many other countries.

22. A concerted effort is underway to enhance regulatory strength of SECP through capacity building and this process is ongoing. Likewise steps have been taken to improve governance and operations of stock exchanges enhancing the role of SECP in appointment of MDs and CEOs and independent directors. On their part stock exchanges have undertaken steps to modernize their operations and improve access and investor information.

23. But, given its dependence of government funds for its establishment and routine operations, SECP has modest capacity and limited institutional capabilities relative to the task at hand, namely looking after capital markets, keeping an eye on how money markets are operating, and also looking after corporate sector compliance. It is facing an uphill task to institutionalize processes of corporate governance in a country which does not have much of a tradition for modern corporate culture responsive to requirements of good governance and compliance commensurate with international standards.

24. Simultaneously, in Pakistan as elsewhere, government departments concerned such as ministry of commerce or industries, undertake registering and licensing of business companies and corporations. Beyond this function, these departments have not been known for designing and enforcing good business practices among businesses and corporations in Pakistan. For some years, Competition Commission of Pakistan has been more active than any other organ of the government including SECP in monitoring and enforcing laws and rules against formation of cartels and monopoly practices so endemic in corporate culture of Pakistan. In the process, it garnered opposition of powerful corporate business groups, threatening the very existence of Competition Commission, and they nearly succeeded at closing down Commission, blocking its budget and release of funds for salaries and routine administrative expenses.

25. Something similar has happened with SECP, but the pressures did not extend to threaten its existence. In early years SECP has to struggle for its survival, while trying to become an effective institution for regulation and governance of financial markets. SECP has faced its share of opposition oft

and on from some groups of powerful and entrenched stakeholders, not all. These stakeholders include institutional investors; domestic and foreign private investors; stock exchanges; brokerage houses, and security dealers. They have overlapping and often conflicting set of interests.

26. The reason is that in regulatory business it is impossible to find a set of rules, regulations and controls that are group-neutral; that is, regulations do end up impacting negatively on one or the other part of stakeholders. Invariably, some group is likely to be adversely affected. The corporate sector and their financiers both formal and informal ones, also occasionally end up in this situation. But all of them have overlapping and often conflicting interests which are very difficult to resolve to every ones satisfaction.

27. Since its inception, this array of stake holders has presented a challenge to SECP to steer through a large agenda of reforms, operational rules and guidelines. At the same time, SECP had to reorganize and re-chart and equip itself from scratch within rather limited budget made available to it by the government, constraining its reach. In contrast to SBP, which has its own resources for its institutional upgrading and capacity building, and has gone through its own programs in early 2000s in these areas, for capacity building SECP could do only as far as its resources allowed for its own capacity building needed urgently, given its terms of reference. For one, SECP's regulatory and supervisory reach on corporate sector and its own monitoring and evaluation capabilities have remained limited through present times. Capacity building has not been easy for SECP.

28. Another intriguing challenge that SECP had to face from its inception has been shoring up investor confidence in operations of capital markets. Rightly or wrongly, the common perception has been that it is a rigged market, run by brokerages for their own financial gains, or those intimately associated with its operations, while public at large is at best a spectator, and investors are at the mercy of a select group of security traders and brokers. There have been charges insider trading or front running in the past, some documented most others anecdotal. Given such attitudes, fostering confidence in capital markets has been an uphill task. These perceptions were further intensified during correction of market in 2006 and crash of 2008. The causes of market crash were classic ones; namely a speculative binge which had no rationale, funded as it was by *badla* financing or underground inflows of funds in massive amounts. Investors who got stuck began blaming SECP for not doing the needful to check speculative buying, without realizing that there are no such mechanisms effectively in place even in advanced markets. After a good deal of procrastination, the panicky response of regulators was to floor the market, halting trading on the floor of stock exchanges.

29. Once floored, the market stayed shut for more than three months, a move that would haunt for a long time. This move put a seal on confidence related concerns of wider public. The massive capital flight of which a good part was undocumented, and drying up of *badla* financing added to the perception that SECP or other government institutions are no match to manipulation of market by a few powerful insiders.

30. On its part, SECP has been cognizant of this issue of investor confidence. Throughout the past decade, it has slowly built up SECP's capabilities to deal with it through a paelothra of rules and regulations. Most descriptions of accomplishments of SECP consist of what new rules were enacted; which ones were modified, and how many new companies were registered. It is a catalogue of events, not an assessment of what this regulatory edifice has accomplished. Most rules aimed at promoting transparency of transactions at stock trading. Some rules concerned margin requirements, stipulated enhanced capital adequacy standards relative to exposure of brokers; or a shift from *badla* financing to a regulated margin financing facility to be funded jointly with the banking system and brokerage houses. Other concerned improving financial disclosure, accounting rules and practices to bring them in line with international standards, together with rules for auditing of corporate financial statements, if disclosure-based regulatory framework were ever to succeed.

31. One of the challenges that SECP faced was to bring around KSE to accept demutualization of stock exchange discussed in Chapter 10. This was reminiscent of similar challenge faced by regulators in India concerning Bombay stock exchange which led to establishment of National Stock Exchange of India in 1993. Now it is the ninth largest stock exchange in the world by market capitalization standards, and the largest in India. It faced similar challenges at the time of its establishment. In early 1990s, Securities Board of India (SEBI) was established under similar circumstances. In Thailand, Securities and Exchange Commission, (SEC) was established in 1992 to put some checks and balances between all powerful Stock Exchange of Thailand (SET) but Thai government did not establish a rival stock exchange as India did. The point is that these issues are not unique to Pakistan, but the way each country has gone around resolving them is different from the experience in Pakistan. These comparative experiences are on tap, and provide a good deal of guidance on how to deal with this trilateral setup; namely, the central bank, major stock exchanges and newly established stock market regulators.

32. Demutualization of KSE was deemed essential to alleviate if not eliminate sources of potential conflict of interest between owners of KSE,

namely a group of brokers and dealers, and trading operations of stock exchange. This was also a part of confidence building measure. It required replacing a few executives of KSE with professional managers from outside, who will be independent of owners of KSE, an initiative that did not go well with existing hierarchy and has not been implemented in full as originally envisaged several years back. A parallel move was to put in place mechanisms for risk management. Along with it, SECP introduced tougher rules for short selling, a practice which had been in vogue almost unfettered since mid-1990s to the detriment of small domestic company stocks exposed to such trading and also often detrimental to foreign currency based emerging market funds who eventually folded up.

33. These reforms and changes could not be achieved without bridging the gap that existed between regulator and those being regulated. This was not easy in face of a narrow-minded myopic view adopted by stakeholders out to make capital gain over the shortest period possible, preferably without any accountability or tax liability, and to keep their positions secure at all costs. Given these attitudes, SECP has been nurturing a common vision among principal stakeholders of what capital markets would be in future. The recent agreement on CFS scheme testifies to these efforts.

34. In current times private corporate sector has shown some dynamism as new companies have been formed such as those in telecom sector, and lately in energy sector. But most of new companies have been established as private limited companies, relying on owner's capital, rather than going public and relying on public issue of debt and equity securities. Therefore they are not subject to as close a scrutiny of corporate governance as public limited companies are. SECP has demonstrated some innovation in the process of company formation and the process has been simplified. But this is not unique to Pakistan; the same is the case in most other countries. For example, now a single owner company can be formed quickly, and permission to commence business operations is granted in shorter time than before. The number of such new companies registered is on the rise. But it has not enhanced listing on stock exchange. In fact it is other way around; the trend has been towards delisting at KSE; that is, public corporation listed on stock exchange are converting themselves into private limited companies for several reasons, in part owing to disclosure requirements. What is more worrisome is that this trend shows that corporations do not consider debt and equity markets essential to raise capital for their growth. They are increasingly relying upon retained earnings or bank borrowed funds for their capital needs. The number of listed companies over the past ten years, instead of increasing, it has gone down as discussed in Chapter 9. This does not augur well for future growth of capital markets; it is a reversal.

The two Regulators – SBP and SECP

35. In summary, if we recapitulate previous discussions, central bank controls money markets, and it exerts a significant impact on capital markets in most countries as well as in Pakistan. It does so through its monetary management mechanisms, helping markets to establish short term interest rate structure in the country. In the process it regulates levels of liquidity vital for financial market operations. The central bank plays a vital role in debt markets through its direct participation in trading of debt securities, particularly activities of short term end of debt markets, namely money markets. The SBP operates treasury bills market which for all practical purposes is most of the money market in Pakistan. Operations of SBP in treasury bills market is the prime mechanism for establishing interest rate structure and regulating liquidity levels. SBP also operates government bond markets which has all along been dominant segment of long term debt markets in Pakistan. The short of it is, central bank exerts a palpable influence on the conduct of financial markets.

36. Thus activities of SBP together with its monetary management policies and initiatives determine how debt and equity markets operate in Pakistan. Further, given its size and its own financial strength, SBP has requisite financial resources at its disposal to directly intervene in debt markets on its own. More to the point, SBP can command financial resources from banking system or from the financial system at large to conduct debt market operations and thereby impact on operations of securities markets. In contrast, SECP has the clout but not the resources at its disposable or on call, to ensure outcome of interventions in securities markets. Such being the uneven clout and financial reach of the two institutions, it is not appropriate to compare the two on equal footing as regulators. Their disproportionate strength behind their respective regulatory functions, has always has been the source of a palpable amount of creative tension between security and exchange commission and central bank in most countries; so it is in Pakistan.

37. There are areas of regulatory overlap inevitably, between SBP and SECP which from time to time have raised jurisdictional issues of the two regulatory bodies in Pakistan and have caused 'creative tension' between the two institutions. This was not on the design board of the most competent authority, the government; it came about this way over the past decade. Foremost is the issue of supervision of non-bank financial institutions, particularly those who are established as a company under company law, but perform quasi banking functions, imitating what banks do, namely deposit

taking and lending, though to their captive clients, not general public. While these NBFIs, including insurance companies, pension funds, modarabas companies, *takafuls*, operate on the fringes of financial system, they have an uncanny ability to overextend themselves and land into financial distress, if not financial crisis.

38. Their lackadaisical observance of disclosure requirements have allowed them to keep financial distress underneath the surface until no longer feasible to cover up its traces. In early 2000s, SBP handed over their supervision to SECP, which is staff intensive and too expensive for SECP. Currently some of these NBFIs are back under the regulatory of SBP, where they should be to begin with. Those still outside this net, are technically under SECP, but escape the incisive scrutiny which they ought to be under.

39. The oversight function of SECP can not be accomplished in securities markets without an extension of its regulatory functions to governance of corporate sector. The reason is corporate sector seeks capitalization through stock market via listing at stock exchanges and trading of its shares by investors. The equity financing raised by corporations entails financial stake of investors. Safeguarding interests of investor public therefore, is a vital for regulatory authority through ensuring accountability, public disclosure of corporate financial operations and transparency under laws, rules and regulation as stipulated by SECP which have to be monitored. Therefore, corporate oversight and regulatory function of SECP is as critical as its oversight function concerning operations of stock exchanges, brokers, dealers and financiers engaged in capital market.

40. As part of these developments, *corporate governance* has recently been elevated to priority agenda, after SECP felt it has the basic framework in place to regulate securities market. It has taken a number of initiatives that impact listed companies ranging from disclosure, auditing to appointment of professionals on corporate boards, which are regarded intrusive by owners who for a long time had been unencumbered by such requirements. Recently, SECP has issued a Code of Corporate Governance and has included this code in the listing requirements at stock exchanges. It is a comprehensive code covering diverse areas such as guidelines for constituting board of directors; rules concerning their financial and accounting responsibilities; a framework for internal control; disclosures of insider shareholdings; scope of internal audit and reporting. This is encouraging, but Pakistan has to travel long ways with regard to corporate governance.

41. There are a few newly established and rather fledgling institutions to provide monitoring and rating of corporations. The establishment of

depository institution, installation of a payments clearing and settlements system, establishment of a credible rating and reporting system together with rating agencies in the private sector has assisted with development of supportive infrastructure needed for growth of capital markets. These institutions are relatively new. Public at large is not aware of their existence or their place in financial market development or appreciation of their role. SECP has gradually strengthened its institutional role, has taken a series of actions to promote financial markets, including better enforcement and monitoring of rules and regulations, though confined it is to their establishments and structure and good governance. A good deal remains to be done with rationalization and incorporation of healthy security trading practices, and modernization of securities market.

Corporate Sector - Pakistan

42. Growth of stock market and corporate bond market in any country, including Pakistan, ought to be seen in the context of growth of corporate sector. The reason is fairly straightforward. A growing corporate sector is the backbone of stock market, a *sine-qua-non* for growth and resilience of stock market. A fast growing corporate sector ensures supply of new corporate securities, bonds and corporate notes, or additional stocks of recapitalized companies and thereby contributes to depth and expansion of bonds and stock market.

43. One could go through the analysis of corporate sector growth over the past decade, complete with scrutiny of data on its size, sectoral distribution, production, sales, performance over the past and prognosis for future growth. We have stayed away from this analysis because it will divert us from the theme of this book. But we have to come to grips with fundamentals that explain how corporate sector growth occurs from the vantage point of long term debt or equity financing, such as what are the pre-requisites of corporate growth; why it is important to delineate leading trends; in what ways it impacts on employment and income growth. That would be a worthwhile undertaking, because such *applied analysis* is rare.

44. In outline, corporate growth is a major source of growing demand for capital, stemming from not only the newly floated companies on stock exchanges, but also from existing corporate units in their subsequent rounds of rationalization, restructuring and re-capitalization. This process unfolded

during early years of the past decade; centered as it was on balancing, modernization and rehabilitation of textiles industry in Pakistan.

45. This demand for long term debt and equity financing is not only for venture capital and equity requirements at initial stages of incorporation and establishment of companies, and subsequently 'going public' through issue of their IPOs, but also for supporting their competitiveness and future growth through replacement and modernization. This process of capital financing through debt and equity markets furnishes a sound capital base for future growth of companies beyond initial investment undertaken by original investors, the enterprenurial class of society. A spanner thrown at any stage of this process will choke-off growth of new companies and may cause demise of existing ones. Such is the experience in Pakistan, as well as comparative experience during the past three decades.

46. This is all fairly well known. For reasons not so obscure, the process of corporate growth has been a stunted one for a good part of checkered history of industrialization and modernization of corporate sector in Pakistan, spanning a period of almost half a century. The sordid experiment with nationalization of companies in the early 1970s, both domestic and foreign, in parallel with sweeping nationalization of all private financial institutions, truncated private corporate growth abruptly, and dealt it a mortal blow from which corporate sector of Pakistan has not fully recovered. There is always a specter hanging over enterprenurial and investor group, causing much anxiety and uncertainty that any misguided and mercurial adventurism of the sort exhibited in the early 1970s may very well get repeated under some new banner, of which there is no shortage in the country.

47. In the wake of nationalization and demise of private corporate sector, the government established and operated public sector enterprises all over the country during 1970s, consisting not only of nationalized units, but invested heavily in new 'industrial complexes' *a la* Soviet model of heavy industry growth as the chosen route for economic progress over the long haul. These ventures were stand-alone type very large industrial units. These industrial units did not have much technological or economic linkage with indigenous resource endowments of Pakistan, nor with managerial, technocratic and technological capabilities available in Pakistan to operate these sophisticated heavy industrial complexes. The result was poor performance all around, converging into financial losses and eventual failure of the enterprise concerned. There was hardly any replacement of managerial class that was banished during nationalization; nor was enough managerial talent available to run large newly established state enterprises.

48. A Department of Production was established at ministerial level in the central government, manned by career bureaucrats, not career managers of enterprises. They were frequently rotated around just about the time they got some depth into operations of state enterprise they were entrusted with as per service rules. Their lack of experience at running large manufacturing units without any stakes of their own beyond a rotational appointment, and lack of continuity turned out to be the precursor of public sector enterprise failure. In cases where management of public sector enterprises was good, they sustained longer. But they all faced lack of trained and disciplined manpower in sufficient numbers, needed to operate these units. There was no supportive structure of light machinery industry in Pakistan, vitally needed for maintenance or operations of industrial units to furnish these state industrial units auxiliary equipment and spare parts from its production lines, customized to mechanical needs of large industrial machinery installed. Clearly, policy makers and senior administrators were unaware of the intricacies of modern industrial organisation and its requirements. Are they aware of it in current times? But administer they must, under a governance system of their own, to surviving units in current times.

49. In addition to shortage of career managers, there was a shortage of trained and skilled manpower, of the same type and magnitude as it has been in most developing countries. This reservoir of skilled manpower was simply not there. Not much attention was given to create a cadre of skilled manpower needed to run modern machinery and plants. Whatever training institutions were in the country, they operated mostly in public sector on same lines as they did before; namely without having much relevance to the needs of trained and disciplined labor force in specific production lines, essential for an industrial society.

50. The irony was that medium scale light machinery and engineering industry was established against great odds by small investors exhibiting entrepreneurship and dynamism in the aftermath of partition and related upheavals. This fledgling industry consisted of new companies like BECO which was nationalized soon after the company had begun to flourish and expand in domestic markets and in a few export markets of developing countries abroad. Whatever remnants of this industry survived nationalization, the proponents of state industrial complexes ensured that these remnants get starved of contractual procurements and supply to the public sector, the only outlet left to these industries, ensuring a de-linkage alluded to earlier and their eventual demise in Pakistan. Most such engineering companies subsequently closed down. Why it happened and what was amiss has been documented; it is a sad reading¹.

51. In their zeal they nationalized even modest cottage industry units set up for rice husking or wheat flour milling in the remote corners of rural Pakistan. Many of these micro-units were improvised and patched together with used foreign machinery and some new local equipment. These husking mills or flour mills were installed in villages, mostly inaccessible places typified by rural environs with bare minimum infrastructure. Yet, nationalization of these small units, almost of cottage industry vintage, was carried out enthusiastically, in the misguided belief that bureaucrats of ministry of production or ministry of industry will do a better job of operating these pitiful outfits better than their owners will.

52. That was not to be. In time, all these units simply rotted away in obsolescence. The ex-chequer was left holding bag of claims to compensate their hapless former owners from borrowed funds. It was dis-investment in at grass roots, the core of Pakistan's rural village or semi-urban society. These new state industrial enterprises were exorbitantly expensive. Their investments were financed by the government from borrowed funds, both overseas and domestically. The hope was that these newly established public sector enterprises and industrial units will usher in an era of industrialization and rapid growth in the country. That never happened.

53. Worse of all, there was hardly any appreciation of requisites of a modern industrial society. Why it happened? Because lessons of history of industrial and technological growth were lost to the proponents of nationalization, namely state can establish heavy machinery complexes but that does not mean that this type of bootstrap industrialization would generate an *industrial society*, replacing a tradition bound, peasant agricultural non-industrial society, to sustain and nurture this process. The understanding of societal dynamism was missing; and still is.

54. Importing expensive, state of the art, sophisticated heavy industrial complexes and sticking them up in cornfields of remote regions of the country was lot easier, but to create an industrial society was then and still is an entirely different proposition altogether. For example, there is the sordid experience of Taxila Heavy Machinery Complex that was eventually sold for scraps. Karachi Steel Mill has always been teetering on the brink of insolvency and bad management. Zeal-Pak cement factory, Pakistan Automobile Corporation, Pakistan Ghee Corporation, National Fertilizer Company, among others, met similar fate for everyone to behold. But all this seems to be lost to many worried about corporate growth.

55. This is a theme that needs explaining in terms of comparative experiences of economic growth and technological change and societal

transformation that has occurred in its wake, mostly creation of a professional middle class and highly trained and disciplined labor force with work ethics and attitudes that are proving so difficult to inculcate in this society. The attitudinal changes that are needed to ensure that this transformation succeeds has yet to take roots given the historic resistance to modernism that began long ago, during the mid-19th century, and has flared up in modern times. For example, in an ironic twist, modern banking and financial system is being called 'conventional' even by SBP, to be replaced by a system of transactional finance that expired long ago. Is that conducive to faster corporate growth? That remains to be seen. But what is obvious are the conflicts in the paradigm of growth to be pursued, and whatever paradigm is adopted, it would epitomize attitudinal changes.

56. The outcome of this adventure of replacing private corporate sector with state corporate sector was a grand failure in Pakistan, much the same way it was a failure in many socialist countries including former Soviet Union. The historical timing of this failure in Pakistan and among leading socialist countries - Russia, China, and Eastern Europe during the late 1970s to early 1990s was coincidental. The fall-out of this failure was that Pakistan got saddled with massive public sector debt, incurred to support public sector enterprises whose burden is unlikely to be mitigated for generations to come. Nonetheless, corporate sector upheavals that Pakistan has experienced, bears an uncanny resemblance to the parallel experience of financial system of Pakistan which has undergone roughly the same process as corporate sector; for it was part of it as discussed in Chapter 4 of Volume I.

57. The point is that just about three decades ago, authorities in Pakistan were busy rooting out all vestiges of private corporate entities in the country. But three decades later, in current times, the expectation is that Pakistan's emerging private corporate sector would be in the vanguard of new growth paradigm; resplendent with golden rules of corporate governance minted at leading executive schools of learning; it shall be awash in shining transparency, and will exude exemplary social responsibility. The saga of WorldCom's or Enron's of multi-national corporate world some years back notwithstanding.

58. How naive are these expectations of given our proclivity to experiment with modes of ownership and governance in utter disregard of historical processes of economic, financial and technological growth over the past couple of centuries. But we are quick to blame everyone else for our own failures; so brazen are our attitudes towards these processes.

The Mind of Investor

59. Most investors follow their own *mental model* concerning investing. They have a mind of their own when it comes to taking a plunge into stock or bond markets, two of the most popular types of investing done in most countries. How these decisions are made, how an investing position is arrived at, what types of stocks or bonds eventually end up in investors' portfolio, the time horizon of investing – all these elements can be traced back to a typical investor's orientation towards investing. Investor attitudes, and preferences derive from a complex set of factors, mostly financial and economic but not confined only to these; some rational, others intuitive, imitative or even irrational. A number of factors shape up investor expectations which provides the base for investor decisions. This is how basic one can get when it comes to understanding investor actions over a given slice of time period in the real world situation.

60. There is a vast body of literature concerning investment decision under uncertainty, risk and return trade offs investment decision rules, asset pricing and evaluation, assisted by powerful and sophisticated techniques of risk mitigation or risk avoidance. This is the domain of professional portfolio managers, derivative traders, brokers, or stock analysts and who are backed by even more powerful resources to carry out elaborate market evaluations, though these are tailored to their own risk and return parameters and tolerance levels and time horizons. Most ordinary investors, in Pakistan however, simply do not have resources, requisite abilities or aptitude to undertake such elaborate studies for their investment decisions, and many suffer from a peculiarly short term time horizon. Professionals or ordinary investors, both, are driven by their own mental models shaped or dominated by their own outlook and thinking to arrive at investment decisions.

61. In classic sense, investing is a long term commitment of own funds for long term gains with some element of entrepreneurship, hinged upon reasonable expectations of steady growth of corporate sector whose securities end up in investor's portfolio. In contrast, a typical private individual investor's mind in Pakistan is far away from considerations of classic entrepreneurship briefly discussed in previous section, or a long term commitment of any kind given the circumstances that have prevailed over the past years. Most of them are out for quick capital gains over as short period as possible, preferably not committing their own funds in a substantial way if unwary financier or the ordinary public can be roped into financing their "investing" activities. Their time horizon is a matter of weeks or months, but not a year or longer.

62. The *investors mind* in Pakistan, specially those of private small investors or casual investors, is dominated by such considerations. Most feel they are born investors, but of so-called *double shah* mentality. But, they can hardly be called investors as the term is largely understood in modern finance. For many such 'investors' in Pakistan, investing is no more than deal making, where the deal is based on some insider information. A large amount of trading is undertaken in the name of investing. Some of them are engaged in pyramiding activities or variants of *Ponzi* scheme, buttressing the speculative mentality of investing, if it can be called investing. In such an atmosphere, *insider trading* thrives; asymmetric information hazards reign supreme; cynicism prevades investment decisions; and there is persistence of widely held belief that stock market of Pakistan is rigged up, or it is run by powerful brokers and short sellers, where genuine investors have little chance of coming out ahead. All this is unfortunate and is likely to continue until such time that investing public begins to have some degree of confidence in the institutional set up to regulate stock market.

63. Institutional investors like financial institutions including banks, contractual savings institutions and mutual funds in Pakistan are a different category though they are not altogether immune to such perceptions. Their mind set, objectives, time horizon, all differ markedly from those of private non-institutional investors because their objectives are different. They have to take all precautions necessary to safeguard the integrity of their portfolio, come bad times or good times. By and large, they are imbued with attitudes and approaches of professional investors more than the odd-lot investors. Mutual funds are relatively new, but their advent has shown an investor mind-set different from speculative mind set that has prevailed for so long in Pakistan. They are a class by themselves as discussed in Chapter 3 and encapsulated below, and are quite apart from individual investors or corporate business investors.

Institutional Investors - Revisited **Commercial Banks**

64. Institutional investors are important players in capital markets as discussed in Chapter 3 on matters of participation. The group consists of banks and non-bank institutions such as contractual saving institutions, pension funds, provident funds, investment banks, finance companies and mutual funds. Among these *commercial banks* are single largest group in Pakistan as elsewhere. Given the state of financial market development in

Pakistan over the past couple of decades covering reforms and privatization period, non-bank financial institutions are not an important player. Within the banking system, commercial banks are key players in long term debt and equity markets with limitations as reiterated below. All this has been discussed before.

65. Commercial banks straddle the full spectrum of debt markets along with stock market. Their participation in stock market as direct investors, however, is limited for reasons of investor risks involved, as well as by regulations like exposure limits imposed by authorities. In the early 2000s, there were proposals to encourage banks to diversify into financial markets as investors, provider of margin finance and investor-based services to their customers, all under one umbrella, following the pattern of universal banking; but luckily for banking system, the proposal did not get very far.

66. For, primary business of banks is lending and managing varying degrees of risks of banking credit. Risks of investment portfolio add on to risks on loan portfolio. How pervasive are credit risks in Pakistan can be gauged by non-performing loans that Pakistani banks accumulated both during the reform and post-reform period in spite of repeated efforts to neutralize them. Banks have their hands full managing their loan and deposit portfolios, helping to manage market liquidity through their key roles in T-bills and bonds markets of Pakistan. They could not conceivably enter into turbulent waters of capital markets of Pakistan and take on added risks of stock portfolio management.

67. In Pakistan, total investment of scheduled banks, including commercial banks and couple of DFIs constituting Pakistan's banking system, in all kinds of securities both short term and long term and stocks has been around 20-22 percent of their assets for long periods. The overall *exposure* of the banking system to financial markets, both short term and long term, has been around *one fourth of their total assets* most of the time in the past decade with exception of a few early years. There have been swings in some years, but these asset proportions have held fairly steady for long periods. Further, much of investment portfolio has been concentrated in income generating securities, namely bonds, rather than corporate stocks for the reasons discussed in Chapter 3 and summarized below. The concentration of investment portfolio of commercial banks has been in *T-bills* for a variety of reasons; primarily because T-bills provide a risk free investment with guaranteed returns if bought on the day of auction and not discounted before the day of their maturity. In the early years of past decade, banks preferred to park their liquidity into T-bills rather than risk lending to their customers.

68. This happened because of the spread between cost of funds and returns on T-bills holdings. Consequently, the amount of T-bills held by commercial banks rose astoundingly from a low of Rs106 billion at the end of FY00 to Rs1120 at the end of FY10. There was a considerable reshuffle of these holdings in some years in response to monetary policy stance of SBP, liquidity requirements, changes in interest rates in money and T-bills markets, portfolio and profitability considerations. The result of this portfolio preference was that exposure of banking system in capital markets, both bonds and stocks was no more than half of their total investment in securities in early years of the decade, as the years went by; there was a decline to about 42 percent in the last couple of years of the decade. Given a choice, banks would stay away from investing in capital markets in preference for their investment in money markets. Within the capital markets their preference is for government bonds over private bonds and corporate stocks.

69. As regards bond markets, suffice to point out here that exposure of banks to government bonds, mainly Pakistan investment bonds has been declining over the past decade from about 40 percent in FY01 to about 11 percent in FY10, thereby compensating for the rise in the proportion of T-bills in the investment portfolio. This trend of government bond investing has been downwards, though with considerable volatility in intervening years. The rate of average annual growth in government bond investments during FY01-07 was 24 percent; it has declined to about 6 percent during FY07-09.

70. The same volatility is perceived in banks' investment in private bonds; though for most of the past decade, banks have held a very small proportion, only 4 percent of their total investment portfolio in private bonds of all variety. Hence, bank's portfolio and their exposure to bond markets, both government and private, is about around 14 percent for most of the years during second half of the decade. There have been unusual times but investment in bonds by the banking system has remained relatively a small part of total investment in financial markets.

71. Contrary to popular perceptions, banks do not invest in stock market of Pakistan in a big way or even in a noticeable manner. Their investment in corporate stocks as a proportion of total investment portfolio of the banking system has been around 4-6 percent during boom years. Seen another way, the share of bank investment in corporate stocks has been no more than 2.5 to 4 percent of the total market capitalization of KSE stocks for most years. During 2008-09, however, this proportion has risen to 8.5 percent. One could argue that a depressed stock price over the past couple of years, provided banks a buying opportunity with relatively safer investments in well known stocks., though stock investing is not a preferred investment activity.

72. Investment of banks in mutual funds is rising but still it is not a visible item in their investment portfolio. Of the late, banks have moved in mutual fund industry in a big manner and that may explain why they are reluctant to take a direct exposure in stock market. Similarly, bank holdings of NIT shares has never been large; and in recent years bank's investment in NIT is declining as their own mutual funds replace NIT as the medium of investment for private investors.

Non-Bank Financial Institutions - Revisited

73. Investment of NBFIs as a group in capital markets has not been significant. The investment portfolio of leading NBFI groups was Rs 129 billion in FY00 and it is estimated to have grown to Rs 594 billion by FY10, yet it is much smaller than investment portfolio of banking institutions, and only about 3 percent of a negligible proportion of securities markets as a whole as shown in Data Set 8.71 and discussed in Chapter 3. Among NBFIs, contractual savings institutions like insurance companies and pension funds are major players in financial markets, but their investment portfolio is varied and consists of significant amount of non-financial assets. These institutions would not normally like to load up different risk factors on both sides of their financial statements, namely the risk and liability of payout on the cash inflow, as well as the risk of loss on their investment portfolio.

74. The trade-off between risk and returns for these institutions is critical. How they have fared over the past decade remains to be analyzed. Other investor groups of NBFIs are investment banks, a few surviving development finance institutions, *modarabas* and assorted finance companies, but their exposure to securities markets is very small. Among NBFIs, mutual funds are emerging as major investors given their fast growth over the decade as discussed in Chapter 3 in detail. But for considerable time in future among institutional investors, banks are likely to dominate even though investing is not their main line business as pointed out earlier.

Chapter 7: End

Data Set 8.7		Banks: Investments in Securities Market										End June, Rs billions				
		FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10				
5	Securities Markets, Size \1	891	807	1205	1602	2711	3454	4612	6054	6240	6011	8614				
6	Stock Market- Capitalisation	392	339	408	746	1403	2037	2766	3981	3744	2120	2732				
7																
8	Banks: Inv Securities Markets	311	315	438	703	784	725	867	1107	1037	1360	1950				
9	Government Securities \1	254	252	374	616	670	603	592	826	742	947	1328				
10	Federal Government Bonds	148	126	152	211	259	188	182	169	183	198	208				
11	Treasury Bills as reported by banks	106	126	222	405	411	415	410	657	559	749	1120				
12	Private Sector Securities	57	63	64	87	114	122	275	281	295	413	622				
13	Private Bonds	16	14	20	37	29	22	34	36	37	70	105				
14	of this: Corporate Bonds - TFCs	15	13	18	36	28	21	32	32	35	64	96				
15	Stocks, Equity Shares	25	29	33	35	53	64	90	95	115	129	154				
16	Corporate Stocks	13	17	23	24	35	33	48	56	46	57	66				
17	NIT Shares and Mutual Funds	12	12	10	11	18	31	42	39	69	72	88				
18																
19	Bank Investment/ Securities Markets	34.9	39.0	36.4	43.9	28.9	21.0	18.8	18.3	16.6	22.6	22.6				
20	Bank Inv in Stocks / Securities Markets	2.9	3.6	2.7	2.2	1.9	1.9	2.0	1.6	1.8	2.1	1.8				
21	Bank Inv in Stocks / Stock Market	3.4	5.0	5.7	3.2	2.5	1.6	1.7	1.4	1.2	2.7	2.4				
22																
23	Government Securities	81.7	80.0	85.4	87.6	85.5	83.2	68.3	74.6	71.6	69.6	68.1				
24	Private Securities	18.3	20.0	14.6	12.4	14.5	16.8	31.7	25.4	28.4	30.4	31.9				
25	Treasury Bills	34.1	40.0	50.6	57.6	52.4	57.3	47.3	59.3	53.9	55.1	57.4				
26	Federal Bonds	47.6	40.0	34.8	30.0	33.1	25.9	21.0	15.3	17.6	14.5	10.7				
27	Private Bonds	5.1	4.4	4.6	5.3	3.7	3.0	3.9	3.3	3.6	5.1	5.4				
28	Equity, Stocks	8.2	9.1	7.5	4.9	6.7	8.8	10.4	8.6	11.1	9.5	7.9				
29	of this: Corporate Stocks	4.3	5.3	5.3	3.4	4.4	4.6	5.5	5.0	4.4	4.2	3.4				
30	Investments in govt & private Bonds	52.7	44.5	39.3	35.3	36.8	28.9	24.9	18.5	21.2	19.7	16.1				
31	SaF Data Set															
32	\1 Fiscal year data, recalled from Table 8.0, as reported by banks															

Source: SBP Annual Reports, Data Annexes, Table 6.1, & Banking Statistics

p: provisional, subject to revision

33	Banks: Investments in Securities Market										End June, Rs billions					
	Data Set 8.7a										FY07	FY08	FY09	FY10		
34	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10					
35	(Annual growth rates)															
36	Securities Markets, Size \ I	-9.4	49.3	32.9	69.2	27.4	33.5	31.3	3.1	-3.7	43.3					
37	Banks: Inv Securities Markets	1.4	39.1	60.4	11.5	-7.6	19.6	27.8	-6.3	31.1	43.4					
38	Government Securities \ I	-0.7	48.5	64.6	8.7	-10.1	-1.8	39.6	-10.2	27.6	40.3					
39	Federal Government Bonds	-14.7	20.9	38.6	22.7	-27.7	-3.1	-6.8	8.1	8.0	5.2					
40	Treasury Bills as reported by banks	18.9	76.2	82.4	1.5	1.0	-1.2	60.2	-14.9	34.0	49.5					
41	Private Bonds	-12.5	42.9	85.0	-21.6	-24.1	54.5	5.9	2.8	89.2	50.0					
42	Stocks, Equity Shares	13.4	14.1	5.9	51.7	21.2	40.6	5.5	21.1	12.2	19.4					
43	Corporate Stocks	25.4	37.5	3.5	45.6	-5.2	45.5	16.4	-17.7	23.9	15.8					
44																
45																
46																
47																
48																
49																
50	Banks: Inv Securities Markets	FY00-10	FY01-07	FY03-07	FY07-10			FY00-10	FY01-07	FY03-07	FY07-10					
51	Government Securities \ I	20.2%	23.3%	12.0%	20.8%			27.0%	28.3%	34.1%	30.3%					
52	Federal Government Bonds	3.5%	5.0%	-5.4%	7.1%			20.7%	17.0%	-0.7%	42.9%					
53	Banking Inv in Pakistan Investment Bonds	21.4%	30.7%	-1.1%	10.4%			20.3%	16.2%	-2.6%	44.2%					
54	Treasury Bills, Debt data, MTBs	26.6%	31.7%	12.9%	19.5%			19.7%	22.0%	28.5%	17.5%					
55								17.3%	22.2%	23.7%	5.7%					
56																
57	Memo Items:															
58	Stock Market Size, KSE Capitalisation	392	339	408	746	2037	2766	3981	3744	2120	2732					
59	Banking System Credit + Investments	1108	1177	1323	1674	2419	2938	3483	3853	4440	5125					
60	Banking System Credit	797	862	885	970	1242	1694	2376	2816	3080	3175					
61	Bank Investments / Total inv+Credit	28.1	26.8	33.1	42.0	38.7	29.5	31.8	26.9	30.6	38.0					
62	Banking System Investment (CY, net)	304	351	701	787	800	823	1276	1087	1737	2078					
63	Banking Inv in Pakistan Investment Bonds	27	28	81	146	159	149	140	162	177	188					

Data Set 8.71		NBFIs: Investment in Securities Market										End June, Rs billions				
		FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10p				
4	Securities Markets, Size <i>of this: Capital Markets</i>	891	807	1205	1602	2711	3454	4612	6054	6240	6011	8614				
5	Investments, all NBFIs, (cstd)	571	533	685	1075	1812	2393	3129	4389	4202	2662	3383				
6	Mutual Funds, NAV	129	130	158	217	274	326	382	554	632	532	594				
7	Insurance Companies \ 1	13	12	25	52	94	126	160	289	335	204	246				
8	Development Finance Institutions	73	77	86	97	112	127	151	198	231	249	282				
9	Investment Banks	26	22	30	42	43	43	38	37	36	59	48				
10	Modarabas, Leasing	12	12	11	20	17	21	24	21	17	11	10				
11	Mutual funds and insurance, sub-total	6	7	6	7	8	9	9	9	13	9	8				
12	Shares of NBFIs Inv in Securities Market	86	89	111	149	206	253	311	487	566	453	528				
13	Share of Mutual Funds in NBFIs	15	16	13	14	10	9	8	9	10	9	7				
14	Share of Mutual Funds in NBFIs	10	9	16	24	34	39	42	52	53	38	41				
15	Share of Mutual Funds + Insurance in NBFIs	56	59	54	45	41	39	40	36	37	47	47				
16	Mutual Funds + Insurance in NBFIs	67	69	70	68	75	78	81	88	90	85	89				
17	Share of DFIs in NBFIs investment, %	20	17	19	19	16	13	10	7	6	11	8				
18																
19																
20	Mutual Funds, NAV	13	12	25	52	94	126	160	289	335	204	246				
21	Annual Growth Rate, NAV		-8	107	108	82	34	27	81	16	-39	21				
22	Ownership, Public Sector, % of total			90	79	53	49	40	32	25	21	18				
23	Ownership, Private Sector, % of total			10	22	47	52	60	69	75	79	82				
24	Open-end Funds			78	78	74	70	73	82	86	89	91				
25	Closed-end Funds			25	22	26	30	27	18	14	11	9				
26	Mutual Funds: % of Securities Markets	1.5	1.5	2.1	3.2	3.5	3.6	3.5	4.8	5.4	3.4	2.9				
27	Mutual Funds: % of Capital Markets	2.3	2.3	3.6	4.8	5.2	5.3	5.1	6.6	8.0	7.7	7.3				
28																
29																
30																
31	Investments, all NBFIs, (cstd)	FY00-10	FY05-10							FY00-10	FY05-10					
32	Mutual Funds, NAV	16.5%	12.8%			Insurance Companies \ 1				14.5%	17.3%					
33	SaF Data Set	34.2%	14.4%			Development Finance Institutions				6.5%	2.2%					
34																

Average Annual Growth Rates

Average Annual Growth Rates

Source: SBP, FSA Reports, Data Annexes

p: provisional, subject to revision

Chapter 8: Long term Debt Markets ***Bond Market***

Thematics

Bond Markets - Debt Markets, Long Term

- Bond Market - An Overview
- Bond Classification
- Bond Issue - Underwriting, Syndication
- Trading - Primary and Secondary Markets
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Government Bonds - Pakistan

- Bond Issues and Auction System
- Primary and Secondary Markets
- Growth, Structure and Trends
- SBP and Government Bond Market
- Interlinkages with Monetary Management
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Corporate Bonds (TFCs) - Pakistan

- Term Financing Certificates (TFCs)
- Primary and Secondary Markets
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- Growth Prognosis - Bond Markets in Pakistan

Chapter 8: Long term Debt Markets *Bond Market*

Section 1: Bond Market - *Generic*

1. A bond is an interest bearing security, a debt obligation of the bond issuer, classified in two major categories, *corporate bonds* or *government bonds* as per their originators, the issuers, who are borrowers as well. As a fixed income security, both of these have common features such as coupon interest rate, face value and a maturity period mostly medium to long term, but have markedly different risk and return profiles. Both corporate or government bonds are long term tradable debt instruments for its issuer, the borrower, who has the option of borrowing from a bank or borrowing directly from investors through bond float in capital markets. For investors, the lenders, bonds are fixed income securities with risk-return features closely tied to interest rates and market trends.
2. Bond markets are dominant part of medium to long term debt markets. In most developing countries, bond markets consist mainly of government bonds, owing primarily to relatively a small number of large corporations, and also because securitization has not yet developed to the point where other types of asset backed securities could be available and traded in long term debt markets. In the absence of tradable long term debt instruments other than bond, government and corporate bonds is all there is to bond markets. This is the same pattern that has prevailed in early stages of the growth of bond markets both in developed as well as developing countries who have been relatively more successful with government bond finance. Growth of bond markets, however, has shown dis-similar patterns.
3. There are two major categories of bonds; corporate or government. As a fixed income security, both of these have common features such as coupon interest rate, face value and a maturity period mostly medium to long term, but have markedly different risk and return profiles. Based on these features, bonds may be classified as follows:

by *type of issuer*; such as government bond, federal, provincial or municipal bonds; or corporate bond, which are also called debentures.

by *origin* of the bond; such as local or foreign bonds.

by *maturity* of the bond, though mostly it is a medium to long term instrument, it may be broken down in time slices; or it may be a perpetual bond issued without a maturity date and is therefore irredeemable and interest thereon is paid for the holding period. Such bonds are uncommon, since bonds issued these days have a defined maturity period.

by *type of use*; such as infrastructure bonds issued to finance infrastructure facilities such as electric power, transport; or industrial bonds issued for investment financing; or real estate and property-based bonds.

by *type of risk*; bonds classified by potential risk of default, or based on risk ratings; for example, in the US, Standard and Poors' bond ratings ranging from AAA (triple A), the highest quality bonds commanding a price premium, down to single D bonds of doubtful value. Bonds with the rating of triple BBB and above are regarded investment grade bonds for conservative investors like insurance companies, trusts, mutual savings institutions, commercial banks, and mutual funds.

Government Bonds

4. Government bonds are debt obligations of the government; federal, provincial or local, or any government agency issuing the bond with explicit or implicit sovereign guarantee, offering a *risk free* investment to the bond holders at premium interest rates depending on the maturity of the bond. In bond markets, the long-term federal government bond is usually regarded as *benchmark bond* since it provides a guide to the market for pricing new issues of corporate bonds. Typically, benchmark bonds are of ten year maturity, and their yield provides a standard basis to price new issues of corporate bonds returns. This is because benchmark bond sets a stable tone for bond market and its price is relatively free of volatility observed in case of low grade corporate bonds or zero coupon bonds.

5. In countries like Pakistan where bond market are not developed, the need for a benchmark bond becomes more acute to provide some kind of a lynch-pin for corporations or financial institutions who would like to raise long term funds through a bond issue. If long-term government bonds of maturities of more than eight to ten years do not exist, or they are limited and not commonly available, then benchmark may be provided by treasury notes of two to ten years, but this is not the same as bonds. In many developing countries, mostly federal government and often provincial governments issue medium to long term general purpose bonds which may be labeled as *development bonds* or *defense bonds* mainly to finance their fiscal deficits rather to finance any specific development project or large defense procurement.
6. Occasionally, federal or provincial government may issue a single purpose bond, an *infrastructure bond* to finance a large investment such as a highway or a bridge, railways, or telecommunication installations, labeled by the project name, with a very long pay off period. For this type of borrowings through bonds, repayments of interest and the principal are made from cash inflow generated by infrastructure facilities from fees or toll paid by their users. But issue of these types of bonds and their success depends on how developed is the bond market and what is its potential.
7. In developed countries, municipal authorities routinely issue their own bonds, called *municipal bond* to finance local projects or infrastructure facilities such as water treatment facilities. These bonds are default free with reasonably high returns; therefore, they have a brisk market of their own. These bonds are debt obligation of municipalities and normally do not carry sovereign guarantee of the federal government, but are treated by investors a shade below federal government bonds in terms of their risk profile. In developing countries, municipal authorities rarely issue such bonds for the reason that bond markets are not developed to carry a successful issue.
8. A common type of bond is *savings bond* issued by government or treasury agencies, such as a bank or other financial institution authorized to issue such a bond to attract depositors by offering better rates of interest than saving instruments in deposit markets. These bonds are sold at a discount directly to investors There is no coupon payment during the holding period but is lumped together with the par value of the bond on the redemption date. There is no penalty if bond is redeemed after six months of purchase. Since savings bonds are not traded in the secondary market, there are no market risks to the bondholders.

9. Likewise, there is no reinvestment risk since interest earned is reinvested through conversion into bonds of new maturities. In this respect savings bonds are like perpetual bonds. Saving bonds are similar to zero coupon bonds in that investor's return on maturity date is the difference between redemption value and discount price originally paid by investor.

Private Corporate Bonds

10. Private corporate bonds, also called corporate security, are debt obligations originated, issued or floated by business corporations, companies or financial institutions. Their asset quality and marketability is shown by their asset class or rating which depends on several factors, creditworthiness and financial strength of corporate issuer being the most significant one, industry or sector of activity of the issuer, future prospects of growth the sector, and rate of profit or earnings growth of issuing corporation or financial institution.

11. Incorporating these features, corporate bonds are issued under an agreement called *bond indenture* to pay bond holder a principal amount equal to its face value, called coupon value, on the date of maturity plus periodic payment of interest, called coupon rate, over maturity of the bond. For bond issuer, the corporate borrower, bonds are medium to long term debt instruments and is a preferred mode of raising long term funds for investment or other long term financing needs of bond issuer. This mode of financing enables a bond issuer, the borrower, to convert non-liquid or less liquid assets into marketable instruments.

12. For investor, bonds are *fixed income* security which provides a defined cash flow over its holding period as per coupon interest rate of a bond, *plus* capital gain or loss depending on market price of the bond at the time it is sold relative to price of bond paid at the time of purchase, or relative to coupon value or face value of the bond if purchased at the time bond is floated. Hence for an investor, return on bond holdings is determined by bond yield which is a composite of these factors

13. Bonds issued by banks are also called *debentures* if backed by specific corporate assets as collateral to bond issue, instead of a general corporate obligation, and if for coupon payments and redemption, sources and size of income are specifically earmarked at the time of issue. This is a fundamental difference between bonds as commonly known and debentures as specified

here. The same is the case with *sukuks*, the Islamic bonds, which require a tendering of corporate assets specifically in the amount borrowed at the time of their issue as discussed in Chapter 9 on Islamic finance in Volume I. The point is that if a corporation possessed assets to tender them as collateral for debentures or *sukuks*, why it would seek financing via such demanding procedures involving financial disclosure, underwriters, fees, collateral declaration and tendering requirements which have their own elaborate procedure.

14. Bond financing is done to *create* assets that do not exist; for example a new plant or a new manufacturing unit, or to modernize existing unit through rehabilitation and refurbishing. If assets do not exist, there can not be debenture financing, nor *sukuk* financing as discussed below. Similarly, infrastructure bonds are issued to finance infrastructure facility that does not exist; a new highway, or a new airport, or new power plant. If these assets existed to begin with, there would be no need to go through the process and expense of bond issue.

15. In practice, bonds are issued on the general rating of the issuer, where ratings are assigned by a third party, a rating agency, that evaluates overall financial strength and creditworthiness of bond issuer. This is an established procedure, tried, tested, and well known; its arrangements are satisfactory to bond issuers, underwriters and investors. This controversy has spilled over the legitimacy of *sukuks* in case of Islamic finance. One faction of proponents insist that before *sukuks* are floated, bond issuer must tender assets as collateral or guarantee *before sukuks* are floated, otherwise veracity of the borrower is not established; hence in their view, *sukuks* are not in accordance with stipulations of Islamic finance.

16. Therefore, asset creation is central to bond financing. Bond issue is predicated on it; investing is tied to the prospects success of infrastructure project that would generate the stream of revenues to enable the borrower to pay coupon rates and face value upon redemption. Neither coupon payments, nor redemptions are possible if the infrastructure facility is not built, and revenue stream is not generated.

17. If a corporate bond issue consists of a series of bonds with different maturities assigned to each series but issued under a single bond indenture, where each series matures in a dated sequence of redemption, it is classified as *serial bond*. For the issuer, redemption of serial bond is staggered, thereby spreading out the burden of repayment of principal amount borrowed, and diversifying maturity structure of borrower's portfolio. For investor, a serial bond is practically a bunch of several bonds with different maturities at the

same coupon rate but with different yields to maturity, thus diversifying maturity structure of investor's portfolio. In contrast, if a bond issue has a single maturity date; it is classified as *term bond*. A corporate bond issued in perpetuity to consolidate previous debts is classified as *consol bond*. For transaction purposes, bonds may be classified as *bearer bonds* to be traded like any other bearer security, that is, there are no formalities attached to transaction. But transactions of registered bonds require completion of formalities such as authorization of bondholder selling the bond, and verification from authority before sale is finalized.

18. If a corporate bond can be converted into a common stock of issuing corporation at a conversion ratio specified at the time of bond issue, then it is a *convertible bond*. It has all the features of a regular bond, namely par value, coupon rate, maturity period, coupon payment, namely interest payment per period, but additionally, bond issuer pays dividend and offers an option to investor to convert the bond into a number of common stocks as per conversion ratio or conversion price of the stock; as a result market price of the bond is affected both by interest rate movements as well as stock market price movements. The cost of conversion option is gauged by a premium paid for the bond in secondary market trading.

19. Convertible bonds provide a potential gain to the investor if the bond price goes up, while at the same time offer an attractive bond yield, especially for corporate bond whose price is likely to materially increase over the maturity period. The market value of option attached to convertible bond is zero or insignificant at the time bond starts selling initially in secondary market, but value of the option increases as bond price climbs up. It is also possible that bond price may fall instead of rising with disastrous consequences for option holder. Therefore, market risk of convertible bond is the same as for other type of bonds, as its price is affected by interest rate changes and also due to changes in share price of bond issuing company. These price movements can be potentially rewarding to investors.

20. Another bond instrument developed in the US in early 1980s for corporate financing was *junk bonds* for leveraged buy-outs, mergers and acquisitions. Such bonds involve considerably high risks but also offer potentially high yields to the bond holders; hence, they are named high yield-high return bonds, though in common parlance, the name *junk bonds* has stuck. Rating of these bonds generally is much lower than investment grade bonds, with extremely high debt ratio such that the risks of bond holders are similar to those of common stock holders. These bonds are issued by prospective buyers of conservatively financed companies targeted for their acquisition, or often in a bid for hostile take-over; or these bonds are issued by companies in financial troubles, but with good business prospects.

21. No matter what the underlying motives are for these bonds, they carry significant risks all around. At the time *zero-coupon bonds* were floated, there was a great deal of enthusiasm in US bond market about them, mostly among high stake large businesses and corporations seeking market domination if not control. But, zero-coupon bonds are corporate debt securities that do not pay regular interest at specific intervals as bonds usually do, but are issued at a deep discount from the face value. The discount approximates the total amount of interest that will accrue on the bond from the date of issuance to maturity. Hence, market price of these bonds is highly interest sensitive and fluctuates with interest rate changes than market value of interest paying bonds. Therefore, interest rate changes are major risk for zero-coupon bond holder. Given the underlying risks of zero coupon bonds, a hefty premium is bundled up in the deep discount mentioned above, because simple interest coverage does not adequately cover risks of default.

22. If coupon value of a bond is separated from its redemption value, creating two strips of the same bond for sale to different investors, it is a *strip bond*. For example, one of the coupon strips may be sold to investors who are looking for a stream of fixed income cash flow over a specified period, usually less than maturity period of the bond; whereas redemption strip may be sold to long term investors who need cash at maturity to meet certain payments due at a future date.

23. Occasionally, corporations or government issue a *sinking fund bond*, that is, a bond issues of a single maturity date like a term bond where random portion of the issue may be retired on different but listed dates and in specific amounts as per sinking fund payout. The bond holder, however, is not aware which portion of the bond issue will be retired early and which portion will be retired on maturity; this feature of the sinking fund bond provides some flexibility to the issuer to better manage his liabilities outstanding, such as sinking fund obligations.

24. In developed bond markets, therefore, there is a variety of bonds ranging from investment grade to junk bonds, each with their own features of risk and return. Bond investing, therefore, requires more sophistication than stock buying and investing. Analysis of risk and return features is complex even for market savvy investors; it needs a great deal of quality data and information; its assessment; and evaluation of creditworthiness of bond issuer. In contrast, government bonds are fairly straight forward being zero-default risk securities and are a favourite of those who are content with low but guaranteed returns over the long haul and in this sense, government bonds zero coupon bonds are a *pair of opposites*.

Bond Issue and Trading

25. Every private bond issue involves a *bond plan* outlining features of a scheme for a bond issue. It contains *bond covenants* that specify the terms and conditions of bond issue including coupon rate, maturity period and security or guarantee against which it has been issued, method of interest payment and final payment or redemption on maturity date. A contract for bond issue is drawn-up at the time a bond is being issued called *bond indenture agreement* outlining the bond covenants as tendered by a bond issuer specifying its contractual obligations concerning a bond issue such as interest rate and date of maturity, repayment schedule, collateral, protective covenants, and call provisions of the bond, and stating type of the bond being issued. Bonds may be issued in domestic market or in foreign markets under procedures of their own; but for different investor groups in different bond markets with features of their own.

26. There are three approaches to a bond issue in domestic markets: *auction, syndication, or tap sale* depending on whether it is a private bond or government bond to begin with. A bond may be floated through auction with uniform pricing or discriminatory pricing. These auctions are usually not open to ordinary public investors. Instead, auctions are restricted to large banks and securities firms, or to a consortium of large financial institutions including banks, insurance companies and other qualified institutions like unit investment trusts. Under uniform pricing auction, bonds are sold at one price to all bidders, and under discriminatory pricing, each winning bidder pays bid price tendered at auction. In Pakistan, SBP does not follow uniform pricing at auctions in the primary market; instead all bids equal to a cut-off yield rate or lower are accepted at auctions.

27. Private corporate bonds may be floated through *syndication*, where the syndicate may comprise of a group of underwriters, mostly financial institutions, led by an investment bank with a firm commitment to buy bond issue in full by members of the syndicate underwriting the bond issue. Or, the syndicate may guarantee purchase of entire float jointly with other banks or institutional investors interested in bond float, thus ensuring sale of the bond in primary market and a successful float in secondary market. Third, part of a bond issue may be *sold on tap* after an auction where institutional investors can buy bonds at close to auction price in the primary market in a manner similar to auction under discriminatory pricing, or at a weighted average price arrived at auction of a bond issue.

28. Most long term government bonds are sold through auction on *uniform pricing* basis at the time of bond float to a group of institutional investors, such as a group of pre-qualified and selected banks, designated by the government or the central bank as *primary dealers*; subsequently through sale on tap by the central bank. Government may also set up a consortium of banks, institutional investors or securities firms and may apportion a bond issue among them at a predetermined price other than auction price in consideration of some privileges extended to consortium members

29. In secondary market, trading is done by bond traders or securities dealers on quoted price of the bond. The *bid* and *ask* quotations are given in percentage of par or face value of the bond; that is, if a bond of Rs1000 face value is quoted at Rs 97.25, it means a price of Rs 97.25 for each bond of a face value of Rs 100, and thus actual price payable is Rs 972.50 for the bond. Since this purchase value is below redemption value, bond is selling at a discount of Rs 27.50, based on Rs 1000 par value, or at a discount of 2.75 points, where one point is equal to 1% of par value of the bond. Conversely, if the same bond is quoted at 103.50, price payable would be Rs 1035 and bond is selling at premium of 3.5 points. The date, transaction is carried out is trade date which may be different from settlement date when payment for purchase is due. Trader's commission is included in bond price; for purchasing it is marked up, and for selling it is marked down.

30. At the time of purchase, a bond is entered into accounts at its book value which is the same as purchase value of a bond; but its book value changes over the holding period through redemption date according to the discount or premium paid by bond holder. On redemption date, book value of the bond is equal to redemption value. If a bond is purchased at a discount, book value of the bond is increased on each interest date until book value equals redemption value and this procedure of writing up of book value is called accumulation of discount. Conversely, if a bond is purchased at a premium, book value is reduced on each interest date until book value is equal to redemption value, and this is called amortization of premium, or writing down the book value. The recall or redemption of an existing bond issue and its replacement with another bond issue is called bond refunding.

Bond Risks

31. There are a variety of risks associated with investments in bonds. These can be summed up in bond *market risks* or can be decomposed as below. Typically, bond markets are less volatile for top grade bonds such as government or treasury bonds and also for top rated corporate bonds, but are

highly volatile for other types of bonds, such as junk bonds. Therefore investment in top rated bonds generally is less risky than stocks, but at times, bonds could be as risky as stocks during rapid changes in the bench-mark interest rate, usually the central bank rediscount rate. For the same reason, long term bonds may be more risky than stocks because market price of these bonds is relatively more interest sensitive.

32. Stock and bond markets may fluctuate independently of each other, and may offset investor's risks if price movements are in opposite directions and provided investor's portfolio is diversified into bonds and stocks in adequate proportions, and his exposure is such that losses in one market are offset by gains in another. Such offsetting price movements in stocks and bonds are not uncommon. But during periods of changes in interest rate structure, market price of bonds and stocks move *inversely*; that is a decline in interest rate will cause an up-tick in the price of both bonds and stocks; hence direction of price change would be the same for both stocks and bonds. There are no offsetting movements mentioned above. But during periods of stable interest rates, bond prices may turn out to be relatively less volatile than stock prices, providing incentives for risk averse investors to shift their exposure from stocks to bonds.

33. Given that bond is a debt instrument, the foremost risk of a bond is *credit risk* which is the risk of non-performance, hence default risk of the bond issuer as the borrower; or the risk of default in that the bond issuer may be unable to make timely repayments of interest, the periodic coupon payments, or may be unable to pay the principal amount on the date of redemption. In this sense, credit risk on a bond is similar to credit risk on a loan. By the same token, government bonds are considered least risky since they carry sovereign guarantee of repayment, whereas corporate bonds carry different level of risk depending on financial strength and business performance of corporation issuing bond.

34. For a bond holder, next to credit risk is *interest rate risk* also called market risk of the bond; the risk that an increase in interest rate will cause a decline in market price of the bond and will cause a capital loss on bond holdings. In general, changes in interest rates are inversely related to market value of a bond, the bond price. A rise in interest rates is usually accompanied by a fall in bond price. Conversely, if interest rate declines, bond prices increase, leading to capital gains. These capital gains associated with falling interest rates are fine, but potential of capital loss owing to a rise in interest rate is a major risk for bond holder. In times of market volatility and rapid changes in interest rates, such risks become a dominant factor in determining investors' preferences and their exposure to such risks.

35. Bond holders also face *inflation risk*, the risk that the real value of the total returns of a bond will be eroded by rising prices. This is a generic risk, though a powerful one in times of rapid inflation and is not limited to bonds; rather it is common to portfolio investment equally applicable to returns from all kinds of financial assets. Often inflation risk and interest rate risk combine together because the first line of defense of monetary authorities against inflation is to increase interest rate which lowers price of bonds for current bond holders. For them bonds becomes unattractive, and if these investors begin to unload their bond holdings, it generates a negative momentum of its own in bond markets, causing a decline in bond prices.

36. There is *sector risk* to be considered. It is the risk applicable to bonds of a particular sector of the economy owing to its poor performance, regardless of financial strength of the issuer. This is also a generic risk that affects all investors alike, whether they are bond investors, stock investors, or owner investors in a plant or factory, or any other type of exposure in affected sector such as creditors, mostly banks. If investors are significantly exposed to a sector, and that sector experiences a downward trend, there are losses all around. It happens quite frequently.

37. A bond holder may face a *call risk*; the risk that a bond issuer may retire the bond before its maturity date if interest rates fall, or bond issuer as a borrower may restructure his debt portfolio to take advantage of falling interest rates in an attempt to reduce overall costs of debt outstanding. The bondholder who has invested in such fixed income securities, to earn a stream of fixed income, is then faced with the option of reinvestment in bonds with lower coupon rates because newly issued bonds carry lower interest rate, and hence a reduction in fixed income from bond portfolio. The bond holders may face *liquidity risk* of their own; the risk that they may not be able to unload bonds and raise cash in time to meet liquidity needs or other contingencies in case of thinly traded bonds, or bonds with limited markets. Generally, trading in bonds of a company is relatively thin as compared to trading in its stocks; hence bond markets are deemed less liquid than stock market.

38. In case of *foreign bonds*, there are additional risks. These are:

- i. **Currency Risk:** the risk of change in exchange rate between the currencies in which the bond is issued versus currency of bond investor between the time of bond purchase and bond sale, or redemption at maturity. A shift in exchange rate could cause considerable change in value of bond portfolio during holding period of a bond in the home currency of bond investor.

ii. **Repayment Risk:** also called sovereign risk, country risk or political risk, associated with foreign bond. It is the risk that interest income of a foreign bond, or its sales proceeds, or its redemption proceeds may not be repatriated to a bond investor owing to actions taken by the government such as moratorium on external debt payments, or freeze imposed on repatriation owing to worsened financial and economic conditions or political upheavals.

39. To recapitulate preceding discussion, bond risks are exacerbated by volatility of markets. In general, bond market is less volatile for top grade bonds, such as treasury bonds, and top rated corporate bonds, but is highly volatile for other types of bonds, specially the co-called junk bonds. Thus investments in top rated bonds may be less risky than stocks, but at times, bonds could be as risky as stocks, especially long-term bonds which are relatively more interest sensitive. In general, when interest rates rise, bond prices fall, and conversely; if interest rates decline, bond prices increase. The stock and bond market may fluctuate independently of each other, thus offsetting investor's risks, provided investor's portfolio is diversified into bonds and stocks in adequate proportions, and investor's exposure is such that losses in one market are offset by gains in the other market.

Bond Returns - Yield

40. Returns on investment in bond consist of two elements: interest rate income based on the coupon rate, *fixed* at the time of issue; and capital gain or loss over the holding period. Note that changes in yield or interest rate are expressed in basis points where one basis point is 1/100 of one percent of face value of the bond. The holding period of a bond in portfolio of investor may not be the same as life of the bond from the date of issue through its maturity. Therefore, return on the amount invested in a bond over its holding period is captured by *yield*, expressed as annualized percentage and is derived as below.

41. In its simplest form, yield is interest income on the bond over its holding period divided by average amount invested based on purchase price of the bond paid and its redemption value, if bond is held through maturity date. This is known as yield-to-maturity (*YTM*). In this sense, yield is a rate of return on invested amount in a bond through maturity period or the holding period. But the simplicity ends here. In operational

terms, yield of a bond is based on the amount invested which is based on purchase price of the bond, maturity date, holding period, number of periodic payments received per year as interest income together with any reinvestment income accrued on the amount of interest reinvested; and redemption value of the bond adjusted for any capital gain or loss at the time of redemption.

42. The purchase price of the bond may be at a discount or at a premium, which may be different from its issue price, the par value. The interest income is based on coupon rate or the nominal interest rate stated on the bond and it consists of the cash flow from periodic payments through the maturity period, or the coupon interest income over the holding period and interest on reinvested amount. The redemption value of a bond is inclusive of capital gains or losses on redemption and is the deciding factor for investment in bonds, though other factor such as bond risk, bond prices, discount and premium, also plays a part.

43. Hence, yield on a bond is not the same as coupon rate, because a bond is traded in the market at a price usually different from the par value of a bond. In contrast, yield on a loan is the actual amount of interest earned on an annual basis and expressed as a percentage; whereas yield on a deposit is interest income earned divided by deposit balance over a defined period. This is because unlike a bond, a loan or a deposit is not traded in the market and therefore it does not have a market price like the price of a bond.

44. Generally, *bond yield* is inversely related to its price; that is if market price of the bond goes up its yield will decline, and *vice-versa*. The reason is that underlying amount needed for investment in a bond is not the same. When bond price goes up, a larger amount is needed for investment to earn the *same* coupon interest income as before, fixed at the time of bond issue through its maturity, regardless of what happens to bond price in between.

45. Conversely, if bond price goes down, a smaller amount of investment is needed to earn the same coupon interest, the income from bond holding. For the same reason, *bond price* is inversely related to interest rate. If interest rates increase and are higher than the coupon rate, bond prices decline, and *vice-versa*. The same amount of money if invested in other interest bearing instrument will yield a higher return than if invested in the bond, hence bond yield is lower. Hence, yield on a bond and interest rate movements occur in the same direction, but price of a bond and yield move in opposite directions.

46. This inter-linkage between bond price, its coupon rate, market interest rates, current yield or yield-to-maturity has to be clearly understood. If a bond trades, above its par value, at a premium, coupon yield of the bond is higher than its current yield and both are higher than yield-to-maturity. Conversely, if a bond trades at a discount, below its par value or coupon value, coupon yield is below current yield, and both are below yield to maturity.

Section 2: Bond Markets – Pakistan

1. In Pakistan, bond markets are fairly small and their relative size in securities markets, overall, has been declining throughout the past decade. The implication of this long term trend is that bond financing is not a feasible or preferred mode of financing long term investment in new plants or business, refurbishing or modernization of existing ones; not for private sector as discussed below. The role of bond finance in corporate growth, likewise, is only a footnote in overall financing picture.

2. Public sector on its part has not used bond financing to invest in new infrastructure, energy or transport sectors, critical to provide the base for growth. Instead, bond financing has been used by the government for budgetary operations to cover endemic public sector deficits. At the macrofinancial level, thus, role of bond markets in Pakistan for corporate growth and economic development has all along been marginal and has been dwindling over the past decade; while public sector has not deployed bond financing for economic growth and development; assertions to the contrary notwithstanding.

3. Market for government bonds is well established; but market for corporate bonds, or their variant, the Term Finance Certificates (TFCs), issued by large corporate borrowers, is very small and it is in early stages of development. Leading features and trends of both these markets are separately discussed below. Common to both government and private bond markets are large institutional investors, because household investors are mostly investing into defense bonds or other such instruments issued under national savings scheme, NSS, by Central Directorate of National Savings,

CDNS. The regulatory framework, laws, rules and regulations are specific to the type of government bonds or private bonds; that is, these bonds are governed by their own procedures, rules and regulations, prescribing mode of issue and trading both in the primary and secondary markets.

4. Both government and corporate bond markets in Pakistan are in their early stages of development. Prior to financial reforms of 1990s, there was a bond market, if it can be called as such, because it was only for government bonds and there was no corporate bond market as such because publicly owned corporations did not need long term debt financing; hence they did not issue bonds on their own. Their long term financing needs were taken care of by their owner; the government.

5. There were no private bonds outstanding either; because there were not many private corporations publicly owned, listed on stock exchanges, and *active* in bond or stock markets until mid-1990s. There were no bonds issued by private limited companies, because there were not many left after nationalization; and those who emerged later on in private ownership pursuant to privatization, these companies would not ordinarily want to issue bonds because of disclosure requirements as per prospectus to be prepared by their underwriters on the day of bond float. These private limited companies made every effort to avoid any public disclosure of their financial status.

6. A rubric of government bond market has prevailed all times; but it failed to take-off for a variety of reasons. There has always been an appendage of a market for *prize bonds* among public, if they could be called bonds as such. It is a misnomer; because prize bonds are zero coupon, zero return, and zero risk instruments with lottery based returns for one lucky winner take-all. These prize bonds are bereft of basic features of a bond as the term bond is commonly understood. It was in late 1990s, towards culmination of financial system reform period, when both government and corporate bond markets came into being. From that period onwards, Pakistan Investment Bonds (PIBs) and corporate TFCs, began to be floated in sizable amounts, and their growth took off in early years of the decade.

7. From perspective of financial market development, in a relatively short period of about a decade, bond markets in Pakistan have generated a good deal of institutional investor interest as exhibited by over-subscription of auctions for government bonds and TFC issues. TFCs and PIBs, both have a good potential for mobilizing long term debt finance, but a number of issues need to be resolved for their healthy development in future. For example, the advent of Islamic instrument of bond like financing, called *sukuks*, briefly

described earlier, seems to have thrown a spanner in private bond market development given its stipulations which can not be implemented in full in their intent or interpretation. This will thwart issue of private corporate bonds in the market. Most bond issue will not qualify to be classified as an appropriate Islamic finance instrument unless they satisfy these stipulations discussed in Chapter 9 of Volume I.

8. Note that our main concern here is with government and private bonds issued in domestic bond markets. Pakistan government has also issued US dollar based bonds, but they are not bought or sold locally, therefore foreign bonds are not a part of domestic bond market. Those are parallel borrowing operations in overseas market. The government has accessed foreign bond markets through issue of forex bearer certificates and US dollar bonds, but the amount of debt financing thus raised has declined sharply over the years for which data is available, from Rs 27.4 billion in FY03 to Rs 8 billion in FY09. These equivalent values in Pak Rupees have been estimated at nominal average exchange rates prevailing at that time.

9. Much of growth in government bonds in Pakistan has occurred in the wake of persistent borrowing needs rooted in fiscal deficits arising from excessive government expenditures year after year. These borrowing needs could not be alleviated through financing from short term instruments like treasury bills adding to the stock of floating debt; because borrowings through treasury bills has always been a bridge to tide over short term liquidity needs of Treasury. These needs, however, have emerged not from casual or temporary deficits, rather because of *structural imbalances* between government revenues and expenditures, not cyclical imbalances. This short term financing via T-bills had to be replaced by long term financing, namely, long term bonds in domestic markets, or through long term foreign borrowings if accessible and feasible. No other alternative was available.

10. The same has happened in the wake of persistently large US federal government deficits and an enormous rise of federal debt over the past half a century. It is the same pattern of market origination and growth as observed in many developing countries including Pakistan, only the scales are different. In early 1970s, in US the proportion of bonds outstanding to GDP representing the size of bond market, was about half of GDP and was below capitalization of stock markets. By mid-1990s it has surpassed capitalization of stock markets and was more than 100 percent of GDP and this trend continues unabated.

11. Growth of bond markets among other developed countries like Germany and Japan, has also been fairly high though not as fast as in the US. Similar trends are evident among the frontline developing countries though their bond market growth has been relatively slower. The replacement of equity financing with bond financing through debt markets, outstripping credit finance extended by banking system is the difference between structures of corporate finance in advanced and developing countries. As a result, there has been a phenomenal growth of bond markets among advanced countries over the past three decades, led by US bond markets. Will this long term trend of bond financing, outstripping equity financing will replicate among developing countries is an intriguing proposition. The outline is quite clear.

12. Whatever may be future trends overseas; in Pakistan, operations of bond market is not as much an issue for government borrowing, as they are for private sector. Government will always be able to obtain domestic loans one way or the other. If it is not investment bonds, called PIBs currently the dominant instrument of government bond financing, then some other quasi-long maturity instrument of perpetual roll over, namely prize bonds; and if that turns out to be insufficient, then it is NSS as it was in the past; if all these turn out to be inadequate, then some variant of NSS. Lack of viable bond instruments has not been a hindrance for the government to borrow.

13. The impact of such pattern of growth has been segmentation of bond market in Pakistan between government bonds and private bonds. The two markets have different structures, participation, and depth because of different issuer preferences. Typically, bond market segmentation occurs for opposite reasons, that is because of different investor preferences underlying their portfolios. For example, contractual saving institutions like insurance companies and pension funds are major players in bond markets but have a different asset management profile and different portfolio considerations than those of other institutional investors.

14. For one, pension funds and life insurance companies have to tailor their portfolio to actuarial obligations they face with targeted maturities; hence they are mostly invested in medium to long term fixed income securities including bonds, whereas contingent liability insurance companies have to be invested according to the profile of hazards they cover, while keeping only a part of their portfolio in targeted fixed income maturities. Investors simply do not have a range of variety in bond investing in Pakistan. Therefore, segmentation in Pakistan's bond market is not investor oriented; it is issuer oriented based on PIBs and TFCs.

Bond Market – Size and Trends

15. The size of bond markets in Pakistan is fairly small, though it has risen fast at an average annual growth rate of about 14.6 percent during FY00-10 period. In early years of the decade, bond market started from a fairly low level Rs180 billion in FY00, rising to Rs 705 billion by FY10. (*Data Set 8.3*) After nearly a decade of operations, bond market in Pakistan still remains practically a market for government bonds, as these bonds have been an overwhelming proportion of bond market at around 90 percent in early years, down to about 80 percent at close of the decade.

16. Correspondingly, private bond market is fairly small; its proportion was around 9 percent for most years except for FY10, when there was a significant increase in the amount of *TFCs outstanding* in the bond market. Therefore, role of private bonds in providing long term debt finance to corporate sector has been fairly limited one. It is a thin market of bonds and it is dominated by only one instrument at that, namely PIBs which were about 80-85 percent of total bond market for most of second half of this decade. There is no depth neither diversity in bond market. If compared with credit market of banking system, the bond market is simply an adjunct to system of resource transfer at macro- financial level in the country.

17. Growth of PIBs and TFCs was made possible by several reforms of NSS impacting on financial markets; the main one was detaching the pricing of corporate debt from NSS rates, and barring institutional investors from buying NSS instruments. The reason was that NSS constituted about a quarter of government debt and still does, aimed almost entirely at the same group of investing public which the TFCs were also targeting through their listings at stock exchanges. There were no long term bench marks for TFCs' coupon rates except NSS rates.

18. Financial system reforms improved tax treatment somewhat and streamlined issuance of TFCs. As a result, starting from fixed coupon rates, the pricing of TFCs has evolved into a floating structure in the face of declining interest rates all around. Thus far, TFCs are the only operational instrument for corporate debt market for maturities of 5 years. The need is to diversify the instruments, together with strengthening of rating agencies to assist investors. Apparently, tax incentive policies to induce corporate bond market are inconsistent; secondary market has yet to evolve; policy and legal framework needs to be improved further.

19. For the government, existing structure and operational mechanisms of bond market are no hindrance to borrow from financial system entities, namely banking system and non-bank financial institutions. But for private sector, this lopsided structure of bond market has significant implications. As it is, market based debt financing is not in reach for most private corporations in many countries, including Pakistan. For large banks and large corporate businesses, market based debt financing is an alternative to credit financing from banking system; but even for these borrowers, floating private bonds like TFCs, and lately its Islamic version, *sukuks*, offer a limited opportunity for debt financing, provided bond market mechanisms allow level playing field for these instruments in a market which is beginning to find a place of its own.

20. While the main purpose of government bond issue is to provide long term debt financing to the government, these bonds also serve the need for a long term marketable government security that could meet portfolio investment and diversification requirements of banks, NBFIs, insurance companies' pension funds and other portfolio investors like mutual funds. Thus, for the government, PIBs are a source of mostly bank based and some non-bank based borrowings. For the investors, be they banks or other non-bank financial institutions, PIBs are long term debt market assets with some risks should interest rates change over the holding period, which they do. Yet, the demand for PIBs by commercial banks has risen significantly. The largest part of the increase in PIB investment is institutional and originates from the banking system. A part of the increase in the demand for PIBs occurred since the time financial institutions were forbidden to invest in NSS instruments. They still are. Another minor part occurred owing to a shift from maturing NSS instruments to government bonds.

21. For the government, PIBs were supposed to be a source of non-bank borrowings; but in effect they are a variant of bank borrowings. For non-bank investors, these are long term, default risk free securities; with some risks should interest rates change over the holding period, which they do. In early days of bond market, demand for government bonds by commercial banks began to rise as NSS rates declined on its bond-like instruments owing to maturing NSS instruments held prior to the ban in 2000s. This demand rose significantly after the ban on institutional investing. As the decade wore on, these two markets in long term government bonds and bond like instruments were brought on a level playing field inn terms of rates of returns offered, the coupon rate or the nominal rate, which previously were very high on NSS instruments which helped them to monopolize the market.

22. Markets for NSS and PIBs in current times are no longer de-linked markets except for their client base, since anomalies in their rate of return features have largely been eliminated. Investing in PIBs has always been partly linked up with what transpired in NSS instruments, and towards end of the decade it still is as NSS rates have risen again comparative to PIB coupon rates. It is not a healthy situation for government bond to be so closely linked with developments in the NSS instruments. It is not healthy either for portfolio risk management of banks given their short term liabilities, if coupon rate increases or term premium is diminished.

Government Bond Market – Pakistan

23. Be that as it may, we need to get a bearing on government bond market for operational purposes. For the decade of 2000s as a whole, government bond market has been a single instrument market; the PIBs that were issued for the first time in FY01 and since then have replaced all other bonds. PIBs are mostly 5 to 10 year maturity bonds and pay a fixed coupon rate every six months. Prior to their introduction, Federal Investment Bonds (FIBs) was the main instrument of government's medium to long term borrowing, supplanted by a few other government bonds which were an insignificant part of government bond market.

24. The government stopped issuing new FIBs in 1998, and these were eventually replaced by PIBs in early 2000s. Effectively, government **bond market** as the term market did not exist in any meaningful form until the initiation of PIBs in FY01. Therefore, it is essential to come to grips with the structure of government bond market, together with some analysis of maturities and yields that have prevailed during the decade.

25. The *size* of government bond market has grown from Rs164 billion in FY00 to Rs 555 billion in FY10, at annual average rate of 13 percent during the decade; virtually all of it is in PIBs; and a small amount in prize bonds. There was considerable volatility in growth of bond market, reflecting large swings in the issue of PIBs. During the first half of the decade, FY00-05, growth of PIBs was 15.4 percent; thereafter, it declined to 10.6 percent during FY05-10 period. (see Data Set 8.3)

26. This happened because there was a decline in the amount of PIBs outstanding during FY05 and FY06, implying that there was a net redemption of government bonds outstanding with the public. Thereafter,

annual rate of growth of PIBs has been stable around 13 percent per year, but in FY10 there was an increase in growth rate to about 16 percent owing to large borrowings by government.

27. We need to look at maturity *structure* a bit more closely, since PIBs are the only bonds operational in the market. At the time of their inception in late 1990s, and their advent in early 2000s, growth of PIBs was phenomenal at about 31 percent per year during FY01-FY10. But in the first four years the growth was a phenomenal 61 percent per year. This was not because of sudden popularity of government debt instrument, now called PIBs, instead of FIBs, rather PIBs were replacing holdings of FIBs issued earlier. As a result, once this replacement was done, growth of PIBs was back to where it should have been around 10 percent per year during last five years of the decade. These trends show that as a single instrument market, growth over the past few years was not very high as is commonly believed.

28. Next, we need to look at maturity structure of PIBs. Initially these government bonds carried maturities of 3, 5, and 10 years. Subsequently, PIBs of 15 year maturity were issued in FY04; while PIBs of 20 year and 30 year maturity were issued in FY07 onwards. Later on PIBs of 7 year maturities were introduced in FY09 and have been in operations only for a couple of years to make any material difference in the overall picture of government bond market. In early years, during FY01-04, bonds of 10 year maturity were more than half of all PIBs outstanding; but this proportion declined to a little over one third during the middle of the decade. In recent years, PIBs of 10 year maturity are back again as most favored maturity by institutional investors and constitute slightly more than half of all maturities; the same proportion they were before bonds of longer maturities were introduced in expectation of broadening maturity base of bond offerings and providing investors an extended range of bonds in their portfolio.

29. PIBs of longer maturities, 15 years, 20 years and 30 years, have never been popular from the time they were introduced. All these three long maturities are no more than 7 percent of total PIBs outstanding. The time when PIBs of 30 year maturity were issued, expectation was that these will turn out to be truly benchmark long term bonds, providing a keel to the development of other long term instruments both in the loan and deposit markets, and will be instrumental in firming up long term structure of interest rates all around. PIBs of longer term maturities, 15 to 30 years, remained of noticeable interest only for couple of years, FY07 and FY08, but when novelty wore out, their combined proportion went down to about 6 percent in FY10, way below those of 3 to 10 year maturities whose proportion was about 94 percent in all maturities accepted in the same year.

30. Therefore, in operational realm, one has to bear in mind this squeezed structure of bond market both in term of variety of bond instruments, or lack thereof, and also their maturities. A break away from this mould would occur only when the size of bond market is reaches a critical mass; but what that critical mass is for this market is hard to specify.

31. The structure of yield rates, the *YTM* rates, has followed a predictable pattern. For short maturities of 3 to 5 years, lower-end yield rates have been in the range of 10 to 12 percent through out the decade; while for longer maturities, the maximum yield rates was around 13 percent. These generalizations of long term yield trends, however, are inappropriate, because there has been variation from year to year depending on financial trends and monetary policy stance of SBP. For example, during middle of the decade, bond yield rates touched their lowest at around 5-7 percent; thereafter yield rates began to rise, and are currently around 13 percent as stated above. A discussion of yield rates, therefore, has to be done in the context of short term monetary stance, not long term market trends which are focus of this study.

32. Generally, in case of bonds, coupon rate is fixed for maturity period, while changes in market interest rates inversely affect price of the bond in secondary market, thereby affecting yield of the bond. In turn, the market interest rate is highly sensitive to any change the discount rate, so-called *bank rate* of the central bank. In well functioning bond markets, any change in the bank rate, or even anticipation thereof, prior to its announcement by the central bank, is immediately reflected in the market price of the bond. A delay in this response time is symptomatic of rigidities in bond market. Such interplay of market forces is yet to be seen in bond markets of Pakistan.

Primary Market - PIBs

33. Primary market for bonds consists of bond issuer, the borrower and institutional investors, who are involved in processes of bond inception and bond issue until bond is finally traded in secondary market; not individual bond investors, who are a small group in Pakistan, mostly retirees with substantial network. This is generally the case both for government bonds and corporate bonds, but structure and operations of *primary market* for government bonds is different than those for corporate bonds. The *secondary market* is common to both government and corporate bonds, and consists of final investors who may be individuals or large institutional investors, domestic or foreign.

34. At the time government bonds are issued, a select group of banks and brokerage firms active in securities markets are designated as *primary dealers* by the central bank who are authorized to participate in government bond issue and bond auction in the primary market *before* bond is floated in secondary market for re-sale to final investors. This designation confers on the primary dealers a privileged position on a *quid pro quo* basis which requires them to operate under a set of rules and regulations specifying their role; the main role being market makers in government bonds both in the primary and secondary markets.

35. Under this arrangement their main obligation is to participate meaningfully in bond auctions in primary market to begin with; and subsequently help to promote a viable secondary market with transparent market processes on market-based yields and returns. Primary dealers have to rely on brokerage houses and other market participants in government securities for sale of bonds to private investors in secondary market on retail basis. This network of primary dealers helps them to obtain best bid and ask prices from potential investors without taking a position of their own in the bond issue which are essential for their yield based bids at auctions in primary market.

36. In Pakistan, primary market for PIBs is the auction market, where SBP is the auctioneer, and participants are mainly primary dealers, the same group of banks who participate in the auction market for treasury bills. The auction of PIBs started functioning in FY01. Since then, auction mechanism has taken roots and has helped development of government bond market both in term of size and liquidity. Initially, government selected 7 banks as primary dealers of which four were money center banks to develop a secondary market to act as market makers, to supply PIBs to institutional investors, and to help their clients with good investment decisions.

37. The role of SBP has been crucial in orderly development of bond markets, particularly for government long term bonds which serve as the benchmark for private corporate bonds. This benchmarking is pivotal for private bond issue. As mentioned above, central bank appoints primary dealers, conducts and manages auctions for government bonds, and this ensures involvement of central bank in the whole process. The option available to SBP is to conduct sale of government bonds entirely through auctions, or partly through auctions and partly through syndication where government bonds are sold at weighted average price of auctions, or tap sale to ensure a smooth integration of government bond market proceedings with monetary management, especially movements in interest rate structure.

38. Thus far, SBP has primarily relied on auction mechanism held fortnightly and on occasions has scrapped auctions if bids were out of line with goals of monetary management. Occasionally, primary dealers may engage in pre-emptive bids at bond auction, thereby cornering the entire bond issue; or they may simply collect pass through bids from final investors without their own commitment to purchase the bond issue for their own portfolio. In both the cases, their role as market makers in government bonds is jeopardized and is detrimental to orderly development of bond markets.

39. Hence limits are placed on primary dealer privileges and obligations to promote a meaningful competition in government bond markets both in the primary and secondary markets. They may be assigned a limit of total bond issue size that a primary dealer can subscribe for, and may be required under the rules and regulations to maintain their presence, namely their portfolio position in the secondary market to fulfill the role of market makers.

40. The advent of PIBs deserves a brief account though it happened a decade ago for the reason that it represents beginnings of an open and liberalized market for bonds after nearly 30 years of nationalization. It imparts an understanding of how in real world situation bond markets get started in countries like Pakistan where none existed before and what processes underlie its long term growth.

41. The first auction of PIBs was conducted in FY01. The combined target of auctions conducted during FY01 was to raise Rs 49 billion, though the amount offered for all maturities was Rs 59 billion. The amount accepted for all maturities was Rs 46.1 billion at weighted average yields ranging from 12.5 percent to 14 percent. In that year, only three maturities were offered consisting of 3-year, 5-year, and 10-year PIBs. The breakdown of the auction for various maturities was as follows. For 3-year maturity of PIBs, amount offered was a modest Rs 8.5 billion at coupon rates of 12.5 percent; while amount accepted was Rs 4.7 billion at average weighted yield of the 12.5 percent, the same as coupon rate.

42. For PIBs of 5-year maturity, amount offered was Rs 6.7 billion at a coupon rate of 13 percent; while amount accepted was Rs 5.3 billion accepted at coupon rate. For PIBs of 10-year maturity, amount offered was the highest of all three maturities, Rs 43.6 billion at a coupon rate of 14 percent; while amount accepted was Rs 36 billion at the same yield rate as the coupon rate of 14 percent. Such were the humble beginnings of PIBs in early years of the past decade.

43. Since then, PIB auctions became a regular feature; but number of auctions conducted during a fiscal year was not the same. Some years, only as few as three auctions were conducted, and in other years, seven to eight auctions were conducted. The target amount of auctions envisaged, the amounts offered and actual amounts accepted for various maturities at the auctions, their coupon rates, cut-off yield rates, and weighted average of yields within a class of bonds, all of these parameters varied significantly from auction to auction reflecting market conditions.

44. The highest amount borrowed during the past decade was during FY02 and FY04. In Fy02 the amount offered was Rs 238 billion, and amount accepted was Rs 108 billion and the weighted average yield rates ranged between 9.8 to 11.6 percent for various maturities. Almost the same amount of borrowings was done in FY04 at much lower rates ranging between four percent for 3-year bonds to 9.3 percent for 20-year bonds. The market did not deviate from the coupon rate offered. (*see Data Set 8.31*)

45. The smallest size of auction of PIBs ever conducted was in FY05, where three auctions were conducted. The total amount offered was about Rs 8 billion in three maturities of 3-years, 5-years and 10-years, while amount accepted was a paltry Rs 771 million, not even one billion rupees, at weighted average yields of about 6 to 8 percent, the lowest it has ever been. All three bond maturity segments were successfully sold by the government at face value. FY05 was most unusual year of all for PIB auctions, the only year in the past decade. Why this turnabout occurred and so quickly after record borrowings in FY04, is discussed below.

46. In the early years, introduction of PIBs was at the heels of significant changes in the rate structure of NSS instruments that were around 18-20 percent in some years of 1990s. Since NSS was effectively a long term borrowing operation of the government, these rates became untenable if a bond market were to develop, and had to be lowered to around 12 percent, just not for the sake of giving headroom for issue of government bonds but also to lower the costs of unfunded debt entailed in NSS operations. This explains why in the opening rounds of auction, coupon rates of PIBs were 13 to 14 percent and were regarded as long term instrument designed to effectively replace NSS; and that is what happened on a limited scale.

47. There was a good deal of shift from NSS long term deposits to PIBs by the banking system, not only because of rate structure, but mainly because financial institutions, mainly banks and insurance companies were prohibited to invest in NSS instruments. This history is relevant because of rise of NSS rates once again above PIB rates in current times and a return to

status quo that prevailed before, whatever the motives may have been. Given the ban on financial institutions to invest in NSS instruments which still exist, and non-availability of any other comparable long term investment instrument, government had to expand supply of PIBs as an alternate long term instrument for institutional investors, though these expansions had to be tailored to domestic financing needs of the government.

48. In parallel, SBP had to find ways to accommodate other competing concerns like liquidity of banking system; operational needs of OMO trading; net domestic assets (NDA) targets that SBP had to adhere to as part of its commitments to IMF concerning monetary expansion over the year. This was true then, and it is pertinent in current years as well.

49. Going back to early years and these overlapping considerations aside, primary market of PIBs picked up momentum during FY02-04 as the number of auctions increased together with the amounts offered. In FY04, the amounts offered were Rs 238 billion more than four times in FY01, but the amounts accepted were less than half of it, Rs 108 billion as mentioned in para 36 above. This happened for a variety of reasons. One reason was to give a strong signal to the market against speculation of significant rise in long term rates of interest at that time. (see *Data Set 8.31*) In FY04, government issued 15 and 20 year maturity PIBs for the first time. This lengthening of maturity was needed to expand yield spectrum of bond market; enhance its depth and thus help the market sort out long term interest rates; and to provide bench mark rates of interest in credit market for banking system term lending operations.

50. In the first four years of operations of PIBs upto FY04, the government mobilized Rs 337 billion through PIBs at times of declining coupon rates in line with the general downward trend in interest rate structure over this period. The buyers were commercial banks in primary markets and some institutional investors in secondary market; but whether households got active in bond purchases is not known for sure. As it turned out, primary dealers failed to judge the overall size of market demand, and hence auctions were oversubscribed. Primary dealers were unable to quote *two-ways pricing* essential for price discovery and market making. They made excessive use of *pass-through bids* and were reluctant to invest their own funds in PIBs.

51. The next couple of years were a wash out for long term bond market, as the primary market of PIBs got squeezed in FY05 with the lowest amount of auction conducted. The next year, FY06 was slightly better; though only one auction was conducted for total accepted amount of Rs 11 billion for three maturities, three, five and ten years. There was a net decline in the amount of

PIBs outstanding in the market owing to a net deficit of Rs 6 billion between maturing PIBs and new issues during this period. After FY04, for next two years, government retired a small amount of PIBs outstanding as part of its efforts to lower the burden of domestic debt, but this reduction in PIBs did not make any dent into the overall size of government's domestic debt outstanding. The total amount of PIBs outstanding decreased from Rs 332 billion in FY04 to Rs 304 billion in FY06.

52. This situation changed drastically in FY07 and afterwards. Soon thereafter, government was back borrowing through PIBs at an accelerated pace over remaining years of the decade as its borrowing needs began to rise; hence the size of auctions increased, though the yield structure remained remarkably disciplined. In FY07, SBP conducted seven auctions for all five maturities issued as previously, plus one more of 30 year maturity to provide a benchmark for housing mortgage lending which even now remains an insignificant part of banking system credit, thereby absorbing a great deal of market liquidity. For the first time, the spectrum of maturities ranged from three year to thirty years, thereby extending yield curve from its narrow confines of earlier years.

53. In FY07, bonds auctioned carried coupon rates of 11 percent for 3, 5, and 7 year maturities and 12 percent to 14.5 percent for successive higher maturities. However, the weighted average yields of offers accepted were higher ranging between 12.7 percent to 14 percent for lower maturities and upto 16 percent for higher maturities, but only in one auction. These yield rates however remained moderate in the range of 12-14.5 percent for most auctions for the full range of maturities. Such wide range of maturities in PIBs were not offered before and the spectrum of coupon rates and weighted average yields were fairly close to what one would expect in reasonably well functioning bond markets

54. During FY08-10, while government borrowings shot up to new heights, banking system, the mainstay of bond markets did not show a matching level of participation in auctions market. The SBP conducted seven auctions during FY08, of which four auctions were not successful and were scrapped. The total amount accepted in remaining three auctions was Rs 23 billion for all maturities as against Rs 39 billion offered. The coupon rates were remarkably the same for all seven auctions; around 9.5 for first three maturities; and 10 to 11 percent for higher maturities. The weighted average yields of accepted offers were about 200-250 basis points more than coupon rates, showing for the first time a high premium for long term debt instruments like PIBs.

55. In FY09, SBP conducted four auctions for the full slate of 7 maturities ranging from 3-years all the way upto 30-years at coupon rates ranging from 11.2 percent to 13.75 percent for 30-year bonds. The total amount offered at all these five auctions was Rs 160 billion, and the amount accepted was Rs 71 billion. (see *Data Set 8.31*) These bonds carried same coupon rates in all auctions. For 3, 5, and 7 year maturities, the coupon rates were 11.25 - 11.75; but for all higher maturities, the coupon rates ranged 12 to 13.75 percent. The weighted average yields of offers accepted were volatile. They were in the range of 12.8 percent to 14.5 percent for most auctions. These yields touched their highest levels in second auction conducted in early 2009 and were in the range of 13.9 - 16.2 percent. For the first time since auctions began yield rates in primary markets for government bonds had shown their departure from patterns set in previous years.

56. In FY10, the amount offered was Rs142 billion for all maturities and the amount was less than half of it, Rs65 billion in five auctions. Interestingly, in the last two auctions, all the bids for maturities longer than 15 year were rejected, putting a seal on growth of long term bonds. The largest amount offered was for Rs70 billion for 10 year maturities at coupon rate of 12 percent, the flagship of bond market. Of this Rs39.5 billion worth of bids were accepted at a slightly higher yield rate of 12.5 per cent. By end of FY10, the outstanding amount of PIBs was Rs 505 billion in contrast to Rs 46 billion outstanding at end of FY01, representing a ten-fold increase over nine years at an average annual growth of 31.5 percent; a remarkable feat indeed.

57. This is all *history* by now, but it is not irrelevant. One may wonder why all this recounting is needed and so tedious one to read; far more tedious to write. It has been done because this historical evolution brought a mould of its own kind which has been hard to breakaway from over the past decade. It's grip is unlikely to be loosened so easily in years to come.

58. Also, it has been done to see how far the road has been traveled since the inception of government bond market in Pakistan. It may not be terribly relevant to practitioners in current times; but for those beginning their learning about how bond markets come into being, how they operate and what outcome one can anticipate, the historical account has its own usefulness, and in the applied context of Pakistan. It is quite instructive to observe the evolution of bond market in Pakistan in the post reform era. It is spread over a few pages, not more; as against volumes of up-down rendition of even more tedious and colorless events, but laced with colorful charts that one is confronted with in the routine reporting; yet, utterly beguiling to the uninitiated and perplexing to those who follow up routinely.

59. The implication is clear, that in Pakistan the viable long term *base interest rate* in current times is around 12.5 percent for maturity of 10 years, the most preferred maturity by financial institutions. There will be variations along this norm as per market developments, but all retail transactions will, be equal to the base yield rate accepted at the auction, plus premia for all types of risks in long term commitment of funds, both for lenders and borrowers. Bonds for longer term maturity are not viable in the market place; hence the benchmark is 10 year bond and its associated yield rate. This is a salutary development in bond market.

Secondary Market - PIBs

60. Trading and transactions for bonds in *secondary market* in most countries occurs in over-the-counter (*OTC*) market through order matching process by bond dealers between the buyers, the final investors be they individuals or institutions, and the re-sellers, be they primary dealers or underwriters selling a new bond issue, or portfolio managers and individual bond holders selling from their existing bond holdings. Corporate bonds are listed on the bond exchange, though government bonds may not be required to be listed on the exchange, and therefore, their transactions may occur outside bond exchange. Trading is done by securities dealers, engaged in trading a range of corporate or government securities, or their trading may be confined to a few types of securities. Inter-dealer brokers are also active in secondary markets who list price quotations collected from securities dealers and these are made accessible to all market participants.

61. Secondary markets are essential for bond market growth, but it depends on how efficient and how rewarding they are in providing diversity to bond portfolio of investors. The more efficient are secondary markets, more competitive are securities prices and lower are costs of trading, though cost of trading also depends on volume of transactions in *OTC* market. Further, large trading volume ensures greater liquidity to bond holders to cope with changes in risk and return profiles of their portfolio owing to changes in investment environment and periodic interest rate movements. Much of the turnover in *OTC* market is in benchmark bonds of ten year maturity issued recently, since these bonds provide an easy liquidity in times of volatile markets. Trading frequency of non-bench mark bonds depends on their market grade and how sought after they are by investors, though it is less frequent relative to bench mark bonds.

62. In Pakistan, secondary market for bonds is among contractual savings institutions, the NBFIs, interbank *repo* market, or SBP fund market involving liquidity injections or absorptions as part of OMOs. What is the proportion of PIBs in these markets on the basis of turnover values remains to be ascertained. The participation of individual private investors is not known with any degree of confidence; but looking at the turnover of interbank markets, and size of investment portfolio of banking system, it is clear that secondary market in bonds is bank driven, or at most banks plus NBFIs driven. This is to be anticipated given the early stages of bond market in Pakistan and its relatively small size as compared with equity market.

63. Apart from *repos*, another technique of bond portfolio management, to improve earnings and overall quality of an investment portfolio, is bond swaps. While *repos* are sale and purchase of a bond before its maturity; swap may be done to reduce default risk by purchasing bonds of higher rating from sale of low-grade bonds, called grade swap. Bond swap may also be done to improve the maturity structure, called maturity swap; or to maximize return on bond investment, called yield swap; or to lower the tax liability on capital but protecting original investment, called tax swap. Given this variety of swap trading, for PIBs, default driven swaps are not needed; whether banks do swap trading of their bond portfolio is not known.

64. Given developments of primary market over the past decade as discussed earlier, behaviour and performance of secondary market was not much different. After all, parameters of secondary market derive from what transpires in primary markets. If primary bond markets are relatively new and are not diversified, and have relatively a low base; secondary market is even younger, narrower, and confined to what transpires in the interbank repo market where PIBs are traded along with T-bills. The operations of secondary market transactions in PIBs is given in Data Set 8.31a but only for years FY04-09, for the reason that secondary market could not get started in any cognizable fashion without first attaining a critical mass for operations, namely the PIBs in circulation, net of maturity expiration and redemptions.

65. The sizes of these trading operations have been declining all through these years from Rs3722 billion purchases in FY04 to Rs930 billion in FY09. This decline seems to have occurred in part because of dwindling proportion of 3 year or 5 year bonds as they are redeemed, or paid off, or converted into longer maturity bonds. Since long maturity bonds of 20 years or 30 years are relatively recent issues, these may not be actively traded by banks, except if there are returns to be made or in case of dire liquidity needs.

66. There are two constraints on secondary market operations of bonds, PIBs or any. One is the size of fresh supply, which in case of Pakistan is size of auctions market acceptances less bonds that have matured and are replaced or retired before maturity. Hence, the net position of new bonds in the market determines the supply, and changing conditions of market, determines how actively they will be traded. The second constraint has to do with how bonds get classified with regard to liquidity requirements. If bonds are classified by investing banks as *held to maturity* in their balance sheet for financial reporting purposes to convey implied liquidity position of the bank, this will take away a good part of PIBs from active market, because they can not be traded any longer.

67. This action may be taken to protect banks from revaluation losses if market has gone sour when banks are preparing financial statements, but the impact on secondary market is debilitating. This happened over past few years in Pakistan's bond market. There seems to be no significant trading of bonds in secondary markets to public and hardly any to individual investors through secondary market operations as routinely done in stock market. If so, bond markets have yet to make inroads among investing public.

68. If *repo markets* in PIBs is all that counts in secondary market operations, their amounts traded by banks are the largest. On its part, SBP participates only in purchase operations of PIBs in the repo market, not sale operations, which means that there has been a net injection of liquidity in the repo market by SBP for its monetary management purposes. SBP has not used repos of PIBs for liquidity absorption. It has done so through T-bills trading, though the proportions of PIB based transactions is not known. Bulk of trading for injections or absorption is T-bill based, not PIB based. Same is the case of trading under SBP's 3-day repo facility. Trading of PIBs by SBP in *repo* market is small; the bulk of trading is in T-bills. Hence, secondary market for PIBs is a fairly limited one.

69. In contrast, banks are the largest traders of PIBs in secondary market, though its size has dwindled in recent years. But since their sales and purchases in *repos* of PIBs or outright sales and purchases of PIBs, both transactional positions even out, leaving no net position to be cleared, or leaving a tiny net position. The implication is that at end of the day, there has been no net change in the size of PIBs secondary market. Banks routinely use secondary market to augment their liquidity balances as per their needs and are continuously adjusting their liquidity levels. NBFIs also conduct repo or outright transactions in secondary market, but their transactions are small as compared with those of banking system. Thus, for secondary market of PIBs what matters is size of transactions which banks or SBP may conduct over a given time period.

Corporate Bond Market – Pakistan

70. Corporate bond market consists mainly of Term Finance Certificates (TFCs) of 3-5 year maturity and there are no other short or medium term tradable corporate papers. The TFCs are essentially corporate bonds or bond like instruments; that is, they have a coupon value; a *floating coupon rate* based mostly on KIBOR plus formula, together with a cap rate and a floor rate usually set below the yield rate. The difference between TFCs and bonds is that there are no underwriters or syndication for TFCs as needed for bond floats. The floatation is done by the issuer directly in primary debt markets, and there is now an active secondary market, both domestically and overseas. The interesting feature is that since coupon rate is based on KIBOR, it serves as benchmark for TFC rate, rather than the secondary market yield quotes for PIBs, the long term government bonds.

71. However, not all TFC issues were based on KIBOR in the past years. Prior to advent of KIBOR rate, a good number of them were based on SBP's discount rate, or on the auction yield of government bonds. Thus, during FY02, 14 issues of TFCs out of 21 were based on SBP's discount rate. The same pattern held until FY03 and FY04. During FY05-07, all of TFC issues were based on KIBOR rate which has come a long way to carve out its place in the float and trading of TFCs. Most TFCs issued in early years were of 3 to 5 years maturity, and these TFCs are no longer in the market. Therefore, what matters most is the size of new issues from FY05 onwards till FY10. The numbers of issues have dwindled; and their size is fairly small.

72. The amount of capital mobilized through listed TFC issues since its inception in January 1995 through June 2000 was Rs 5 billion in 13 issues. Thereafter the momentum picked up, and there was a steep rise of TFCs. In FY02, there were 17 issues for Rs10.1 billion, followed by 21 issues in FY03 for almost the same amount, Rs10.4 billion. In FY04, this trend was halted in its tracks as new issues amounted to only Rs3.3 billion, one third of the level achieved a year ago in only 6 issues. Up until FY04, the largest proportion of these TFCs was issued by leasing industry, though private banks like MCB, Union Bank and Bank Alfiah entered the TFC market for the first time to raise medium term funds to supplement their loanable funds in addition to their deposit base. Besides, large firms in chemical, textiles and sugar industries also tapped the TFCs market for medium term funds.

73. Beyond FY04, large banks, specially the newly privatized UBL and HBL, entered the debt market and floated mega issues of their TFCs. Among them, UBL alone floated three issues during FY05-07 amounting to Rs 6 billion; while other major banks floated TFCs worth Rs6.1 billion. Thus the

banking system altogether floated Rs12 billion of TFCs eclipsing leasing companies and others Telecom companies also started accessing debt market in a significant way, with an issue of Rs2.4 billion by Timecard. The total amount of TFCs floated in FY05 was Rs15.6 billion, the largest floatation thus far. There is no clear pattern because there are significant annual variations, but TFCs have taken hold as a major source of debt financing for the corporate sector.

74. From time to time a concern is raised that high yield NSS instruments and PIBs are crowding out corporate bonds, but this is contentious issue. The fact remains that corporate borrowing needs have been thin, predicated as they are on corporate investment growth. After initial outburst in early years of the decade, corporate investment has slowed down, but by how much, that remains to be ascertained. The reason for slow down are understandable given the economic and financial needs of the last three years.

Rating system – Bonds

An Outline

75. For investors, default risk ratings of private bonds are essential, which is not an issue for government bonds, being a sovereign liability. If private bond market has to have wider acceptability and depth and has to grow, there has to be some independent mechanism to classify private bonds according to financial strength and performance of bond issuers, the corporations. In effect, bond rating reflects evaluation of corporate creditworthiness. Individual investors may neither have access nor resources to keep up with the ever changing financial status of corporations, and evaluating them from the angle of default risk. Even institutional investors may find this an onerous and a costly undertaking for their bond portfolio activities. Banks may do better, but their ratings may cover only a limited group of companies who happen to be their clients. Hence, bond ratings for default risk have to be established independently of borrowers, since these ratings are a key element for bond market growth.

76. Bond ratings are limited to investment grade bonds only, excluding zero coupon bonds or bonds issued explicitly to finance leveraged buy outs, corporate mergers and hostile takeovers, called junk bonds. These bonds maybe classified as high-yield bonds, but they are not considered investment grade bonds. As yet, rating of individual bond issue or corporate TFC and *sukuks* in Pakistan is not done. Borrower ratings have begun but mainly for

financial institutions. Corporate borrower ratings have started to appear, but those are not widely used by investing public; the rating is useful for financial institutions who are their lenders either through credit mechanism or through floats of TFCs.

77. The default risk of bonds, therefore, can be inferred from these borrower ratings which started in early 2000s as part of reforms of financial system of Pakistan. In advanced markets, bond ratings are unquestionably relied upon by investors to guide in the selection of bonds relative to their risk and return features. In advanced bond markets multiple ratings may be available for large corporate borrowers active not only in domestic capital markets but also overseas. In the US, there are two corporate ratings available; one Moody's, and the other Standard and Poor's. Both these ratings are widely respected and used by bond investors. Ratings of these two agencies are based on their own independent evaluations concerning corporate creditworthiness. They may not assign same rating to a corporate bond; their evaluations may differ and often they do. These two ratings are extended to overseas sovereign borrowers as well including Pakistan, if they float bonds in US bond market which they do. These sovereign risk ratings are avidly sought after by overseas creditors and bond investors.

78. Since ratings are indicator of default risk, evaluation of this risk has to contend with a host of factors, mainly:

i. Capitalization levels and periodic changes therein caused by a host of reasons, most frequent among them being changes in the market price of its stocks, which may wipe out a good part of capitalized value in a single day, or may bring the corporation to brink as happened during market crash. Capitalization levels will also change revaluation of assets, share splitting or consolidation.

ii. Changes in corporate earnings and liquidity levels.

iii. Changes in financial value of items entered in bond indenture, though specific to a bond or note issue. Since bond indenture agreement stipulates coverage of interest and principal payments from earnings or may identify some corporate assets as collateral, hence any changes in the value of these pledged items may cause changes in the rating.

79. Ratings are like an index. They can point only to default risk inherent in a corporate bond issue, based on credit risk of the borrower corporation. But ratings can not to be interpreted as a guarantee against default. Ratings are bunched together in the sense that most of bonds are classified within a

narrow band of 3 or four levels. In practice it is hard to act on the difference between a bond, rated double BB, and another bond rated single A. These ratings are periodically revised based on changes in corporate financial structure, which keep shifting to new configuration with their business earnings and their outlook. But it is hard to keep up with these periodic changes, and rating agencies are often slow to catch up with them in times of fast moving financial picture of corporations. It could very well be that corporate financial health and creditworthiness have shifted but not to a level where the agency feels it necessary to alter its rating.

80. There is some inertia if not resistance for downgrading a bond rating, once a high rating is achieved, unless evidence for change is solid and compelling. Nonetheless, investors have come to rely on these ratings a good deal and borrowing corporations are keenly attuned to any shifts in the ratings accorded to their bonds. Note that ratings are done only for *investment grade* bonds that are almost certain to provide the investor with a reliable stream of coupon rate based cash flows over their maturity period. Bond ratings are not done for zero-coupon bonds or the so-called junk bonds, otherwise classified as high-yield bonds.

81. In contrast to bond rating there is system of credit rating of borrowers; namely issuers of bonds. In Pakistan, corporate issuers over the years have dwindled to just a few large financial institutions. Their credit ratings began in 2001 by two independent rating agencies, PACRA and JCR-VIS. These agencies provide a rating format similar to Standard and Poor's corporate bond rating. In practice, JCR-VIS rating of financial institutions ranges between BB+ to A-1 to AAA, the highest rating. PACRA ratings are similar; ratings of financial institutions also range between A-1 to AA+. What these ratings mean, and how are these to be inferred is not widely known. Most of these ratings are rather ebullient and are within a narrow band, since no financial institution is rated less than A-1. If all institutions are rated as A-1 that is not particularly helpful for bond investors. To muddy the waters further for investors, there are ratings of Moody's and Standard and Poor's for foreign banks operating in the country; but foreign banks are not raising long term finance through float of TFCs in Pakistan.

Comparative Experiences - Bond Market Growth

82. There are two sets of comparative experiences regarding bond market growth which provide interesting insights that may be helpful. One set of comparative experience concerns growth of bond markets in developed countries like US, Japan and some European countries. The other set comparative experiences involve a select group of relatively more successful and fast growing countries in East Asia and Latin America. A number of studies have been done, and a great deal of analysis and information is now available which provides a good documentation of comparative experiences regarding development of capital markets including bond markets. In a nutshell, development of their bond markets went through same slow and grinding process as outlined above. There are no short cuts available.

83. This comparative experience shows that elements important for growth of bond markets are; availability of long term bonds together with benchmarks; an investor base consisting of both institutional and individual investors; an efficient and transparent market mechanism; a network of primary and secondary market dealers; a modernized payment and settlements system; an appropriate regulatory system; a supportive incentive framework particularly taxation; and above all a monetary policy regime that ensures interest rate structure suitable for bond market development.

84. Bond market growth could be gauged in terms its size as proportion of GDP, or as a proportion of stock market capitalization or a relative position of banking credit. Next, we need to look at relative size of bond market in developed countries and selected comparator countries. A breakdown of bond market into its leading components may be done for government and corporate sector, which can be further broken down into their sub-components like national bonds, development bonds or defense bonds for public sector, and debentures or corporate bonds for private sector. The patterns that emerge from this analysis are quite interesting; some of these are summarized below.

85. Briefly, among developed countries, US bond markets are the largest, followed by those in Japan, Germany and UK. Bond markets of these four countries together account for nearly three fourth of the of bond markets of the developed countries. Growth of bond markets in US, Japan and Germany began in earnest in late 1970s and gathered momentum during the decades of 1980s and 1990s. In early 1980s, the proportion of bonds outstanding to GDP in the US and Japan was about 50 percent, and in Germany about 35 percent.

86. By mid-1990s, this proportion had more than doubled in the US to 112 percent of GDP, and had grown to about 75 percent in Japan and 90 percent in Germany. Currently, in early 2000s, bond markets are larger than equities markets in all these countries. In the US, as a proportion of the GDP, bond markets are 191 percent, equities markets are 130 percent, while bank assets are only 51 percent. In Japan, bond markets are 196 percent of GDP, equities markets are 114 percent, and bank assets are 119 percent. In Germany, bond markets are 167 percent of GDP, equities markets are only 45 percent and bank assets are 119 percent, twice larger than equities market proportion. In dollar volume, the rapid growth of bond financing over this period has outstripped growth of equities markets as well as those of banking finance.

87. In early stages, start of bond markets in developed countries occurred with the advent of government bonds. The same pattern currently prevails in many developing countries. The reason is that in early stages of bond market development, benchmark securities and long term benchmark interest rates need to be firmly established in the market place, before corporate bonds can be successfully floated, or before markets for other types of asset-backed securities can come into existence. Corporate bonds have significantly grown in developed countries, but the growth of government bonds has outstripped growth of corporate bonds. By the same token, growth of mortgage-backed or asset-backed securities is a recent phenomenon but only in the US bond markets with any notable success. These securities remain a fringe element in bond markets of even developed countries.

88. Among successful developing countries, like China, Korea, Malaysia and Singapore among the East Asian countries, Chile, Mexico and Brazil among Latin American countries, with rapid growth of corporate sector there has been a shift in patterns of corporate finance, resulting into a greater reliance on debt market instruments than banking credit instruments. Bond markets of Indonesia, Thailand or Philippines are relatively thin. With sustained economic growth in their economies, massive amounts of long term finance for infrastructure and housing sectors are needed. This is obvious among these developing countries. They have relatively been more successful during the past couple of decades, and currently are in advanced stages of economic growth. The need for investment in modern infrastructure has outstripped their capacities to self finance, or the capacity of banking system to engage in volume lending for infrastructure, whether in public sector or in private sector.

Bond Market Development - Growth Factors

89. Market for any item depends in the first place how strong is its demand in the market; same is true for bond markets, when stripped of all the trappings surrounding it. The impetus for bond market growth in most developing countries came from enhanced needs of long term financing. These needs in turn arose from structural change in modern sectors pursuant to reforms which forced them away from controls on trade and investment towards more open and liberalized regimes. In the process, more successful developing countries moved away from predominantly light manufacturing industries concentrated in a few traditional sectors to more advanced capital intensive industries.

90. Those countries that have not been successful in this transformation of their industrial base, like Pakistan, they also moved towards modernization and rehabilitation of their industrial and manufacturing sectors owing to their labor cost advantages, not necessarily concentrated in a few traditional ones like textiles, together with transport, energy and agri-business sectors, requiring huge amounts of long term investment finance. Hence, need for bond market in Pakistan was not so pressing until after financial reforms had taken hold which brought to the forefront issues of long term finance for investment and development by private sector and without patronage of government owned DFIs. In the days of state owned enterprises and state owned financial system, these needs were being met by DFIs or by state owned banks as desired by government under the rubric of *credit plan* for the banking system that controlled allocation credit by fiat.

91. After reforms, with the re-emergence of private sector, abandonment of *credit plan* with layered system of credit allocation, the need for long term finance became more acute as indigenous private sector has grown. Banking system can not provide for their financing needs, because restructuring and privatization of banking system has redirected its focus away from long term credit, partly via risk-based capital adequacy requirements of international standards pursuant to reforms of banking regulation and supervision. There is hardly any long term contractual lending in Pakistani banking system. It is short term revolving credit with perpetual roll-over. Debt markets also can not provide this financing unless bond market is developed. Such is the bind that both government and private sector find themselves locked in.

92. Ironically, in Pakistan, yet another source of rising demand for long term finance has come from the public sector itself owing to persistent large fiscal deficits that needed to be financed from domestic borrowings or foreign borrowings. In the earlier days, reliance on banking finance proved to be inadequate, and government found an alternative in NSS based borrowings to fill the gap. With the rationalization of rate of interests on NSS instruments, and dwindling *net growth* of NSS based funds during 1990s through early 2000s, that avenue also became less reliable, and focus returned to market based long term debt financing.

93. Thus, in Pakistan there has been a fast growth in financing needs emerging from excess current expenditures, but also for capital expenditures for economic development. This reliance on government to initiate major projects or to undertake investment in human capital have not abated in many developing countries, and has great deal to do with regard to their ability to attract as large FDI inflows from abroad. The FDI inflows are not an alternative to investment in large infrastructure facilities; rather they complement it through investment in industrial units that would not be possible otherwise.

94. Apart from this long list of financing needs, there has been a growing demand for long term fixed income securities by institutional investors, be they contractual saving institutions, or mutual funds or investment trusts. The need to diversify their portfolio base has led to a growing demand for bonds and other asset backed securities, though the latter is still in nascent stages of development. Private individual investors have also become attuned to returns on their financial assets and they are now in the market for long term instruments, preferably risk free government bonds. This is a new dimension of growth factors for bond markets.

95. In summary, the pre-requisites for bond market growth is demand for debt financing outlined above in its various facets; development of regulatory framework conducive to bond market operations, particularly corporate governance; infrastructure which may have common usages like payments and settlement system; a network of bond traders; rating agencies; and most important of all, development of market benchmarks, namely long term interest rate structure that does not distort yield curves; and tax treatment of capital gains that are equally applicable to stock market and bond markets. The litmus test of depth and sophistication of bond market comes when FPI begins to flow into bond market. Currently, FPI inflows are anemic in stock market of Pakistan, not to speak of bond market.

96. Among all these requirements, development of *benchmarks* for bond markets is critical. A set of sound benchmarks enable pricing of bonds both in the primary and secondary markets. This process has begun in Pakistan. Most primary issues are priced at long term rates of interest rates ranging anywhere between 8 to 11 percent. Without a pricing mechanism no market can sustain; same is true of bond markets. Currently these benchmarks are limited to corporate notes called TFCs; subsequently these have to cover subordinated mortgage instruments. But we can not speak of subordinated mortgages in a country where mortgage lending is less than a few miserable percent of total bank lending. What it means is that bond market growth can not occur in a vacuum. It has to occur in tandem with the credit market.

97. A final thought on inferences and conclusions drawn. If we look at bond market only as a segment, a component, this segmented analysis tells us that to foster growth the size of long term debt securities need to be extended, both corporate bonds and government bonds. But this inference is coming from a segmented perspective. If the size of bond market rises, it has serious implications about corporate indebtedness, and it will further exacerbate government debt burden, already reaching dizzying heights. Government and corporate debt analysis done in **Volume I**, tells us just the opposite. That is the reason why *system analysis* at macrofinancial level is so powerful; and that is the reason why it has been pursued relentlessly, but meticulously in this book.

Chapter 8: End

Data Set 8.3		Bond Market - Pakistan										End Period, Rs billions				
		FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10p				
5	Pakistan - Bond Market (estd)	180	195	279	330	409	357	365	411	460	548	705				
6	Federal Govt Bonds, Outstanding \1	164	181	259	293	381	335	331	375	423	478	555				
7	Pakistan Investment Bonds (PIBs) \2	0	46	153	229	332	308	304	353	411	441	505				
8	Federal Investment Bonds (FIBs)	133	113	81	45	34	15	7	3	1	1	1				
9	All other Govt Bonds	31	22	25	19	15	12	20	19	11	36	49				
10																
11	Private Bonds - TFCs Outstanding \3	16	14	20	37	28	22	34	36	37	70	150				
12	Private Bonds - TFCs Issued	0.4	5.5	10.1	14.2	3.3	49.0	54.0	14.2	23.5	4.3	5.0				
13	Number of Issues	3	10	17	21	6	12	7	9	7	1	2				
14	Maturity Range, years	2 - 10	1 - 10	0 - 10	1 - 10	2 - 10	3 - 10	4 - 10	5 - 10	6 - 10	7 - 10	8 - 10				
15	Coupon rate, Kibor + range	1.5 - 2.2	1.5 - 2.3	1.5 - 2.4	1.5 - 2.5	1.5 - 2.6	1.5 - 2.7	1.5 - 2.8	1.5 - 2.9	1.5 - 2.10	1.5 - 2.11	1.5 - 2.12				
16	Coupon rate, cap range %	9 - 17	10 - 17	11 - 17	12 - 17	13 - 17	14 - 17	15 - 17	16 - 17	17 - 17	18 - 17	19 - 17				
17																
18																
19	Federal Govt Bonds, Outstanding \1	91	93	93	89	93	94	91	91	92	87	79				
20	Pakistan Investment Bonds (PIBs) \2	0.0	23.6	54.8	69.4	81.2	86.3	83.3	85.9	89.3	80.5	71.6				
21	Private Bonds - TFCs Outstanding \3	8.9	7.2	7.2	11.2	6.8	6.2	9.3	8.8	8.0	12.8	21.3				
22							(annual growth rates)									
23	Pakistan - Bond Market (estd)		8.3	43.1	18.3	23.9	-12.7	2.2	12.6	11.9	19.1	28.6				
24	Federal Govt Bonds, Outstanding \1		10.4	43.1	13.1	30.0	-12.1	-1.2	13.3	12.8	13.0	16.1				
25	Private Bonds - TFCs Outstanding \3		-12.5	42.9	85.0	-24.3	-21.4	54.5	5.9	2.8	89.2					
26			Average Annual Growth Rates							Average Annual Growth Rates						
27			FY00-10	FY00-05	FY05-10					FY01-10	FY01-05	FY05-10				
28	Pakistan - Bond Market (estd)		14.6%	14.7%	14.6%			PIBs outstanding		30.5%	60.9%	10.4%				
29	Federal Govt Bonds, Outstanding \1		13.0%	15.4%	10.6%											
30	Private Bonds - TFCs Issued		28.7%	161.6%	-36.6%											
31	SaF Data Set		Source: SBP Annual Reports, FSA Reports													
32	\1 Outstanding as Permanent Debt, end-period, held by all financial institutions, NBFIs and private investors.		p: Provisional, subject to revision													
33	\2 PIBs were started in FY01 to replace the earlier series of government bonds; the growth refers to period FY01-09															
34	\3 TFCs outstanding in banking system investment portfolio; an approximation to the stock of private bonds in the market.															

Data Set 8.31		Pakistan Investment Bonds (PIBs)										End Period, Rs billions				
		Primary Market Operations														
		FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10					
5																
6	PIBs, Outstanding \1	46	153	229	332	308	304	353	411	441	505					
7	PIB Auctions, Primary Market \2	46	108	75	108	1	11	89	23	71	65					
8	3 year maturity, accepted	4.7	24.8	9.7	14.5	0.1	3.2	10.8	0.7	10.1	11.6					
9	coupon rate %	12.5	10.4	8.0	6.0	6.0	9.1	9.1	9.1	11.2	11.2					
10	cut-off yield rate %	12.5	9.8	5.5	4.0	5.9	9.4	9.4	11.2	12.8	12.3					
11	5 year maturity, accepted	5.3	24.7	14.4	27.8	0.4	4.6	10.1	0.9	8.8	7.2					
12	coupon rate % - range	13.0	10.9	9.1	7.0	7.0	9.3	9.3	9.3	11.5	11.5					
13	cut-off yield rate %	13.0	10.6	6.5	5.1	7.3	9.6	9.8	10.8	13.5	12.3					
14	7 year maturity, accepted									7.3	2.2					
15	coupon rate % - range									11.8	11.8					
16	cut-off yield rate %									13.4	12.5					
17	10 year maturity, accepted	36.1	58.2	50.8	51.6	0.3	3.4	30.1	5.6	35.0	39.5					
18	coupon rate %	14.0	12.0	10.0	8.0	8.0	9.6	9.6	9.6	12.0	12.0					
19	cut-off yield rate %	14.0	11.6	6.8	6.4	8.0	4.7	10.3	12.1	13.2	12.5					
20	15 year maturity, accepted				7.0			10.2	3.7	1.4	1.0					
21	coupon rate %				9.0			10.0	10.0	12.5	12.5					
22	cut-off yield rate %				8.3			11.0	11.0	14.1	12.9					
23	20 year maturity, accepted				6.8			11.3	4.8	1.9	1.5					
24	coupon rate %				10.0			4.7	10.5	13.0	13.0					
25	cut-off yield rate %				9.3			4.7	12.4	15.1	13.4					
26	30 year maturity, accepted							16.1	7.1	6.6	1.8					
27	coupon rate %							11.0	11.0	13.8	13.8					
28	cut-off yield rate %							11.6	13.0	15.2	13.6					
29																
(percent shares of various maturities in All auctions of PIBs)																
30	3 year maturity, accepted	10.2	23.0	13.0	13.5	13.0	28.6	12.2	3.1	14.2	17.9					
31	5 year maturity, accepted	11.5	22.9	19.2	25.8	54.5	41.1	11.4	3.9	12.4	11.1					
32	7 year maturity, accepted	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	3.4					
33	10 year maturity, accepted	78.3	54.0	67.8	47.9	32.5	30.4	34.0	24.6	49.2	61.0					
34	15 year maturity, accepted	0.0	0.0	0.0	6.5	0.0	0.0	11.5	16.2	2.0	1.5					
35	20 year maturity, accepted	0.0	0.0	0.0	6.3	0.0	0.0	12.8	21.1	2.7	2.3					
36	30 year maturity, accepted	0.0	0.0	0.0	0.0	0.0	0.0	18.2	31.1	9.3	2.8					

Chapter – 9: Stock Market – *Pakistan*

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Stock Market – Pakistan

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Chapter 9: Stock Market - *Pakistan*

A Long Term Overview - The Requisites

1. This is a long term overview of stock market of Pakistan covering developments during the past decade. A great deal has been written about financial market operations and their assessments in other countries, but it is difficult to find similar assessments for stock market of Pakistan beyond anecdotal commentaries and ad-hoc opinions on boom and bust scenario that unfolded here, except for a few periodic SBP reviews. This analysis attempts to provide an understanding of what transpired in the stock market of Pakistan and what were leading factors affecting market outcome.
2. In recent years, stock markets globally and in Pakistan have been shuffling between bulls and bears cycle with a rapidity that has left even seasoned investors frequently out on the limb, not to mention casual investors who are in the market for long term capital gains through value growth of their stocks portfolio. Market fluctuations of routine variety, even the tussle of bulls and bears are regarded a usual phenomenon by market participants. These are sustainable if investors are keenly watching market trends and recent financial and economic developments with focus on corporate sector growth. But boom and bust cycles are known for creating fortunes or wiping out capitalization, often so swiftly that does not leave much time or room to maneuver by those invested in the market. These market upheavals are widespread and are of such magnitude that hardly any safe investment options are open to investors once adverse trends set in. That is, there is no place to run to escape market adversities.
3. For these reasons, a decade is almost an eternity for participants of financial markets, a point which has been stressed before, and it is getting to be repetitive; but it is unavoidable. Most often investor horizon is limited to short periods of time, perhaps no more than a year, or a few months. For day traders, hedge fund managers, or even mutual fund managers of aggressive growth funds, the time horizon may be a few hours of trading on any given

day. They are glued to market movements; they can not afford to wait for quarterly returns. Thus, what is the time span for investors is difficult to specify; it all depends on their perspectives and investment goals. Same is the case with market analysts; rarely their horizon exceeds next corporate reporting cycle, typically next quarter of the year.

4. But our interest is in discerning long term trends so as to understand underlying forces of change that are structural to financial markets and are likely to stay with the market for a long time. For example, in a developing country like Pakistan, one could go on eulogizing how dynamic, how fast growing and how well performing it was during boom years; just look at various reports of that period. From this observation, next was a leap of faith as though it will perpetuate itself for long period.

5. Most evaluations during boom years were heralding stock market of Pakistan as one of the best performers amongst emerging economies, and no doubt it was; but rarely a second thought was given to the depth of market, and a step removed to corporate sector which had just come out of shadows of a bruising period of restructuring, privatization, or closure of a large swath of state-owned enterprises including financial institutions, industrial units, energy sector companies and an assorted lot of other enterprises. Most of these companies had little to do with stock market operations. Private corporate sector was limited to about 700 *listed* companies, some domestic others multinational subsidiaries or foreign companies, even though the actual number of privately owned businesses and companies in Pakistan is much larger than this listed group and it has been growing.

6. A great deal of investment in securities in many developing countries including Pakistan undertaken by non-bank financial institutions, businesses, corporations or private individuals is done in corporate stocks, not so much in bonds or in futures, swaps or derivatives, which are in their early stages of growth. Except for stock market, all other markets are much smaller in terms of participation, a narrow band of investors, issues and capitalization. Investors operate mostly on their own, because financial services industry in Pakistan is in early stages of its development.

7. Lately, asset management companies and mutual funds owned have been growing fast in Pakistan, yet institutional investing by asset management companies is a fraction of total exposure of investors in the stock market, dominated as it is by banks and NBFIs. Mutual funds are growing very fast and are likely to become significant participants in future. Individual investors, also known as *odd-lot investors* are relatively much smaller than institutional investors.

8. Further, investors both institutional and individual investors are in the stock market with the prime objective of capturing large capital gains from their stock holdings over a short period, rather than sustained stream of income from dividend earnings which is a secondary objective for most. However, substantial income growth may occur, provided there is sustained corporate growth. In the interim, market fluctuations alter this outcome often drastically as it happened in Pakistan's stock market in 2008 following market crash. For this reason, investment in equities, namely stock market though supposedly for long term, could in practice be for short periods if volatility of markets becomes too frequent and investor confidence is impaired. Undue uncertainty in stock markets when combined with notoriously fickle mind of Pakistani investors seeking to double their gains over a very short period of a few months if not years, is a recipe for perpetual volatility. This is confirmed by stock market trends in Pakistan over the past decade briefly encapsulated below.

9. At the start of decade, stock market of Pakistan was volatile but with fairly undervalued levels of share prices. The market took off in earnest in mid-2002 with volatility in its turnover never witnessed before. Stock prices began soaring, and by June 2007, share prices and market capitalization rose to nearly ten times of what it was in 2002. By April 2008, the market reached its peak when the down turn began and precipitously. Within four months by August 2008, market had lost nearly 60 percent of its value from the peak level. The authorities in a panic closed down market trading, a decision that would haunt everyone for a long time to come. As soon as the market reopened, by end January, market had collapsed to less than one third of its peak level. What the market had gained in six years, it lost it all in about ten months. Such was the rapidity of market collapse.

10. The reasons of this boom and bust scenario that unfolded during 2008 are varied and can not be placed on the doormat of economic or financial fundamentals, or lack of economic management. One could argue that this is all in hindsight which is always perfect, offering a perspective not available before. This is not true. During middle of the decade, while market kept soaring high, it was evident that it is grossly overvalued, that share prices bore little relation to corporate financial strength, share price multiples were out of line and were not grounded in earnings profile. The market was riding high on unfettered speculation and herd behavior of investors, and most of the day-trading activities were being funded by parallel market financial mechanisms like *badla* financing and undocumented capital inflows. Anecdotal estimates of *badla* financing were done at that time, but nothing much came out of it. All this was well known.

11. The size of parallel economy and magnitudes of undocumented inflows in Pakistan has always been very high. Declining corporate listings at KSE in this period is a testimony to growth of parallel market funding in the sense that companies did not need equity financing through stock market when they could obtain similar funding from the vast network of parallel market. The owners of companies were not prepared to float their shares owing to what they perceived to be the overall *costs* of documentation and stock exchange listings, just not taxation or fees involved. These observations are not borne out from statistical evidence. They can not be; but these trends were as palpably evident then as they were after collapse.

Stock Exchanges - Market Indices

12. Among the three exchanges, KSE, LSE and ISE in Pakistan, KSE is the oldest, dominant and influential given its size, listing, and trading. Both LSE and ISE are regional exchanges, but they do trading mostly in stocks of same companies listed on KSE. Since structure of Pakistan's corporate sector is of limited size given that much of it is family owned, the pool of publicly incorporated companies is small and has remained fairly narrow. Hence there is multiple listing of companies on the regional exchanges, in spite of all the *hoop-la* about corporate growth and diversification. Major public limited companies are listed at KSE, and the same are listed at LSE and ISE simply because there are not enough of them to go around.

13. For the same reason, trading at KSE is price and trend setter with highest turnover in stock market of Pakistan on any given day. The trends at LSE and ISE reflect the patterns set at KSE, but their trading is relatively small and it follows patterns set by KSE. These two regional stock exchanges were established to dilute the overwhelming position that KSE has occupied, but their operations have not made any dent in this dominance beyond providing a duplicate facility at regional centers. The reason is that regional corporate base is simply not strong enough to support listing and volume of securities that are traded at these two stock exchanges. Islamabad is not the hub of industrial or commercial activity in that region of the country, regardless of an exchange of its own.

14. The number of companies listed on stock exchanges has been declining over the period of FY00-10 owing to privatization, consolidation and mergers. Their number has shrunk from 762 in FY00 to 651 in FY10, even though there have been some new listings during this period. This

decline in number of listed companies is rather intriguing and happened during the time of boom years. Yet, there has been significant increase in the injection of new equity by owners from their own resources; and the *listed capital* has risen from Rs 229 billion in FY00 to Rs about 910 billion in FY10 at an average annual rate of about 15 percent per year, with accelerated growth during the last four years. These issues are explored in some depth in sub-section on market concentration below.

15. There are five stock price indices, namely KSE General Index of All Shares with base year 1995=1000; KSE-100 index, base 1991=1000, KSE-30 index, base 2000=100, SBP General Index, and BR (Business Recorder) index. In addition, there are two more regional stock exchange indices, the LSE-25, and ISE-25. The KSE-General Index with base year 1995, is a comprehensive index, free of any bias in its composition. The KSE-100 index (base 1991=100), as the name shows, consists of stocks of 100 out of 651 listed companies and is based on relative size of their market capitalization. It is the most commonly used index of all and also includes all the 30 companies of KSE-30 index. Since a large part of market capitalization and number of shares is concentrated in these companies, KSE-100 for all practical purposes is a virtual index of KSE and is a good indicator of stock market in Pakistan.

16. The stock indices of 30 companies are too narrow and they introduce a bias in evaluation since they are composed of large, well managed growth centered companies. A good number of them are foreign companies, concentrated in a few sectors like energy, food, distributive trade and more significantly banks and other financial institutions. The stock market, however, is composed of a variety of companies, both domestic and foreign, large or medium size in a fairly well distributed manner throughout various sectors of Pakistan's economy. What companies reflect most representative features of Pakistan's stock market and consistently over a long period, is a contentious issue and we shall leave it here.

17. The KSE-100 is dominated by handful of major stocks, about 30 of them, and these are market price trend setters. The share prices movements of these thirty stocks have a disproportionate impact on the index, since small price changes relative to their capitalization affect the KSE-100 index disproportionately on any given trading day such as the energy sector stocks involving shares of oil and gas companies. To remedy this bias of KSE-100, another index, KSE-30, was floated in September 2006, based on 30 stocks, but it has not been able to dislodge KSE-100 from its eminence in KHI stock market. It is not widely reported and how far it is used by market dealers, brokers, and investors is not known. Both KSE-100 and KSE-30 index are

indicative of free float share values, namely market capitalization, rather than paid up capital base. Both incorporate a weightage system based on a variety of stock features, liquidity features being one category of those used in these indices. Hardly any rigorous analysis of stock market is available from Karachi stock Exchange except for the data coverage on its web site which is not easy to access by those not registered as traders or portfolio investors.

18. The SBP General Index, base June 2001= 100, is constructed using original paid-up capital of all listed companies at KSE, their initial equity, and provides data on sectoral capitalization which is quite useful. However, initial equity of companies bears little resemblance to market capitalization of well established and fast growing companies whose share prices have seen phenomenal increases during the boom years but has not followed similar changes downwards since market collapse. This index runs parallel to KSE share indices but it is not widely used, nor is it reported on daily basis the way KSE indices are reported.

19. The Business Recorder Index is a late addition to stock price indices of the market. However, for purposes of this analysis, we will concentrate on KSE-100 index since it has a much longer running base starting in 1991. It is derived from share prices of leading companies of Pakistan, and hence it provides a more meaningful insight into dynamics of stock market of Pakistan as well as its corporate sector. Its web site and those of leading asset investment companies provides useful online data to investors and analysts alike. Business Recorder occasionally provides spot coverage on selected items. Availability of timely information is no longer a hindrance it used to be a decade ago.

20. There is no evaluation or analysis of capital markets from SECP. Academia has its own research priorities and proclivities that are not geared to stock market analysis and to the needs of investors. The only source of analysis and evaluation is SBP's periodic coverage in its quarterly or annual reports, or assessment of stability in its annual series of financial system reports. These SBP reports are focused on recent developments but mostly in the money and treasury bills market, given their implications for monetary management in line with the main role of a central bank. This analysis often appears as a special section in its reports, and given its focus on recent developments, it reflects the tenor of market trends prevailing.

21. Much of SBP analysis of financial markets during the boom years was ebullient; so were the attitudes of seasoned market investors, without a prognosis of what lies ahead, much less a word of caution from any quarter as to where the market is headed. One could say it is not a function of central

bank to get into evaluation of financial markets, beyond money market or T-bills markets critical for monetary management. There is not much interest in capital market in the public, except for a small group of investors engaged in trading in stock market and even smaller group in other financial markets. This sums up the reasons for lack of serious analytical work in this area.

Section 1: The Boom Years, Crash and Revival

1. During the past decade, stock market of Pakistan has been through a cycle of boom and bust of a severity and magnitude never visited before. From mid-2005 onwards, the market went through unprecedented volatility which seems to have abated now but its impact is lingering on. Currently, market appears to be trendless, though it has continued its recovery from the depths of crash in 2008 and recaptured a good deal of lost ground by close of the decade. There have been noticeable spikes in turnover and share prices, otherwise market has been stable in recent years in spite of economic and financial adversities than it was through much of the decade.
2. These adversities have been compounded by deep rooted and often ferocious conflicts that prevail in Pakistan. This is the gist of daily fare on the media and their commentators, now in full view of all and within reach of public. Their observations are that the society is effectively under a siege from frequent terrorist attacks and bombings with large civilian casualties; involvement of Pakistan in the ongoing Afghan war; a break down of law and order and diminishing writ of the government; ineffective governance rampant with corruption; a severe energy crises compounded by those involved, out to make a fortune amidst all the chaos. In spite of all this, banks, non-bank financial institutions, businesses, and financial markets somehow continue to function as best as they can in such circumstances.
3. The analysis of stock market growth together with market capitalization of listed companies is divided into three periods for decade of 2000s, though markets have their own dynamics, and are not bound by arbitrarily selected neat time slices. The *first period* consists of market growth over nearly six years during mid-2002 through the first quarter of 2008 which is designated as the *boom* period. This was not uninterrupted growth; there were usual market swings downwards, but they turned out to

be transitory, and market resumed its upward march. The *second period* is a relatively short one, starting April 2008 through January 2009, designated as *crash* period of less than one year. The *third one is recovery* period, from February 2009 through end of the decade. We have used end fiscal year data which does not correspond exactly to the time periods identified above, but serves as benchmarks for analytical purposes. We have used KSE-100 index because market trends are best captured by this index, and it is more representative than other indices like KSE-All Index, KSE-30 index, SBP or BR-30 index.

4. Briefly, market started its ascent in mid-2002, when KSE-index was 1770 and market capitalization stood at Rs 422 billion. From there on, market reached a peak by mid-April of 2008 with KSE-100 index of 15700 and market capitalization of about Rs 4800 billion, the highest it ever reached in the past decade and before. The market crunch started in third week of April, and swiftly wiped out gains of previous six years. By late January 2009, KSE-100 index plummeted to its lowest level of 4815 and market capitalization eroded to Rs 1574 billion, less than one third of what it was at the peak level just eight months earlier. From thereon recovery began, and by mid-2010 KSE-100 index reached 9772 level and capitalization of Rs 2774 billion, rising from their lowest level reached in late January 2009, nearly 18 months before. Ironically, mid-2010 levels were nearly identical to what they were in late August of 2008 when market was floored in a panic reaction. These are the *benchmarks* of boom bust and recovery of stock market.

5. Volatility in stock market of Pakistan was not witnessed only during the decade under review. The stock market was equally volatile even before the onset of boom of this decade. During much of the decade of 1990s, stock market remained fairly depressed most of the time. The index reached its lowest level in early 1999 around 920 after nuclear explosions by India and Pakistan, and this was below the base year of 1991. The market took off in early 1999, and by end of 1999, KSE-100 index rose to nearly 1400 plus level which lasted well into next year. Thereafter the market was down again.

6. These trends were further compounded by 9/11 events, resulting in market slide and pushing KSE-100 index to around 1100 by end-September 2001, the *lowest* in past decade. Thereafter, market quickly picked up momentum with vary large volume of trading and transaction values of around Rs 2 billion, nearly three times the level observed in those months. By January 2002, stock market had recovered and KSE-100 index was back to its former 1400 level. From here on, market began its climb, though punctuated by minor corrections along the way which turned out to be only brief interludes in sustained growth of the market.

7. Within a year and a half, by mid-2004, KSE-100 index had reached 4877 level, widely believed at that time to be in line with true market valuation of corporate stocks though on conservative side. General market expectation was that there is further room for growth in stock prices. The market obliged and growth continued, as KSE-100 reached around 6700 level by mid-2006. At this point, market was largely believed to be over-valued and there were muted warnings of an overdue correction, but it was dismissed as baying noise of short-sellers. Market did not stabilize. It continued its upward trend as speculative investors moved in, first slowly then in a big manner.

8. By mid-2007, stock index had nearly doubled to what it was a year earlier, reaching 13772 level of KSE-100 index. It was clear then, that market is in a speculative frenzy and is overdue for a 'correction' meaning a sizable reduction in stock prices, but "investor" sentiment was beyond rationale by then, and by April 2008, KSE-100 index moved to 15500 level. At that point the boom had reached its peak, and was clearly ripe for a major downward slide, though there was no warning from any quarter, the brokers, regulators or analysts, that market is overdue for a significant fall in stock prices. Thereafter, the crisis set in and the market began to slide in late April of 2008, and by year 2008, it was all over. The market had nosedived to levels that were incomprehensible to many. Just a few months back, they were riding high, by mid-year they were holding an empty bag of valueless stocks.

Market Closure - *Imposition of Market Floor*

9. Alarmed by persistence of price decline with no end in sight, authorities panicked and in a desperate bid, closed down the market on August 28, 2008, when market had lost ground and KSE-100 index had reached 9200 level. But that only postponed the inevitable. This was an extraordinary step, a public recognition of market collapse, and a worst one because this step put a seal on loss of *investor confidence* and ensured further decline in stock prices. By late August, the market had already lost 6500 points, or 41 percent of capitalization since April 2008. By then a large swath of investors and a few stock brokerages were already insolvent.

10. The widespread expectations were that more decline will follow when floor got removed and market did plunge further when it re-opened for trading. The swift downturn had already triggered massive repayment efforts by creditors of *badla* financing which could not be bridge financed by

banking system. There were no alternate sources of providing this bridge finance. A small group of investors who had lost a great deal were already on the street demanding a closure of market in a desperate bid to stop further losses, without realizing that market closure is not the remedy when market is in a free fall.

11. Earlier on, government had floated a proposal to float a put option of Rs 30 billion and another Rs 20 billion in market stabilization fund. Both of these proposals however, were seen as of too-little-too-late variety given the size of market turnover. A package of Rs 20 billion stabilization was too small a safety net in face of widespread down turn in stock prices. The proposals were also out of sync because they were to cover market exposure for shares floated by PSEs, or to support exposure of foreign portfolio investors in Pakistan. The government did not have the resources to float stabilization fund on its own, and would have to borrow domestically from the banking system. The next idea was to ask National Bank of Pakistan, State Life Insurance Company, National Investment Trust and Employees Old Age Benefit Institution to contribute Rs 20 billion into stabilization fund. All these institutions are government owned and could be ordered to follow suit, but it would have jeopardized trust obligations and financial base of these institutions. The proposal was dropped.

12. The proposal to float put option of Rs 30 billion was equally impractical because foreign private investors could not be persuaded to join put option, even with guaranteed buy-up by the government whenever put option reached its strike price if downturn were to continue. The specter of a certain downfall after removal of floor loomed large; the rescue package could not persuade investors to hold the line regardless of put option if it were to materialize. The government kept holding the line until the very end, reassuring the investors that such a drastic step will not be taken, but was forced to act because of massive losses of foreign exchange reserves owing to open capital account and the imminent outflow of foreign private portfolio of nearly half a billion dollars.

13. It was Hobson's choice facing authorities. A delay in flooring the market could unleash a chain of defaults starting with margin calls; yet imposing the floor meant that whenever market re-opened it will further decline. But that was the course adopted in late August. Market closing has not been resorted to in countries to arrest market decline because such a draconian step is self-defeating because market valuation or market sentiments are not easily reversed, though floor trading has often been suspended. Whenever the floor is removed, markets plunge still further. In the 1929 stock market crash, New York stock exchange was closed for 22

days. In 1987, trading was temporarily halted in the face of massive swift losses, but that was a market trigger mechanism to smother runaway trading, not a market flooring mechanism. NYSE was closed for four days in the aftermath of 9/11 tragedy. There are no similar cases of market closure in the second half of this century for a prolonged period of three months resorted to in Pakistan. It was a desperate move.

14. The floor was removed on 12th December, 2008. When trading resumed, market began losing ground heavily. It lost nearly 1000 points of KSE index within couple of days and nosedived to 6000 level by end of trading on December 30th 2008. Stock trading at all exchanges was very heavy; the turnover of KSE was 616 million shares for a trading value of Rs 118 billion just in one day. Thus, within a fortnight, market had lost 3000 points from its level of 9200 on the eve of market closure in August. Market capitalization likewise was down to Rs 1929 billion, less than half of what it was at the peak level. The slide continued through January amidst heavy trading. The market ultimately found its lowest level in fourth week of January at KSE-100 index of 4815 and capitalization of Rs1574 billion; less than one third of its peak level reached in April 2008. What a drop it was from 15700 level 10 months back!

15. Another way to look at stock market is that it had taken KSE-100 index the whole decade of 1990s to reach 1366 in FY01, its lowest level during the past decade. From this lowest point in FY01, KSE-100 index climbed to 15700 level by April of 2008, which is an extra-ordinary growth of share prices in the stock market over such a short period anywhere in comparative country experiences during the past four decades.

16. Since then market recovered in fits and starts, and by the end of year had risen back to 8000 plus level as discussed in the sub-section below. In early 2010, the market crossed 10,000 plus level of KSE-100 index, recovering a good deal of lost ground. Currently, at the close of the decade, stock market is hovering around 9500 of KSE-100 index, which seems to be a more resilient level, in spite of a terrible investment climate, a near shut down of new foreign investment except for group related activities of a few parent firms in Gulf countries or long established British companies, and a disinvestment by foreign private portfolio investors.

Trading and Turnover

17. On any given day, volume of turnover, the number of shares traded in the market, is a good barometer of market sentiments and trading activity as a consequence of or in anticipation of economic, financial and key political events. A look at total turnover for a short period of preferably a week or at the most a month is called for, not the turnover averages because these averages smooth out short period volatility and are not so revealing. The turnover data covering the period of boom and crash period shows that total turnover began to pick up during FY03 when 53 billion shares were traded at KSE as compared to 29 billion shares traded in FY02.

18. The Average *daily* turnover during FY03 was 215 million shares traded per day as compared to 120 million shares per day a year before. In FY04, the total turnover was 97 billion shares, nearly twice the level reached in FY03. Likewise, average *daily* turnover was nearly 400 million shares, the highest in the whole decade. This type of feverish *average* daily trading does not show up even during FY08 as a whole. Beyond FY04, turnover during a fiscal year began to decline, and daily averages also began to decline.

19. In FY08, total turnover of KSE was 63 billion shares, and daily average was 256 million shares traded. But during height of the boom in 2007, average daily turnover was not particularly high as it ranged between 210 to 260 million shares a day, except for sharp spikes that did occur. During 2008, daily trading stayed there except for month of April when it rose to 290 million shares a day. After market began to slide, daily turnover remained around 300 million shares for a while, but by June steam had run out, and trading slowed down to 150 million shares per day. In August 2008, daily trading was below 80 million shares. On such thin trading, market crash continued until closure during August 28th-December 12th. When market reopened, daily turnover averaged about 300 million shares for most days, with a record spike of 616 million shares on the last day of trading in 2008.

20. The *volume* of turnover, therefore, does not shed much light on the underlying elements governing trading in a given period. Therefore, one has to look at the *value* of turnover. Clearly, value of turnover during the months preceding onset of crisis was much higher for a given volume of turnover than in any comparable period before, given that stock prices had risen manifold. One could argue on *a-priori* basis that sharp increases in the value of turnover during 16 months prior to onset of crisis in April 2008, could not conceivably be financed from roll-over trading, which is the staple of day traders; nor can it be explained by formal financial flows.

21. Therefore, the issue is where financing of net value turnover came from, if not from the sources alluded to in the preceding para? The levels of *badla* financing were not known, nor investments by individuals through informal flows of funds from overseas to Pakistan, or from underground money sources. Financing of trading and turnover levels at such high stock prices as they prevailed in months before the crash of mid-2008, remain an enigma, because these cannot be explained by growth of formal financing by the financial system at large.

22. The rise of stock market can be explained by a host of factors discussed later on this chapter; and likewise causes of crash can be outlined. But what is not easily explainable that during the time of market slide after floor was lifted in mid-December, where from exceptionally large turnover came from? It is understandable that once market slide set in, investors began to unload massive amounts of shares in the market to avoid further losses. The runaway behavior can be understood. But why in a sliding market there would be hordes of buyers willing to plunge in a market in throes of a crash, defies any intuitive explanation, because buying stocks in times of falling prices in folkloric sense is like trying to catch a falling knife. Perhaps the answer can be found in pair of opposites: i.e., for each seller anticipating further price decline and capital loss, there is an investor who thinks of sliding market as a buying opportunity, and is willing to purchase shares, harboring a set of expectations completely opposite of expectations of a seller and having access to liquidity to finance and settle the trade.

Market Concentration

23. Much of the boom in stock market of Pakistan was concentrated in about 30 stocks, because market is not diversified. The number of listed companies has declined over past eight years, further intensifying concentration. A major reason for this trend is that a large number of corporate businesses and companies are family-owned, who do not wish to dilute ownership and control if they were to *go public* for equity needs, preferring their business to remain under their control. Nor these unlisted family owned companies wish to be subjected to public scrutiny and regulatory watch beyond routine requirements which are easier to manipulate or to comply with, instead of submitting half yearly audited financial statements as per disclosure requirements.

24. Therefore, stock market growth as typified by KSE index does not mean that private corporate sector *at large* in Pakistan had contributed to or shared into stock market growth. Only a segment of corporate sector of Pakistan, namely the group of listed companies experienced the boom and bust cycle; some of the companies actively participated in the stock market; but most did not necessarily experience a commensurate increase in their financial or operating base to warrant such astounding growth in their stock prices and their capitalized value base.

25. Second, a good number of leading companies among those 30 are of mixed origin, both domestic and foreign. The indigenous corporate sector is lagging behind in this pattern of capitalization growth. Third, the increase in capitalized value does not mean that corporations have necessarily transferred this increased capitalization to their invested capital, or have leveraged capitalized based into new investments or additional investments, though there has been some increase in base equity of companies.

26. There are problems with reporting of *corporate valuation* and price discovery process. Hence, it is difficult to determine how far weaknesses of market valuation contributed to the initiation of boom or bust cycle, if they did so, *before* other factors like herd sentiments or speculative behaviour took over. Whatever financial reporting is done, it is not market oriented; it is regulatory control oriented; designed to satisfy statutory requirements of financial disclosure and reporting rather than performance reporting needed for market pricing of stocks.

27. For example, in public arena, there was no *regular* reporting of earnings per share by listed companies on quarterly basis, though financial statements are now beginning to appear in sporadic fashion. The process has just begun. It is hard to find market consensus on quarterly earnings so vital for adjustments in stock portfolio by investors. Brokerage houses must be doing their own stock analysis, but it is not common knowledge except for 'street estimates'. Similarly, it is difficult to find estimates of value of stocks, based on present value of expected cash inflows of corporate assets *less* present value of expected cash outflows on corporate liabilities, adjusted for present value of expected net inflows on off-balance sheet activities and instruments of corporate financing.

28. One could argue that a large part of stock market boom could be ascribed to substantial undervaluation of stocks in late 1990s and early 2000s for historical reasons. The prominent one being a major drive of privatization of nationalized units which required a massive reassessment of market valuation of companies at the time of privatization, and subsequent

revaluation owing to a structural re-alignment of corporate businesses after reorganization and consolidation that did occur widely after the units were privatized. The corporate sector has just emerged from the shadows of nationalized system after privatization and closure of public sector enterprises as a central part of economic and financial reforms stretched over the decade of 1990s and early years of this decade.

29. Fourth, if above premise is sustained, the issue is that did corporate sector end-up on the other extreme, starting from a severely undervaluation, namely a serious overvaluation, well beyond verifiable underpinnings of corporate financial performance? This remains to be ascertained, but in a preliminary way it can be found out with comparative comparisons of price earning ratios over time, not point estimates given below. How far this phenomenal growth was rooted in underlying strength of corporate sector is also difficult to establish. Regular data on earnings per share (*EPS*) by corporations is published sporadically; but there are no established benchmarks to gauge quarterly corporate performance, except annual income and profitability indicators which can not effectively serve as the basis for routine stock investing, driven by short term considerations as it is.

30. There is no single-sided relationship between what transpires in the market and how corporations respond to these trends. Market trends are a composite of many factors, corporate participation and response being one of them. Mostly business corporations are bystanders on the investing scene; that is they do not indulge in stock investing or trading the way financial institutions do. Corporate earnings and profitability do trigger a market response, but for only those companies listed on stock exchange and whose shares are being traded.

31. The trend of corporate financial assessment and evaluation started in a credible manner only a few years ago. Publicly owned corporations have begun to announce their financial statements in the media, complete with all the statistical data required as per disclosure requirements. A system of regular reporting of stock analyst estimates of corporate performance, or targeted levels of *EPS* for leading stocks is not yet available in full to general investing public, but daily reportage of stock prices shows it in the side columns. Eventually, it will take root and decent stock analysis in public arena is not far away.

Market Trends - Corporate Response

32. Market trends are governed by financial and economic fundamentals which consist of factors that are internal to the firm with reference to their stock price prevailing at any time. These internal factors boil down to profitability of their operations as captured by various profitability ratios, but most importantly by the ratio of price of share to earnings per share, a critical element in corporate valuation and market value of its share. The external factors consist of major economic trends, specially stability of interest rates, price level and exchange rates. Underlying these stability concerns are trends regarding performance of the economy domestically and abroad, particularly export performance, balance of payment deficits and foreign financing.

33. First of all, with rising prices of corporate share outstanding increase in capital base occurred only in the companies being traded on stock exchanges; not among those unlisted companies on the side line. That is, capitalization growth was not shared by the business corporate sector at large. Further, in booming stock markets, existing companies push for stock split thereby significantly enhancing capital gains of their shareholders, while unlisted companies intensify their efforts to gain listing at stock exchanges to play on their leverage and to enhance their capital gains. In Pakistan it seems to have happened in the reverse. The number of listed companies went down; not up; and there were no stock splits. One could argue that there was increase in release of IPOs, but in absence of primary data on IPOs it is difficult to determine what the volume of IPOs was during boom years. If indeed there was IPO activity, it seems to have been confined to over the counter market. Again, not enough is known about IPO market growth over this period.

34. The growth of market capitalization was higher than prices of stocks. This comparison has to be done with reference to KSE-All companies' index, not KSE-100 index, because capitalization values are showing all listed companies, just not those who comprise KSE-100 index. During the boom years, FY00-07, KSE-All index showed an average annual growth of about 37 percent; slightly below the rate of capitalization growth which was about 39 percent. Similarly, during bust years, FY07-09, there was a 27 percent decline per year in the KSE-All index. Same was the case with capitalization levels as reported for FY07-09 period; it registered almost the same rate of decline. Usually, the index and capitalization move very closely; they ought to, because after all, the index is weighted average of price movements.

35. The rate of growth in market capitalization when compared with listed capital, which is own equity of shareholders of listed companies, was phenomenal. The average annual growth of listed capital during FY00-10 was about 15 percent per year while rate of capitalization growth was 21 percent per year. The growth of listed capital continued and in spite of all the odds stacked against, it was about 13 percent during FY07-10. As for listed companies, while focus of market participants and analysts is mostly on movements of stock market index, in stock market trading operations, a rise in the index does not necessarily mean a commensurate rise in capital value of *all listed* stocks. There is hardly any uniformity in the extent of capital gains by *all listed* companies implied by a rising index across the spectrum. There are gainers and losers at any time, but what matters to investors are changes in value of their portfolio, first and foremost.

36. The direction and extent of index movement is only a market indicator and generally values of portfolio held will follow the direction of movement. But it could well be that in times of fast rising stock prices some of these portfolio may not witness a corresponding gain in their net asset value as evidenced by NAVs of growth mutual funds versus value mutual funds. Only stock-indexed funds mimic their value performance as per movements in the stock index. Hence there is a need for a well-defined strategy of investing during fast rising stock prices.

Price Earning Multiples – A Comparative Analysis

37. Our concern is how market fundamentals impacted on stock market during boom years and afterwards. To begin with, given that corporate stocks have been undervalued in Pakistan except for a few boom years, the *price earnings multiples* were lower in Pakistan as compared to those prevailing in comparator countries or in emerging market countries, inclusive of fast growing economies. For the decade as a whole, the ten year average of price earnings multiples is 9.4, in Pakistan as compared with 14.4 for all emerging market countries, and 15.6 among Asian countries, the highest among emerging market countries group. These ten year average of price earning multiples in Latin American countries was lower, at about 13.2, but close enough to emerging market average for the past decade.¹

¹ See Data Set 8.5a for 21 emerging market countries. Primary source of this data is Morgan Stanley International, reproduced in IMF data base on Equity Valuation Measures.

38. From the vantage point of price earning multiples over a long period, among Latin American countries, the top performers were Argentina and Chile. Their average price earning multiple was about 22.5 for the decade. Surprisingly, among Latin American countries, stock markets of Brazil and Mexico did not do so well. Their ten year average of price earning multiple was much lower; in Brazil it was only 11.6, and in Mexico, this average was about 16. In contrast, this performance was more widespread among Asian countries. These averages were: 21.5 in Philippines, 20.7 in Thailand, 17.3 in Malaysia, 17.6 in Sri Lanka, 16.2 in China, and 17.8 in India. Clearly, stock markets of Asian countries have shown higher price earning multiples than any other group; exceptions aside.

39. During the boom years of 2006-07, price earnings multiples in Pakistan ranged between, 10 to 13, the highest they have ever been. In 2008, when stock market crashed, this price earning multiple came tumbling down to about 4, nearly less than one third of what it was at peak period, though this had little to do with global stock market crisis discussed earlier. But within a year, average price earning multiple in Pakistan was back to 10.1, more than twice of what it was at its lowest. This pattern of price multiples during boom, bust and recovery period is remarkable similar among emerging market countries. That is, as stock market crashed in Pakistan, at about the same time US stock market plunged into its own crises, and stock markets in Europe followed suit, including those in emerging market countries, but with a crucial difference as follows.

40. Stock market crash in Pakistan had little to do with market crash in the US. It was not the contagion that spread to Pakistan, although it occurred roughly at the same time. The timing of the crash was so close, but the crash in advanced markets had little to do with market crash of Pakistan, because it simply did not have similar globalized linkages prevailing in most emerging market countries as we have already discussed. This is borne out by indices of globalized financial linkages on comparative basis. The contagion impact of global market crash of 2008 on Pakistan was minimal; but it was pretty strong among emerging market economies as shown by trade and financial flows. Price earning multiples of emerging market countries were 15.7 to 17 during boom years, 2006-07, just prior to the crash; they declined sharply to nearly half of what they were at peak period, to about 8.5 in 2008. The impact of global financial crisis was harsh on emerging market countries.

41. Among Asian countries, this price earning multiple followed the same trend, but swings were subdued. During boom years price earning multiple among Asian countries ranged between 16 to 19; in 2008 it came down to 9.4, nearly half of what it was in peak period. But a year later, the average was

back again to 14.6, a remarkable comeback from crash period. Within Asian countries, highest multiples prevailed in India, followed by China. In India, these multiples ranged between 23 to 27 during peak years of 2006-07. In 2008, the multiples slumped to 10.5, less than half what they were a year or so earlier; but by 2010, the multiples were back to 22.1, close to what they were in peak years. (see *Data Set 8.5*)

42. In China, the same pattern repeated. In 2007, price earning multiples were highest at 27, below that of India at 32; they began to slide and declined to 10 in 2008, but by 2010, there was some recovery to 14.6 level, but not the same quick recovery as witnessed in India. In Malaysia, these multiples were relatively more stable; they were in the range of 18-17 in 2006-07; dropped to about 10 in 2008, but recovering fast to 22 a year later, perhaps the highest during the whole decade.

43. Among Latin American countries, the patterns of swings in price earning multiples, that is, boom, bust and recovery during 2006-10, were similar with the exception of Mexico. In Argentina, these multiples were 16.7 in 2007, a year later, they dropped to 3.7, nearly four times of what they were a year ago, but by 2010 the multiples recovered to about 9, still well below what they were in boom years.

44. What lessons, if any, do this array of evidence on patterns of change in price earning multiples in halcyon years of second half of the decade have for stock market in Pakistan? Clearly, corporate shares are undervalued relative to other Asian countries. But whether it reflects weaknesses in price discovery process of stocks in Pakistan, or does it relate to financial, economic trends, or does it reflect weaknesses in corporate sector, or is it because of exogenous but powerful factor of social upheavals as many would like to contend; all these aspects need further inquiry, though very likely it is an outcome of combined impact of weaknesses or limitations of stock market and corporate structure. These issues need to be explored further.

45. A straightforward comparison of stock price multiples prevailing in Pakistan and elsewhere, as done in previous paragraphs, however, is hazardous, and is fraught with pitfalls of its own. The important point to note is that financial and economic regime prevailing in Pakistan, and hence price regime in relevant sectors of its economy, are unlike any prevailing among comparator countries not to speak of advanced countries. The resulting price structure is not comparable. There are two sets of price structure that need to be looked at within the context of domestic economy and at domestic price level, because that defines the operating fundamentals for these corporations.

46. One concerns input prices facing Pakistani corporations in productive sectors; and the second concerns output prices, depending on what proportions of corporate output is absorbed in the domestic markets. On the input side, namely raw materials and labor costs facing a corporation is much smaller than costs facing their competitors in foreign countries. At the start of boom, when KSE-100 index was hovering around 1000 in late 1990s in the aftermath of nuclear detonations, sanctions, changes in government, the 9/11 catastrophe, turning-off routine capital inflows, largely informal as well as formal as indicated by workers' remittances around \$650 million annual level, a pitiful foreign exchange reserves – all these factors painted a bleak picture for stock market investing by public at large.

47. In such circumstances, low levels of corporate stock prices and market capitalization were not out of ordinary. Once recovery of stock market was underway, and share prices began to climb high, market undervaluation was no longer the issue. At the height of market boom in late 2007-early 2008, it would have been hard to argue that shares were still below true corporate valuation. The price earning multiples had not only recovered, but had surpassed what they should have been in a realistic manner.

48. Similarly, output price structure in domestic market is considerably lower than those prevailing on similar items overseas. Therefore, it is inconceivable that nominal level of stock prices would be of same multiple of their earning that is prevailing elsewhere. A straightforward comparison of multiples therefore is likely to lead to erroneous results. It is more an accountant's view of what prices ought to be, versus a market consensus that investors face. What prices eventually occur in the market place for stocks, is suppose to be driven b EPS in normal times. But in chaotic times, multiples can provide only a bench-mark, but not across countries and across price structures prevailing elsewhere.

Market Reversal –Underlying Factors

49. By the time KSE-100 index crossed 6000 by December 04, prevailing view was that market has reached its threshold, the upper range of share pricing commensurate to corporate valuation as exhibited by ratios of profitability and asset pricing and further increases in stock prices are unlikely. Beyond this level, share prices will be untenable on corporate valuation. The market, however continued its climb ascribed to various factors such as widening investor base, investor confidence, entry of banks

and non-bank financial institutions in stock market, advent of mutual funds, net inflow of foreign capital, easy banking credit which coincided in times of declining interest rates, stability of exchange rate, a reasonable level of inflation and general economic stability and much reduced 'political noise' whatever that may mean to investors or readers alike.

50. In November 2005, when KSE-100 index reached 9000 level, 3000 points above what it was at the start of the year, it crossed the threshold of prudent investing, though this can be debated for long in hindsight. From then onwards, *herd behaviour* had set in and took over because stock prices went out of line of financial fundamentals of corporate sector. But in those days, prognosis of stock market was unfettered by these concerns, such as gross over-valuation of stocks relative to their fair value based on earnings profile or strength of corporations concerned. Most reviews including those of regulators were ebullient to the point of hyperbole, suggesting that stock market of Pakistan has achieved what it took other countries to achieve over three decades of sustained economic and financial growth. True, hindsight is 20/20, but it was not so oblique to recognize that market was way out of line much before market crash.

51. During 2006 and 2007, it was clear that market is caught up in speculative binge and is operating outside the realm of market fundamentals. A market psyche had taken over that is famously referred to as "irrational exuberance" like the dot-com boom of NASDAQ market of IT stocks in the late 1990s in the US. No amount of rationalizing would persuade want-to-be winners that IT sector itself has ultimately to be based on productive sectors of the US economy and derives its strength from how well these sectors are performing. Those productive sectors simply did not have earnings per share to justify exorbitantly expensive IT stocks of NASDAQ market.

52. The common refrain was that in stock market investing, what matters most is how much capital gain has occurred over a relatively short time, and rest is 'noise' outside of the market processes - a term that seems to have acquired a legitimacy of its own as an explanation of what markets do. In the frenzy of trading on NASDAQ, norms of prudent investing were not adhered to. A lot of IT-knowledgeable investors made fortunes, specially those who had set up IT related companies of their own and had gone public at NASDAQ, not the New York Stock Exchange (NYSE). A large number of new entrants in IT shares market saw their capital base wiped out, and a good number among them got saddled with margin calls on their extended investment on margin-based borrowed funds.

53. Something similar transpired here in Pakistan during 2007 where investors-cum-speculators were extended thin on *badla* based financing. The difference is that banking and financial system at large was not exposed to stock financing. Much of the boom was speculative, beyond threshold of corporate earnings signified by KSE index of around 7000, though there is no consensus as to what this threshold should have been or what it is now. It is hard to guess what multiple of earnings share prices ought to be, speculation aside. Asset pricing models are not much of help to guide; neither in advanced markets nor in developing markets. All this is now history.

54. Going back a little further, East Asian economies underwent a financial crisis during the second half of the decade of 1990s. This crisis was similar to financial crises that erupted in Latin American countries and elsewhere, and it encompassed financial markets of leading East Asian economies and their banking system at large. The financial markets collapsed just about the time that their export-led growth was being heralded as *East Asian Miracle*, a characterization that subsequently came back to haunt those who witnessed the onset of a full fledged crisis in complete reversal of past trends. The literature on this topic is fairly extensive; some of it is listed in Reference. It provides an illuminating discussion of how unfettered investing results into bubbles that are visible; but regulators and investors alike are prepared to overlook them and their implications for stability of markets.

55. Growth of these economies, in large part was fueled by significant foreign investment inflows directly as FDIs in local manufacturing geared needs of overseas markets and exporting, undertaken by leading US, European and Japanese companies as part of their diversification into off-shore operations mainly for comparative cost reasons. But a larger part of this boom in East Asian economies owed to astounding levels of foreign portfolio investment following a long period of financial reforms, opening-up of the trade and capital accounts, and setting up of emerging market mutual funds in the US and European countries that invested heavily into stock markets of these economies which may not have occurred otherwise.

56. This boom of financial markets in East Asian economies in late 1990s was characterized by over-exposure to real estate investments in country after country whereby property prices had risen to levels that could not be sustained for long. When the bubble burst, the same process of open capital accounts, free floating exchange rates, the infrastructure of financial markets, enabled a swing in opposite direction. These economies experienced a massive outflow of FPIs that could not be sustained, triggering a financial crisis and causing massive losses to investors. The *miracle* had gone sour; it had turned into a *debacle* of immense proportions.

57. That is also history now, but with a difference for perspectives on Pakistan's stock market experience of mid-2000s. The key elements of East Asian experience that propelled their emergence onto international scene, namely a sustained export-led growth together with massive inflows of foreign private investment in their industrial base, and foreign portfolio investment in East Asian capital markets. Their export led growth was well diversified; it was rooted in industrial structure of East Asian economies. Their products and exporting could be sustained in a competitive trading environment owing to their being based on comparative cost advantages, together with off-shore marketing facilitated by parent companies.

58. These elements of large export based industries, global group or trade linkages, large FDIs by parent companies; all these were missing in Pakistan during most of the past decade, and are still missing. Therefore, stock market boom in Pakistan appears to be intriguing and needs to be characterized differently than market booms that occurred elsewhere over the past two decades. How differently; this is attempted below. It is not of the same category as witnessed elsewhere. Pakistan had garnered the label of emerging market, but its' industrial base and exporting structure were no match to those prevailing in emerging economies of Asia or Latin America.

Section 2: Macro-Economic and Financial Fundamentals - *Impact on Stock Market*

1. The macroeconomic fundamentals include: a sustained growth; modest level of inflation consistent with price stability, interest rate and exchange rate stability; and adequate levels of liquidity both in money markets and capital markets. One could add to this list, but for financial market growth these will suffice. During the boom years, Pakistan's economy did perform very well indeed as discussed in Chapter 10 of Volume I. The overall economic situation continued to remain healthy; interest rates, exchange rate and the general price level remained fairly stable, though there was a build up of monetary overhang that was identified a bit late in the process; balance of payments position, capital flows and foreign exchange reserves were fairly strong during the first half of the decade.

2. During boom years, stock price growth was not buttressed by macro-financial fundamentals. No doubt economic growth during middle years was high; budget deficits and borrowings were on the decline; but at the same time, balance of payment position began to weaken, and current account deficits re-appeared. Foreign exchange reserves had grown eight times by FY07 from \$2 billion in FY00, but thereafter, growth stopped and reserves began to decline. Inflation was largely in control, and exchange rate had appreciated during FY00-06; but thereafter inflation began to gather momentum and devaluations set in.

3. Hence, most economic fundamentals were strong enough to support stock market growth upto 2007, but after that these fundamentals weakened and have remained that way until 2010. Macro-financial fundamentals were sufficiently strong to spur growth of stock market, but could not sustain its inflated level that was reached by FY07. Growth of banking credit and interest rate levels were in a fairly comfortable range during FY03-06 period, and cost of credit kept declining, spurring investment by industrial units in balancing, modernization and rehabilitation of their manufacturing plants and facilities. But these factors could not sustain share price level that prevailed during FY07-08 period.

4. The weakening of economic or financial fundamentals was neither the cause nor the trigger of crash; nor was it perceived so at that time by major stakeholders. There were usual types of interventions in money market by SBP, in line with monetary stance of that time, but these monetary interventions did not derail the stock market. For one, banking liquidity levels were fairly comfortable throughout the period; there was no crisis of banking liquidity or banking credit preceding the crash that began to unfold in second quarter of 2008. SBP was keen to ensure adequate liquidity levels, which at times were in contrast to monetary stance adopted for objectives of economic management. Why such a sudden and massive reversal and what triggered it, is something that needs to be analyzed further.

5. Liquidity levels aside, causes of crisis were external to monetary or economic management of that time period. Domestically, financial system flows did not show any dramatic diversion of investable funds to stock market that could account for buying frenzy that set in and its subsequent reversal. Neither banks enhanced their own exposure to stock market, nor did they engage in margin financing beyond rudimentary levels that they were providing through brokerages at that time, if they did at all. Financing of stock purchases at inflated prices could be ascribed only to informal flows on private account. That investors were overextended was well known, but this analysis does not pinpoint any financial trigger to the onset of crisis.

6. Did the system of *badla financing* provide resources and thus was a catalyst to buying frenzy that prevailed during latter part of boom years? This is hard to establish; yet, there was feverish badla-based trading during the boom years. At the same time efforts were underway to shift from informal system of badla financing to the formal system of continuous financing (CFS) through the banking system and the network of brokers and trades as discussed in the section on *badla* versus SFS financing below. These elements have not been sorted out to explain what propelled the market beyond the threshold that could be sustained by corporate and financial fundamentals, except for *badla* financing flows.

7. Did non-financial corporations and businesses in Pakistan engage in acquiring stocks during booms years? This is not clear. For one, corporations and businesses do not have spare financial resources to invest in securities and hold them as income earning assets. They are outstretched relative to their financing needs most of the times; and routinely seek funding from their creditors. They are also leveraged in Pakistan as elsewhere for their working capital needs and can not cover their investment needs without long term credit finance. They can not indulge in stock market investing. This is verifiable from consolidated corporate balance sheet data. If their investment portfolio managers venture into stock markets, they may do so at their own peril as short term traders, not serious investors. It is difficult to imagine a corporate business policy that would contemplate holding an investment portfolio in equities of other companies for income generation and capital gains; even if so, they may invest in TFCs or bonds, but not in stocks.

8. Once the boom crossed a threshold of about KSE 9000 index, it began to be perceived as a bubble and hence unsustainable amid signs of a global slowdown and recession, and mounting economic pressures at home. These pressures were reflected in food shortages whether contrived or real, forcing emergency imports, a significant slowdown in industrial activity, energy crisis in face of swiftly escalating costs of oil imports, rising government deficits mainly from oil and food subsidies, a major deterioration in foreign trade balance, and large outflows of foreign portfolio investment (FPIs).

9. Apart from net FPI inflows during boom years discussed below and in Chapter 11, stock buying frenzy can not be ascribed to enhanced investing by financial institutions in stocks over above the levels that they had routinely maintained as recorded in their investment portfolio and their market exposure. Nor it can be ascribed to investing by non-bank corporations and businesses, because as mentioned above, they are strapped for their needs of financing; they do not have extra resources to invest in stock markets. Some of them may have been tempted to do so, but this is not

a general trend. Their portfolio investment data does not bear this out. All of these factors seem to have contributed their bit to rise of share prices and to increase in *net value* of turnover in stock market.

10. Open capital account facilitated large *outflows* of FPIs, but after the crisis, not during the crisis or before. The timing of opening up of capital account in early years of the past decade, together with a move away from managed float and multiple exchange rate to a unified exchange rate in open currency trading, was being heralded on the basis of large inflows of FDIs and a smaller proportion in FPIs. After the crash in 2008, FPIs reversed as easily as they did in early years, and one could argue open capital account was not properly sequenced in financial reform process. In particular, with liberalization and opening up of foreign trade, exporting did not respond to the same extent as it did in other countries, owing to the structural weaknesses in exporting sectors. Liberalizing and opening up of capital accounts without depth and due resilience in export performance or without large net Foreign Service inflows, compensating the outflows of FPIs or Pakistani overseas investors created an adverse situation for stock markets.

Parallel Market Flows

11. This would appear rather far fetched if one were to focus only on documented flows through financial system of Pakistan, particularly banks and authorized foreign exchange dealers, namely exchange companies. During boom period, much of stock acquisition was financed from investor's own resources, and a good deal of it from informal inflows. Because, the other side of the coin is that as stock market crashed, much larger outflows seem to have occurred through undocumented channels. A few big ones were apprehended, but most were not. Further, as regards currency trading, Pakistan is very open country, regardless of the drive for documentation and above board transactions.

12. By late 2007, sensing impending market correction, investors had already left the same way they had come into Pakistan's stock market and also real estate market, namely via undocumented transfers of substantially large *havala* or transactions that were not eliminated in spite of all the efforts made by authorities concerned. One of the reasons was that even though Pakistan has moved away from *dirty float* to a market based unified exchange rate, there still existed a margin, howsoever small on these

transactions, with the added advantage of tax evasion or scrutiny of account holders. Their departure was evidenced in the boom of Dubai real estate market where Pakistan is reportedly among the top five, if not the top three, foreign real estate investors; incredulous though it seems.

13. Once banks were authorized to keep the proceeds of trade and capital accounts in foreign currencies, but duly reported to SBP, many were not prepared to handle multi-currency portfolio in substantial amounts given the risk of adverse exchange rate movements. They were not equipped to deal with foreign currency risks, nor were they experienced at mitigation of such risks through arbitrage techniques, for the reasons that it was needed for a long time. They were used to surrendering export proceeds, the main source of foreign exchange and foreign currency deposits to SBP at the close of the day exchange rates. From thereon, all foreign currency obligations arising from banking business were effectively and materially a liability of SBP, not theirs. Whatever the reasons, there was substantial withdrawal of funds from stock market by large institutional investors as well as foreign investors which contributed to stock market crash in 2008.

Section 3: Global Market Collapse and *Market Crash in Pakistan*

1. The stock market crash in Pakistan and global market collapse coincided, but was it triggered by global market trend needs to be examined in some detail, though it has been briefly discussed earlier. The literature is now poring out, and questions are being raised about the core of economic and financial theoretical framework, its fundamental constructs and its underlying premises. Much of the edifice of financial and economic analysis, particularly its applied counterpart, was meticulously created over the past decades by an assemblage of specialists of a caliber that inspired admiration and awe among many. A great deal of it is enshrined in models of economic and financial market behaviour, deterministic or stochastic, with fairly complex sets of interdependent equations of financial systems with a strong tilt towards monetary management. Their analytical and modeling techniques, their operational research capabilities, their applicability and reliability in the applied realm were never doubted, much less questioned.

2. Most central banks, especially among advanced countries, the Fed in the US, Bank of England in UK among others, have very sophisticated monetary models, painstakingly integrated and intertwined with leading elements of financial system, including complex of sub-models of monetary behavior, that have been time tested over and over and their results reported and discussed in leading economic and financial journals. In a sense, they are revered as an academic discipline of their own; but a daunting challenge to students of mathematical economics, finance and econometrics.

3. Then why the failure to spot impending crises, not only in 2008, but time and again over past couple of decades. With that kind of unanswerable question, all the above seems to have changed. A view point is emerging that science of economics and finance, its conceptual framework, or its analytical apparatus is inadequate or may even be flawed. The contention is that somehow this edifice and its applied counterpart is incapable of dealing with complexities of modern financial markets and their responses to stresses; otherwise it would have pointed out weaknesses and given warning of crisis. The recurring criticism is that participants of financial markets, economists and financial specialist, all have failed to spot time and again accumulation of pressure points, erupting in crises of ferocity and of global dimensions over the past three decades, never seen before. This analytical regimen, therefore, must have shortcomings of some critical manner.

4. The rejoinders have begun to appear that 'economics does not lie', that there is nothing wrong with theoretical constructs. This literature is challenging reading because it questions the efficacy or veracity of existing body of knowledge. But we already have digressed a good deal from the theme that we need to pursue. Let us return to it.

5. The collapse of global financial markets of 2008 among advanced countries is erroneously cited as a factor in stock market collapse in Pakistan. This is simply not the case, because market collapse and its antecedents in Pakistan preceded global financial crisis of late 2008. It had already surfaced some eight months earlier than the full force of global crises. But in popular perception, collapse occurred almost at the same time; therefore, there must be some link between the two. A closer look however would reveal that both the crises had their origination in very different set of circumstances which were not connected in a meaningful way. There were no financial or operational linkages between stock market of Pakistan and stock market in the US or European countries, and no market-based interlinks among their capital markets as they were in other economies. It was a coincidence in time frame, but not in the causal sequence in which the two crises occurred.

6. To begin with, global market collapse of 2008 was not global after all. The accompanying economic recession was global, almost, but it started after main elements of financial crisis had played out their role. The financial crisis and market collapse was mostly confined to US and leading European countries, but genesis of crisis and its severity were different between the US and European countries, not to speak of Latin American or Asian countries. The crisis impacted the largest and most influential of all markets, the US market, and on a scale that seemed global. Its rapidity and its impact could not be visualized even by specialists. The financial dimensions of the collapse of sub-prime market in the US, followed by insolvency of their creditors the banks, massive losses to their underwriters, the insurers was immense. It led to insolvency of those holding securitized portfolio, the large investment banks. Their combined losses were substantial. Given their presence in overseas market, their insolvency appeared to be global in its reach.

7. In the US, the crisis had its genesis in property price bubble of classic variety funded by banking system. But sign of financial distress first appeared not among banks who had originated mortgage lending in blatant disregard of good banking practices; rather it showed up among investment banks who were over-extended in securitized sub-prime market of real estate loans, backed by large insurers. Most private investors who borrowed funds were not financially sound; they were not eligible for such loans. *Only if* their creditors had done their due diligence more thoroughly, was the refrain most commonly heard around. How widespread were bad banking practices became apparent later when bank after bank had to resort to foreclosure proceedings. Much of borrowing and investing by real estate speculators was done in anticipation of quick turnover for large capital gains, contingent upon rising resale prices of heavily mortgaged properties. This is a familiar sequence of events that has repeated itself over the past decades.

8. The default of real estate sub-prime borrowers began with a drop in real estate prices where retail investors were most exposed. As real property prices began to slide, the speculators dumped their holdings; but a large number of retail investors got caught in the cycle of declining prices, with no relief insight for unusually large mortgage payments, that could not be supported by their cash flows. The defaults quickly spread to the main banking system. The banks had bundled their sub-prime or below prime real estate loans into securitized assets, then sold to large banks and investment houses. Insolvency of these sub-prime or non-prime borrowers had a domino like impact on all those holding securitized sub-prime assets, guaranteed by insurers. It looks like that bad banking business after all, is not a monopoly of fragile banking systems of developing countries only; it permeates even advanced banking systems, and ignobly so.

9. Thus, crisis originated from non-performing loans of banking system and subsequently it spread to financial markets. The *contagion effect* of banking system failure in the US spread to Europe, where impact was first felt on their banking system. In earlier rounds, the prevailing wisdom was that financial institutions were so large that their insolvency could not even be contemplated, and that some kind of bail out scheme would emerge, preventing collapse of large financial institutions. They were considered just 'too big to fail'. Later on it engulfed stock markets of the US and European countries and affected global markets as well, but not in crisis proportions as in advanced countries.

10. In the aftermath of crises, bail out was arranged involving governments and their legislatures where once again public at large ended-up underwriting the costs of bail out on a scale that would hamstring public finance positions of advanced countries for long time to come. It has highlighted corporate greed as major causes of the crisis. This revived specter of nationalizing banks and other financial institutions in a repudiation of unfettered market mechanisms, a notion to revert to back to state ownership or control that could not be contemplated before. That markets are inefficient, that they are not self-correcting, and that they have proven to be incapable of regulating themselves was driven home in a stark fashion in the aftermath of crisis. The consequences would be felt for a long time to come.

11. Financial crisis in advanced economies was *followed* by recession; not *preceded* by it; emanating largely from the widespread financial distress and insolvencies both in the US and European countries. This recession also affected developing countries including Pakistan. Since both the banking system and financial markets were simultaneously caught in the throes of recession, central banks and policy makers in advanced countries were all pre-occupied to prevent the crisis from further intensifying itself. In the frenzy of these efforts, dealing with looming recession took a back seat in their priorities.

12. The response of most central banks was of classic variety. To stem the tide and to prevent their economies into recession, Fed in US and European central banks began lowering bank rates from about 2-3 per cent to 0-1 percent. Japanese central bank had traversed the same path nearly a decade ago, but without much success. Large money center banks of the US and some European ones saw their share prices slide down to barely a few dollars, wiping out their capital base; not to mention losses securities market investors had to endure on their stock portfolios.

13. As happened in mid-1980s, the legislatures were once again called upon to deal with widespread bank failures. The mind-set of 'too big to fail' had to be dealt with and countered by enacting hastily devised safety nets to stem the hemorrhage and to limit contagion effect from spreading further. The recession thus took a grip that was not loosened until the end of 2010. The costs of safety net were staggering, breaking all previous records, and reconfirming that money markets, credit markets and securities market can not be relied upon to do self regulation. Institutional participants of these markets had failed to take notice of distortions caused by excessive sub-prime lending. Early warning systems were not early enough to give indication of financial distress, much less prodding institutions for a u-turn in their operations to prevent the crisis. In particular central banks were singled out for criticism to have loosened their watch on banking system, but were spared the blame of financial market collapse.

14. In Pakistan, sequence of crisis was in the reverse. The collapse of stock market preceded collapse of real estate market; in advanced countries it was just the opposite. Further, banking system was not involved; for the reason that in Pakistan, mortgage lending is negligible. Nor the banking system was exposed to margin financing in any significant manner. The system of margin financing was not in full force, and was eventually truncated for leveraged investing by early 2009. Hence, neither real estate financing, nor margin financing had anything to do with market collapse. With stock prices declining, and nowhere to escape, investors pulled out of both stock market and real estate market in droves. Much of this pull out happened via parallel economy transactions; some illustrious exchange companies were caught in the scam; but that was only tip of the iceberg. There is no way to ascertain how massive the pull out was. Since that time, stock market has recovered but real estate market is still in doldrums.

15. This stylized summary conveys howsoever inadequately, a gist of factors, underlying *global* market crisis of 2008. The crisis hardly had much to do with developments in stock market of Pakistan beyond the 'noise effect' that occurred in parallel while stock market went into a tailspin for the reasons analyzed above. There was no direct link between these two episodes. The causes of stock market crash in Pakistan were largely home grown; it was not caused by panicky withdrawal of foreign investors and a reversal of foreign portfolio investment the way it was in previous crises in Mexico and East Asian countries during the 1990s. This conclusion is borne out by the tiny exposure of Pakistan to foreign portfolio investment. Its profile is outlined below in the context of market capitalization levels at different times during the past decade, especially during the boom years, and shortly thereafter.

Foreign Portfolio Investment – Pakistan *Linkages with Market Collapse*

16. A view point is often put across that net foreign portfolio investment (FPI) inflows contributed to frenzy of investing in stock market of Pakistan in boom years, and subsequently, their swift exit was a major factor in collapse of the market. This is discussed in detail in Chapter 11. The argument is that volatility of FPI inflows were a factor in stock market volatility over the period under review, but this can not be substantiated by analysis presented here. Net inflows of FPI during first four years of this decade, FY00-03, were negative for a total amount of \$1.4 billion. Given the sustained growth of stock market as shown by KSE-100 index, foreign investors returned during FY04 with a net inflow of equity finance a paltry \$314 million which was a negligible 1.3 percent of total market capitalization. (See *Data Sets 6.2, 8.5*) Thereafter net FPIs began to rise. Net inflow reached \$620 million in FY05, rising to \$986 million in FY06, and jumped to \$ 3283 million in FY07. At the peak level in FY07, net FPI inflow was about 5 percent of total market capitalization. These are annual flows, not stocks.

17. The stock position of FPIs is not known, but can be estimated in a cumulative fashion for the decade of 2000s. Supposedly, net FPIs during FY04-07 remained invested, their combined exposure in the stock market of Pakistan at the end of FY07 then would be no more than Rs 312 billion in a market capitalization of about Rs 3981 billion in June 2007, or at the most about 8 percent. This may have continued during June-December of 2007, though this can not be substantiated since monthly data is not available. During FY08, net FPIs dried out to \$32 million mainly because for foreign investors, the limit of exposure had already been reached by July 2007. After FY08, FPIs reversed as fast as they had come in; there was net outflow of about \$1.0 billion in FY09.

18. These are documented flows rather at modest levels relative to total size of market. It looks like they did contribute towards swings in stock market, but net FPIs were neither the catalyst for stock price increases, nor they caused the crisis on their own as they did in spectacular fashion in Mexico in the mid-1990s, and in East Asian countries in late 1990s, owing to their relative size in those stock markets. The analysis shows that in Pakistan, net FPIs were no more than a small contributing factor to stock market trends. The relative size of these inflows was nowhere near the size of similar inflows in East Asian or Latin American countries, where they had occupied a commanding presence for a long time.

Section 4: Sectoral Capitalization - Trends

1. The trend of share prices is reflected by all indices mentioned above, their composition or orientation notwithstanding. Market capitalization by sectors is based on end-period stock prices and shares outstanding. The long term series presented here is useful to analyze trends of stock market activity *by sectors* as well as private sector investment orientations in Pakistan. A few leading strands of this analysis are presented below.
2. Market capitalization of listed companies is a mirror image of movement of stock price index. It has to be. As discussed earlier, growth of market capitalization was almost identical to growth in prices of stocks constituting KSE-All index or KSE-100 index. Market capitalization of all 759 companies listed at KSE in FY01, was Rs 339 billion, the lowest recorded in the past decade. Within two years, by FY03, market capitalization had doubled to Rs 746 billion, while number of companies listed declined to 701 over the same period which is rather odd, and it has persisted throughout this decade. (see Data Set 8.6) By FY07, market capitalization was Rs 3980 billion, nearly 10 times the FY00 level, at average annual rate of about 39 percent an astounding growth for of six years.
3. At the peak of boom in April 2008, market capitalization stood at Rs 4688 billion, highest it ever reached in the decade of 2000s. From there onwards, it was down hill for capitalization levels as stock prices begin to collapse rapidly. The KSE-100 index at its peak was about 15600 in April of 2008, and by August, it had lost nearly 60 percent, and was down to 9200 level where it stayed for four months, not because market had stabilized but owing to imposition of market floor discussed earlier. As soon as market re-opened, by end January KSE-100 index had collapsed to nearly 4800, a level that had prevailed during early months of 2004. Market gains of six years were lost in a few weeks of trading shortly after its re-opening in December. Such was the rapidity of market collapse.
4. The number of listed companies kept dwindling during boom years. Towards close of the decade, there were 651 companies in FY09, 111 less than at the start of the decade. While stock prices and capitalization was growing, these companies got *delisted* at KSE. It is not known whether it happened because of bankruptcies, consolidation, mergers, buy-outs, or plain shut down. It appears that *de-listing* had little to do with corporate valuation as expressed by market capitalization levels. Similarly, there is hardly any delisting just because of bearish trends or no trend in stock market. Delisting is largely independent of market trends, and its dwindling during boom years is odd as discussed in sub-section on market concentration.

5. Typically, in booming markets, existing companies push for stock split thereby significantly enhancing capital gains of stock holders, while unlisted companies intensify their efforts to gain listing at stock exchanges to play on their leverage and to enhance their capital gains. In Pakistan it happened in the reverse. What were the causes of this trend? Clearly business and companies shy away from listing in Pakistan; their contention is that they refrain from going public and listing on stock exchange because of intrusive or adversarial behaviour of licensing and tax authorities concerned. Official version is that this corporate behavior owes to disclosure requirements that place a company under public scrutiny after going public which it was not used to during unlisted status. But the main motive is tax avoidance.

6. During boom years, there was reasonably fast increase in listed capital, the own equity of original shareholders of the listed companies, pursuant to even faster increase in their capital base, though there is no direct causal link between them. In June 2001, listed capital of 759 companies was Rs 240 billion, while the size of market capitalization was Rs 339 billion. By mid-2007, listed capital did increase to Rs 631 billion, nearly two and half times the level of mid-2001, but market capitalization by mid-2007 was about Rs 4 billion, nearly 12 times the level of mid-2001. The average annual rate of growth of listed capital was 17.5 percent, but the rate of growth of market capitalization over the same six year period was 51 percent. Much of this increase however was concentrated during FY03-07, when capitalization increased at the annual rate of 52 percent year—a truly astounding rate of growth by any yardstick.

7. The fastest growth in market capitalization during FY00-10 occurred among bank and non-bank financial institutions at an average annual rate of 35.6 per cent, though this composite rate of growth was very volatile and was concentrated among banking institutions. During FY03-07, the four boom years, the composite growth of capitalization was very high at an unparalleled 100 percent per year, meaning capitalization levels were doubling every year. (*see Data Set 8.6a*) During crash and recovery period, FY07-10, there was a decline in capitalization of about 23 percent per year. In value, capitalization of financial institutions was Rs 65 billion; it increased to Rs 583 billion by end of FY06; and then doubled within a year, and stood at an all time high of Rs 1264 billion at end of FY07. By the end of FY10, these capitalization levels were reduced in half and were Rs 620 billion. What gyrations this must have caused to the *profile* of annual assessments based on leading financial indicators and ratios of the banking and non-banking institutions alike.

8. If we decompose this growth between banks and non-banks financial institutions, these trends get more accentuated towards banking institutions. Their growth of capitalization for the whole decade, FY00-10, was about 42 percent per year, meaning a doubling of their capital every two and half years, or in a slightly less period. In the boom years, capitalization of banks was doubling in less than a year, as their average annual growth was 110 percent over these four years. After the crash and upto close of FY10, for three consecutive years, there was a decline in capitalization at an average annual rate of 21 percent. Such were the dimensions of volatility in capitalization of banks in Pakistan over the past decade.

9. Capitalization growth of non-bank financial institutions was far behind, and if we remove its leading components namely mutual funds and insurance companies, their composite is likely to fall below industry trends and averages. As it was, capitalization of all NBFIs as group was about 22 percent for the whole decade, the same market capitalization of stock market. with same patterns of volatility during boom years and after, except during last three years. NBFIs capitalization eroded faster at average annual rate of about 30 percent over the three years as compared to erosion of capitalization of 12 per cent for the stock market over the same period.

10. During the period of boom, banks must have known that stock price increases of its prime clients is out of kilter with regard to their financial performance in productive sectors of the economy. After all, financial strength of banks is beholden to the financial strength of its borrowers, and in normal times it closely reflects what transpires in the corporate sector, both on the downside and upside. But during the boom years, never a voice of caution was raised by banking institutions that stock prices of their clients are way out of line. Perhaps it is not their role; but this failure is reminiscent of the failure of those supposedly knowledgeable and far more resourceful in advanced countries. The regulatory institutions were too caught up in routine up down of capital markets over a short period whose trends seemed to have no end to its steep rise. No word of caution appeared from those quarters either that stock prices are way out of line and over due for a 'correction', not to speak of an imminent market failure, a crash.

11. Perhaps the analysts and researchers were too mesmerized by ratings of KSE performance appearing as part of MSCI (Morgan Stanley Capital International) index, used as a benchmark in international comparisons, alongwith those of emerging market economies, a clear indication that stock market of Pakistan has finally arrived on the scene. It is the same Morgan Stanley which had declared that there was 'no case' for investing in Pakistan a decade ago at the time of closing down at a considerable of its mutual fund

with exposure in Pakistan's stock market. Since then KSE has lately been dropped from emerging market grouping of MSCI index. International financial institutions had shifted to poverty alleviation, and had long given up doing any substantive analysis of financial system of their own except for occasional forays of their surrogates who could not develop a longer term perspective on these issues. It seems that warning failure is an endemic failure, be it a developing country or advanced country. No one likes to be harbinger of bad news in the frenzy of profit taking while the picnic lasts.

12. Apart from volatility, this long term growth reflected almost the same pattern across most developing countries including some comparator countries, India being one of them, who traversed from state-owned banking and financial system to privatized financial system over the last half a century after their misguided venture into nationalized financial system. Financial system reforms were at the centre stage of this transformation. In Pakistan, there was an influx of new financial institutions that were established during this period owing to revamping of laws and rules of entry as a major plank of financial reforms. These new institutions were not only new banks both foreign and domestic owing to easy licensing policy, but also NBFIs, such as leasing companies, mutual funds and Islamic banks.

13. The second reason of this increase in capitalization of financial institutions was a significant increase in capital requirements of banking institutions, both new and old as part of implementation of Basel capital adequacy standards. This is discussed in detail in Chapter 12 of **Volume I**. The equity replenishment requirements of early years of the decade of 2000s were aimed primarily at strengthening capital base of banks for prudential reasons, but in part they were motivated by limiting entry of new banks in the system. Too many banks, mostly small ones were established during the 1990s in Pakistan and their number stood at 43 by year 2000.

14. Simultaneously, the influx of a large number of new leasing companies and mutual funds and other financial institutions during FY01-09, where a good number of them were subsidiaries of large banks, led to increase in capital base. This increase in capital base of was significantly augmented by increase in their share prices in the stock market where only a few of them were listed on stock exchanges. As a result, market capitalized value of financial institutions increased nearly **40 times** from Rs 38 billion in FY01 to Rs 1554 billion in FY07. True, this capitalized value saw a drastic reduction within two years to Rs 630 billion by the end of FY09.

15. The equity base of NBFIs, however, was a smaller proportion of total paid-up capital of all financial institutions, for the reason that these NBFIs were mostly start-up of relatively small leasing companies and mutual funds. The largest part of increase in capital base was among banks, and in this group, it was due mainly to privatization of UBL and HBL, the largest banks in country. Since sale of UBL was to foreign investors, foreign equity inflow from their sale was largest item in total FDI inflow in mid-years.

16. A similar trend has prevailed among the Eastern European countries and the newly independent countries of the former Soviet Union. Almost immediately after break-up of the former Soviet Union, there was a mushrooming of small private banks in Russia as well as in all the former socialist states of Eastern Europe. Up until mid-1991, there were no private banks in Russia. By 1994, number of licenses issued for banks was an astounding 2700. It appeared as though suddenly everyone with any influence and little amount of equity could open up a banking shop even in remotest part of the country without any discernible level of local business and commerce. The same happened in former republics of Soviet Union, including seven Central Asian Republics. These upstart and tiny banks added to the fragility of erstwhile banking system, emerging from shadows of socialist banking or what ever it was then. These new banks became a major concern for stability, because if they were to face financial distress, it would get transmitted to main stream banking system.

17. In Pakistan, next to increase in capitalization of financial institutions is the increase in capitalization of energy sector companies as discussed above, though there were small annual variations. Market capitalization of fuel and energy sector increased at the rate of 27 percent per year during the decade, and its share rose from about 22 per cent in FY00 to about 35 percent by FY09 in total market capitalization. (see *Data Set 8.6, 8.6a*) Thus, financial institutions and energy sector together comprised nearly two thirds of capitalized value of all companies listed at stock exchanges.

18. In contrast, relative shares of chemicals, pharmaceuticals, textiles, and transport and communications sectors declined over this period. This occurred in spite of huge foreign investment and entry of a large number of foreign companies in tele-communication sector. Similarly, during early years, there was a concerted effort at balancing, modernization and rehabilitation (BMR) of textile companies, accompanied by large investment in this sector. This should have led to increase in capitalization and it did at corporate level; still, relative share of textile sector in total market capitalization decrease significantly from 11 percent in FY00 to 2.5 percent by FY10. This sounds rather odd, but it happened because capitalization of financial sector, communication and energy sectors was even faster.

19. As sectoral breakdown of capitalization data shows, there was a *significant shift* in relative shares of capitalized value among leading sectors in the country. At start of the decade, nearly 75 percent of market capitalization was concentrated among four sectors; namely transport and communications has a share of 27%; fuel and energy 22%; pharmaceuticals and chemicals 14%; and cotton textiles 11 percent. Share of financial institution led by banks was close behind with shares of 9 percent. Later on, there was an explosive growth in market capitalization of banks and financial institutions at a rate of 36 percent per year during the decade; consequently their share in total capitalization rose to about 30 percent by FY09, but dropped to 27 percent by FY10 at the end of the decade as compared with 9 percent at the start of the decade. These shifts in sectoral shares reflect structural changes in publicly owned private corporate sector of Pakistan, but not necessarily of family owned or group owned companies outside the orbit of stock exchange listings. Therefore, this analysis and its results need to be interpreted with caution.

Chapter 9: End

Data Set 8.5		Stock Market- Pakistan										End June, Rs billions				
		FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10				
5	Market Capitalisation, KSE	392	339	408	746	1403	2037	2766	3981	3744	2120	2732				
6	KSE Market Capitalisation as % of GDP	10.5	8.3	9.2	15.0	24.3	30.3	35.6	44.8	36.0	16.2	17.9				
7	KSE, All Share Index \ 1	943	870	1119	2527	3480	4877	6708	9758	8834	5122	6810				
8	KSE - 100, Index \ 2	1520	1366	1770	3042	5279	7450	9989	13772	12289	7162	9722				
9	Listed Companies, number	762	759	725	701	666	659	658	658	652	651	651				
10	Listed Capital, Rs billions	229	240	261	313	377	439	496	631	706	782	910				
11	LahoreSE - 101 Index				2034	2828	3762	4379	4850	3869	2132					
12	Mkt Capitalisation, LSE, Rs billions				751	1406	1995	2693	3185	3514	2018					
13	IslambadSE - 10 Index				8210	11894	11571	11528	2716	2750	1713	3093				
14	Mkt Capitalisation, ISE, Rs billions				541	1106	998	2101	3060	2872	1705	2261				
15																
16	Net Foreign Private Investment, \$ millions \ 3	-77	174	-5	532	1220	2079	4436	8309	5367	2622	2145				
17	net Foreign Direct Investment (FDI, \$) \ 3	472	323	486	771	906	1459	3450	5026	5335	3695	2209				
18	net Foreign Portfolio Investment (FPI, \$) \ 3	-549	-149	-491	-239	314	620	986	3283	32	-1073	-64				
19	net FPI inflow, Rs billions	-29	-9	-30	-14	18	37	59	198	2	-87	-5				
20	Net FPI as % of Mkt Capitalisation \ 4	-7.3	-2.8	-7.2	-1.9	1.3	1.8	2.1	5.0	0.1	-4.1	-0.2				
21																
22		Average Annual Growth Rates										Average Annual Growth Rates				
23		FY00-10	FY00-07	FY07-10					FY01-07	FY02-07	FY07-10					
24	KSE, All Share Index \ 1	21.9%	39.6%	-11.3%					49.6%	54.2%	-11.3%					
25	KSE - 100, Index \ 2	20.4%	37.0%	-11.0%					47.0%	50.7%	-11.0%					
26	Listed Capital, Rs billions	14.8%	15.6%	13.0%					17.5%	19.3%	13.0%					
27	KSE Mkt Capitalisation	21.4%	39.3%	-11.8%					50.8%	57.7%	-11.8%					
28																
29	GDP (nominal MP)	3746	4108	4425	4974	5766	6716	7773	8881	10400	13082	15239				
30	Saf Data Set	Source: SBP Annual Reports FY00 thru FY09, Data Annexes & Monthly Bulletin														
31	\ 1 All share Index Base, Sep 95 = 1000	\ 2 KSE-100 Index Base, 1991 = 1000														
32	\ 3 in millions of US dollars; Rs equivalent derived using annual exchange rates from 6.0 data set.															
33																

Data Set 8.5a		Stock Market, Pakistan										End June, Rs billions					
		FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10					
				(annual growth rate)													
34																	
35																	
36																	
37																	
38																	
39	KSE, All Share Index \ 1		-7.7	28.6	125.8	37.7	40.1	37.5	45.5	-9.5	-42.0	33.0					
40	KSE - 100, Index \ 2		-10.1	29.6	71.9	73.5	41.1	34.1	37.9	-10.8	-41.7	35.7					
41	KSE Mkt Capitalisation		-13.5	20.4	82.8	88.1	45.2	35.8	43.9	-6.0	-43.4	28.9					
42																	
43																	
44																	
45	Emerging Markets, P/E Ratios \ 4							2006	2007	2008	2009	2010					
46	All Emerging Market Countries (21)							15.7	17.1	8.5	20.6	14.6					
47	Asia							15.8	19.0	9.4	24.3	15.2					
48	China							21.0	27.0	10.3	21.1	14.6					
49	India							22.9	32.8	10.5	21.8	22.4					
50	Indonesia							19.5	21.5	8.7	16.4	19.0					
51	Malaysia							18.4	16.9	10.2	20.3	18.1					
52	Pakistan							10.0	13.4	3.8	10.1	9.1					
53	Philippines							17.7	16.5	11.7	19.1	17.5					
54	Sri Lanka							21.5	14.7	7.1	77.7	20.5					
55	Thailand							9.1	14.8	7.1	19.3	14.8					
56																	
57	Latin America							14.7	16.0	9.0	18.3	15.9					
58	Brazil							12.8	15.5	7.9	17.0	13.8					
59	Mexico							17.3	16.4	12.3	22.7	23.9					
60	Argentina							16.7	13.1	3.7	8.0	8.8					
61	Chile							23.6	22.1	13.3	18.7	21.4					
62	Colombia							20.1	27.0	13.4	25.1	23.5					
63																	
64	Source: IMF, May 2011, Global Financial Stability Report, April 2011; excerpted from Stanley Morgan Capital International,																

Chapter - 10: Stock Market - *Pakistan*

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Chapter 10: Stock Market - *Pakistan* *Issues of Future Growth*

Section 1: Portfolio Financing

1. The primary source of financing an investment portfolio for private non-institutional investors is their own savings balances transferred for investment in securities markets. Beyond their own financing, individual investors have limited access to borrowed funds in absence of institutional mechanisms of margin finance as is the case in Pakistan discussed below. For this reason alone, private non-institutional investing in securities market is a smaller part of the total investment outstanding in all securities market at any given time period. A much larger part of investing in securities is undertaken by *institutional investors* – banks, mutual funds, corporations, investment funds, insurance companies, and foreign investors who may invest directly in stock market or may invest through emerging market mutual funds as they mostly do, which is the preferred mode of foreign portfolio investment in developing countries.

2. Institutional investors, particularly insurance companies and pension funds have their own sources of financing available for investment purposes since their money balances arise from contractual savings activities, unrelated to stock market trends and activities, guaranteeing a sustained source of portfolio financing. In contrast, sources of portfolio financing for mutual funds and asset management companies are based on share purchases of individual investors who avoid direct investing in the securities market in a bid to diversify their risks of investing through buying into massive portfolios managed by these institutions. In between, there are institutional investors like commercial banks, who rely primarily upon their deposit base or other sources of funds generated from their banking activities. Business and corporations usually do not invest in securities markets for reasons already discussed. Briefly, they are already into credit financing to the hilt; do not have spare cash lying around to invest in securities markets, much less borrowed funds.

3. Those who are active investors and need financing beyond their own sources or their own accumulated funds to invest in securities market, they need access to margin financing, be they private investors or institutional investors. Again, among institutional investors, very few would borrow to invest in securities markets, except for arbitrageurs or leveraged investors and speculators. Therefore, availability of margin finance is more a concern for clients of brokerages, asset management companies, investment companies and individual investors, rather than a concern for mutual funds, contractual savings institutions or commercial banks, the largest investors in securities markets.

Margin Finance – *the Basics*

4. As comparative experience has shown, for long term and sustained growth of stock market a formal system of financing share purchases in stock market is essential, be they private individual investors or institutional investors. The financing system has to be funded by market based costs of banking credit plus a premium for risk to ensure availability of large amounts of financing. The rules, regulations and requirement of underlying the financing mechanism have to be clearly specified and enforced by regulatory authorities to prevent abuses of the system. These fundamentals must be in place if the system is to survive crises and shocks which periodically occur in stock markets of developing and advanced countries.

5. There are two sources of margin finance. The largest and most viable is a bank credit, a direct loan to the investor if banks are extending such a credit. In practice banks do not extend such credit on retail basis. They would rather extend a line of credit type facility to selected brokers pre-qualified for margin financing under rules, practices and procedures of onward lending. Therefore, for odd-lot non-institutional investors, the only source is to secure a margin loan from their broker if the broker is in this business of financing.

6. Such a credit facility may be extended by brokerage firm or by securities dealer with whom the investor is maintaining his portfolio account under a *margin contract*. The loan is obtained specifically to buy stocks and shares as an addition to existing stock portfolio. The amount of margin financing extended by lending broker is smaller than market value of investor's existing stock portfolio. It is specified by lending broker as some percentage of *each* stock in the portfolio, qualified for margin financing

based on its risk return rating; because not all stocks are eligible as collateral for margin finance. After stock purchase from margin finance is completed, market value of the stock becomes new basis for additional lending if margin finance is accessed by the investor.

7. Margin finance is typically extended by brokerages but only to their client investors with well established financial records including size and value of portfolio verifying creditworthiness, record of all transactions and turnover values. The amount of margin finance available to an investor is determined by the lending broker, but within rules set forth by the central bank to regulate margin finance since in essence it is credit financing undertaken by the banking system at wholesale level. The broker is not free to extend any arbitrary amount as such, rather it is based on carefully determined and explicitly stated *margin requirements* as stipulated in the rules and regulations based on market value of shares which keeps changing while trading is going on at stock exchanges.

8. To start with, there is *initial margin requirement*, which is some specified portion of total market value of shares in the portfolio account of the investor with the broker, outside of any other stock holdings of the same investor elsewhere. Next is the *margin maintenance requirement*, based on the value of collateralized portfolio as explained below. These margin requirements, concern stock trading and are different from requirements for derivatives trading. Those requirements are specified separately for different types of derivatives being traded, like options and futures.

9. Note that initial margin requirements as well as margin maintenance requirements, both are set by regulators, primarily the central bank because it has to do with use of credit based on some collateral. Funding for margin finance facility originates from banking credit, obtained by broker as a pre-established line of revolving credit obtained from a large commercial bank, though margin loan to investors is extended by the broker on retail basis. Thus, margin finance is a variation of banking credit, channeled through brokers and specifically designed for stock market investors. Therefore, margin requirements for trading in stocks are set by regulators and are different for financing trading in stocks and trading in derivatives.

10. The *collateral* for margin loan is the value of existing securities in the investor's portfolio. After new securities are acquired, they also become part of collateral in some combination of new securities as well as old ones, specifically designated as *margin securities* depending on their risk ratings and broker defined risk thresholds. Thus, not all securities held in a portfolio may be treated as margin securities. The amount borrowed is based on some

stipulated proportion of net market value of *margin securities*, and is subject to terms and conditions of margin maintenance requirements, which are a part of the loan agreement that investor has to agree with and furnish documentation *before* margin financing facility becomes effective. The most important requirement concerns market value of securities, called *margin positions* tendered as collateral, specifying that if market value of margin securities were to decrease by a pre-specified proportion, say one third, owing to adverse stock market movements, margin loan will be recalled and is payable in cash or securities of equal value. For these reasons, margin maintenance requirements are higher for volatile securities; otherwise, it is roughly one third of market value at the time of access to margin finance.

11. The *cost* of margin finance is variable and is continuously changing based on credit market conditions and interest rate movements. The cost is pegged to some bench mark rate of interest specified in the margin contract plus a premium which also fluctuates depending on investing features. Under the contract, the lending broker has the right to change the cost of outstanding margin loan as well as new loans. These cost feature crucially hinge upon the role of central bank concerning management of liquidity and interest rates in the money markets as part of its monetary policy stance over any given time period. Hence, the cost of margin finance is *variable* and is not independent of what transpires in money markets over short term.

12. In times of booming securities markets, investors borrow margin loans in anticipation of quick capital gains well above cost of margin loans. But if these anticipations turn sour owing to market reversal, investor faces huge losses plus costs of *margin loan re-calls* which are automatically triggered if market value of pledged securities in investor's portfolio has plunged down below a pre-agreed level, thereby impairing collateral. The recall or *margin call* as it is known in practice made by lender stockbroker. Recall of margin loan may be in full amount outstanding, or some proportion of it, which must be repaid in cash by the borrower on a stipulated date and time, usually end of the trading day. Failing that, lender has the right to liquidate part of investor's portfolio to satisfy margin call requirements. This forced sale involves a substantial loss to the borrower because timing and value of sale may not be most beneficial to the investor.

13. Such a situation is not uncommon, and arises mostly due to market volatility and adverse movement in the market value of securities thus acquired; or due to over-exposure of investor to risky stocks compromising soundness of investor's portfolio; or due to lack of liquidity depth in the investor's portfolio with lender broker or securities dealer. *Margin recall* is a dreadful word in the lexicon of investors playing on outer fringes of stock

market using their portfolio as collateral for loans to buy stocks. Margin loans may be seen by risk prone investors with speculative orientation, as an easy way to finance large capital gains at market costs; but they are also an easy way to incur losses on borrowed money. Therefore, prudent investing requires a tight discipline. Part of this discipline is built into exposure limits on margin loans and its recall stipulations, but a more important part concerns investors own investment orientations, rules and procedures of borrowing and investing and self-imposed exposure limits.

Margin Finance vs Badla Finance

14. Margin finance and *badla* finance both are modes of borrowed financing for stock purchases by investors in equity markets beyond what they will be able to purchase and hold otherwise, if they were to be confined to stock purchases from own-financing sources. However, *badla* finance is a mechanism to defer settlement of stock trades by a day or more as agreed between trading parties, creating a short term debt liability for the investor. This deferment is done through a repurchase agreement to carry-over stock trading transaction (COT) which is another name of *badla* finance. The price differential between the two transactions involving purchase and repurchase of a stock determines the cost of *badla* finance, together with brokerage fees and settlement charges as applicable to execute settlement of trade.

15. The mechanisms of borrowing margin finance markedly differ from mechanisms of *badla* finance as discussed earlier. Both these financing mechanisms enable investors to leverage their invested positions depending upon rules and practices of financing that vary depending on portfolio composition and market conditions. Borrowing, investing and leveraging is done in *expectation of* increase in stock prices over very short periods, typically during a trading day or at the most over a few days during strong bullish trends in stock market.

16. Margin finance is regulated by central bank because its wide spread use has implications for liquidity and banking credit at macrofinancial level. If there is frenzy of stock buying funded in part or at large by margin finance, central bank may impose restrictions to dampen the speculative element in investing. Conversely, if share prices in the market are in a free fall, central bank may ease these requirements together with restrictions on short selling done in anticipation of falling stock prices and large capital gains.

17. The capital gains on stocks acquired through margin finance and consequent increase in total portfolio returns is the prime motive for investors to seek margin finance or *badla* finance. If expectations materialize, such financing could be wildly successful, garnering significant capital gains, well in excess of prudent norms of capital gains, and certainly well beyond returns that may occur on a portfolio built solely from own-financed investments. If *expectations* do not materialize and stock prices were to turn against expected market trends, the leveraged position and bloated market exposure could result in massive losses to investors.

18. Therefore, risks of margin based or *badla* based investing are also disproportionately high, though such considerations take a back seat when herd behavior and irrational expectations take over. A widespread access to margin finance or *badla* finance enhances systemic risks and volatility, often culminating into market crisis as happened in Pakistan in 2008 and in India in early 1990s. These salient elements are common to both systems of financing, but similarities end here. In practice, margin finance as practiced worldwide, be they advanced countries or emerging market countries, is inherently dissimilar to *badla* finance as practiced in the sub-continent, particularly in Pakistan. These dissimilarities are briefly discussed below.

19. First, margin finance as it currently prevails across all countries, is a system of *formal* credit based financing, involving a contractual agreement and its *documentation* between borrowers and lenders, with binding rules of accounting, reporting and disclosure of transactions; transparent rules and regulations of credit; well known procedures of lending; adherence to established norms and practices that are well known to all, be they lenders, borrowers or investors; reporting and adherence to tax regulations and reporting of capital gains or losses by the parties involved.

20. In contrast, *badla* finance is an *informal* arrangement of lending between an investor and a lender who may be a private source, brokerage or any other party and it is based on *social collateral* if it can be called as such. It is an informal arrangement of a credit secured by a trader or investor through his private network on terms agreed among the parties. There is no formal loan documentation; borrowing transactions are based on word of honor between the counterparties; there is no formal reporting to regulatory authorities, and therefore norms and practices of lending usually are not in accord with those prevailing in formal credit arrangements. Likewise, there is no recourse in case of disputes since these transactions are undocumented, informal, hence outside the routine legal framework.

21. Second, margin financing is arranged and secured *before* shares are purchased and settled. The *badla* financing agreement is informal; there is no loan documentation, and no formal collateral is required except for the stocks thus purchased. The identity of financier is not known, though the record of transaction is maintained and market cost is known and is well publicized daily. In this sense, *badla* finance is collateral based lending similar to inter-bank loan based on repurchase (*repo*) agreement which has its own repo market based cost structure.

22. In contrast, *badla* financing is arranged through private network *after* shares have been purchased by the trader/investor; that is, transaction is carried out but has not been closed; it has not been settled on the day of transaction, rather it is carried over through a repurchase agreement between the investor and the financier. The shares thus acquired serve as collateral for short-term *badla* loan.

23. Third, the cost of margin finance is fairly well known and may vary between those providing margin finance but within a narrow band. Typically, the cost is 6-8 points above the short term peg rate of interest like KIBOR in Pakistan. In contrast, *badla* financing costs may significantly vary depending on the credit conditions being extended by private networks. In principle, *badla* financing costs are also pegged to market-based premium, but are not uniform for all stocks; rather the premium is specifically set for the stock whose purchase is being financed. Thus, the cost for a given stock being traded through *badla* finance may fluctuate from day to day or within a trading day. It may even move in opposite direction from costs and value of other stocks depending primarily on the risks and market value of the security being transacted rather than interest rate implicit in *badla* costs.

24. Fourth, as mentioned above, *collateral* for margin finance are securities already held in the portfolio, *prior* to access by investor to buy additional shares or new stocks. After this acquisition is completed, collateral value of portfolio is amended inclusive of new acquisitions; likewise margin loan facility is also amended. In contrast, in *badla* finance, credit is sought after shares have already been purchased, and the collateral tendered by investor consists of new shares, rather than market value of stock portfolio or other liquid assets of the investor. Thus, margin facility is variable though it is held within confines of market value of borrower's portfolio; whereas *badla* finance is independent of portfolio value; instead it is tied to the market value of security being funded and traded.

Margin Finance - Transition to CFS

25. As though these weaknesses of *badla* financing were not enough to consider its replacement with a system of margin financing, there are two other important reasons often cited for the shift towards margin financing. One is the systemic risk inherent in *badla* financing; and second is market volatility ascribed to *badla* financing. Systemic risk is perceived to emerge from domino like defaults that may be triggered by adverse price movements affecting all *badla* based investors, and a step removed their financiers, depending upon their market exposure.

26. As regards market volatility, how much of it can be ascribed to *badla* financing may be debatable, but over the past decades, *badla* financing has been deemed the main factor causing stock market crash both in India and Pakistan. In particular, *badla* financing is considered a destabilizing force leading to stock market crash of 2008 in Pakistan. In India, *badla* financing has been the main factor in derailing Indian stock markets from time to time, notably early 1990s, spurring financial reforms in India together with replacement of *badla* financing with margin financing.

27. In spite of these efforts, *badla* financing has proved more resilient than anticipated by regulatory authorities. In Pakistan, *badla* financing has been substantial in the past years, though operationally it has remained restricted to a small group of investors who are well inter-linked with an informal network of private lenders, arranged mostly by brokerages. During FY04, a variant of margin financing called Continuous Financing System (CFS) was introduced in Pakistan. At that time, the average investment in *badla* market was Rs 20 billion, up from Rs 6 billion in FY03.

28. Given this sharp rise in demand for *badla* finance, the average *badla* rate increased to 11 percent in FY04 from 9 percent that prevailed a year earlier. But these averages hide the volatility of *badla* market rate. During FY04, *badla* rate ranged between 5-17 percent with several sharp reversals. Further, the rise in KSE-100 index closely mirrors the rise in *badla* volume to 331 million shares from 139 million shares the year before, while a good part of the turnover at KSE was ascribed to enhanced levels of *badla* financing.

29. The issue has been whether a system of informal financing is needed to sustain market liquidity and hence trade volumes, given its impact on stock price distortions, and hence its potential for market volatility culminating into destabilized securities market. The consensus was that *badla* financing has to be replaced, hence the introduction of Continuous Financing System (CFS) in 2003-04. The transition has dragged on because from its start, CFS

was seen a re-packaging of *badla* financing, where financier could be banks, quasi-bank or non-bank entities, saddled with full credit risk of investor clients, while brokerages were deemed as non-risk bearing intermediaries. This version of CFS was clearly a non-starter, given the risks involved and an endemic default culture.

30. Because of these limitations and a lack-luster response by banking system to start lending margin credit, CFS was amended into version MKII a year later, with the usual limits on banking credit operations as applicable under rules and regulations of prudential supervision with the expectation that banking credit eventually will replace *badla* financing where banks will be dominant creditors. Development finance institutions (DFIs) were also allowed to engage in CFS financing, but DFIs will remain be a tiny source of margin finance because DFIs have been marginalized in the banking system and their share in total banking credit is negligible. Under CFS-MKII, banking system credit is to be extended to brokers, who will be thus obligated to banks as borrowers. The brokers in turn will onlend to their clients, assuming credit risk as lenders. Thus, under the CFS, if brokerages are going to be the intermediary, they will have to assume lending risk of their clients; while banks will assume lending risks of brokerage companies, who will be bank's clients.

31. Under SBP and SECP rules concerning CFS, banks are required to lend only to those brokers who are registered as limited liability companies, and are also registered with SECP for margin financing. Hence, brokers will have to borrow under prudential rules and regulations enforced by SBP and are tied to financial performance criteria established by banks in line with standard rules and regulations of banking credit already in place for major corporate borrowers. Under the CFS-MKII, a broker cannot borrow more than ten times its paid-up capital, a ceiling on borrowings imposed by regulators. Banks are expected to adhere to a lending limit of their own concerning loans to brokers for onlending, much the same way as these limits are applicable to other borrowers, based on bank's own credit policies, practices and lending procedures.

32. As intermediaries and lenders, brokers are required to execute margin borrowing agreements with their client investors, and are required to maintain separate accounts with Central Depository to facilitate pledging of securities as collateral to the credit thus extended. In addition, banks could specify their own criteria regarding eligibility of securities for margin financing funded by banking credit. As it is, margin financing is effectively limited to a small group of company stocks which were being traded through *badla* financing in the first place before the advent of CFS. Therefore, under

CFS, only a limited number of stocks are eligible for margin financing thereby limiting usage of margin facility to only those stocks that are deemed relatively safe for investment, though this number could grow as the CFS scheme matured.

33. In late 1990s and early 2000s, as many as 350 stocks were active in *badla* financing; subsequently SECP intervention brought down this number to only 30. Currently, *badla financing* is done for these 30 stocks which account for nearly ninety percent of all *badla* financing. The same is likely to be the case with CFS. Brokers maintain that margin finance is likely to curb their brokerage business; therefore it is not an attractive for them because it will reduce turnover, and hence commission of brokerages. *Badla* financing mechanism is known to artificially enhance turnover of shares at end of the day because trading occurs in notional terms without involving actual transfer of shares. That precisely is the intention behind the shift to CFS, if turnover and market volatility arising from *badla finance* is to be restrained.

34. The CFS scheme, as outlined above is a major improvement over *badla* financing, nonetheless. When it becomes fully operational, if it does, it will entail a significant shift in stock market from an informal system to a formal system to financing. Since CFS is banking credit based, it is expected to facilitate stronger integration of credit markets with equity markets. This shift is uncertain and hence unwelcome by brokerages and perhaps borrowers too who would like to maintain privacy of transactions for reasons too well known. CFS financing is also expected to help mitigate volatility of stock market, while broadening investor base. Currently, investors who can not obtain *badla* financing are outside informal network of private lenders, and there is no replacement available; there is no formal margin finance in the system.

35. The scheme has been stymied from the time of its inception in 2003-04 not because of technical deficiencies in the design of CFS, rather because of reluctance of the key stakeholders - intermediary lenders, namely brokers and banks - to apportion counterparty credit risk inherent in margin finance. Over the years, SBP as well as SECP have articulated and refined rules, regulations and requirements concerning margin lending, credit risk, reporting and disclosure, but there are weaknesses in this framework.

36. Regulatory provisions aside; how effectively these rules and regulations have been implemented is another matter. The perception remains that oversight and implementation by SECP has compromised investor public interests over lender broker interests; for example, by allowing diverse and risky leverage facilities over the past years. Further,

SECP apparently has not pursued recorded violations of rules of margin financing by a good number of brokerages. For example, in sliding stock market, often the entire portfolio of clients was pledged by brokers without clients consent, owing in part to poorly defined or poorly enforced initial margins and maintenance margins by SECP. This has strengthened the perception among investing public that when chips are down, lender-brokers have an upper hand.

37. At the root of it all is the issue of apportioning credit risk, given the endemic default culture and rising amounts of non-performing loans. Under the CFS of any version, banks have to assume credit risk of lending to brokers; who in turn have to assume credit risk of their clients. But banks are not immune to systemic risks if a brokerage company were to go down under owing to default of its clients. Hence, banks are unwilling to undertake margin finance in a substantial manner, and without a critical minimum, this mechanism will not upstage *badla* financing. Brokerages, being an influential group as they are, have been introducing changes and amendments to MKII from time to time, and SECP has been striving to forge a consensus, but it is yet to materialize. At the close of the decade, a fully operational CFS was still out of reach, while search is on for yet another version of margin finance system. This cycle never seems to come to a close.

38. The latest on these margin finance proposal is that stakeholders are back to the drawing board. They are going to review alternate proposals and until a consensus emerges none of these proposals will be implemented. It is not clear whether banks are already lending to brokers for margin financing. If so, what are the stipulations covering such online lending facility. The stumbling block is treatment of default risk and cost of financing.

Section 2: Enabling Environment

Taxation - Capital Gains

1. During the reform years, the 1990s, and its continuation upto 2005, the government rationalized tax structure on asset-backed securities; abolished tax on bonus shares and turnover tax; extended exemptions on capital gains, for example, to insurance companies and mutual funds on their stock

investment and portfolios; exempted withholding tax on securitized receivables; and has progressively liberalized some restrictions imposed earlier on institutional investors, such as insurance companies and provident funds; introduced restrictions on stock market investment and exposure of commercial banks and other financial institutions.

2. In FY10 budget, the government stipulated capital gains tax on stock holdings and *proprietary* trading as it prevails in many countries, both advanced and developing ones as per schedule given below.

Tax Years	Holding Period (less than 6 months)	Holding Period (less than 12 months)
2011	10.0 %	7.5%
2012	10.0 %	8.0%
2013	12.5 %	8.5 %
2014	15.0 %	9.0 %
2015	17.5 %	9.5 %
2106	17.5 %	10.0 %

3. Note that implementation of tax is spread over six years. In the initial years tax rate starts with a minimum of 10 percent rising eventually to 17.5 per cent for capital gains accrued on short term holdings of stock portfolio. For portfolios held for less than 12 months, capital gains accrued on their trading are taxable at 7 percent initially, eventually rising to 10 percent by 2016. The tax net covers holding period of 12 months only.

4. Ostensibly, capital gains accrued on portfolios held for more than 12 months are exempt from capital gains tax, since such holdings are considered long term exposure for investment purposes. Along with capital gains tax, a 5 percent tax credit has been announced for new listing of companies with stock exchanges to encourage greater participation by Pakistani corporations. But tax credits of this kind are not a major factor in the decision of existing companies to *go public* for raising equity finance.

5. The procedures for tax collection require quarterly payments as *withholdings* in advance of the annual tax cycle. This advance quarterly payment stipulation may be easier for institutional investors to comply with, but not for casual investors such as private individuals, with dive-in dive-out type transactions in stock market who are not geared up for advance quarterly tax payments. Further, mutual funds and institutional investors like insurance companies are no longer exempt from capital gains taxes.

6. But as the tradition is in Pakistan, each time a tax or utility tariff is announced, influential groups begin to lobby forcefully for exemption of one kind or other, and most of the time they succeed in thwarting or in mutilating original provisos. The same is happening now, as mutual funds industry gears up to seek exemption on the plea that capital gains tax will be detrimental to asset management companies who are in their nascent stages of development, and they ought to be treated like infant industry as in the past. In Pakistan, infants like these hardly ever grow-up as evidenced by corporate sector development. A good number of industries have remained classified as infant, refusing to grow up like mutants into competitive and viable units. They do not have much incentive to do so, unless their profitability is not compromised because of their reliance on a captive domestic market. Here in the case of stock market investing, there is no captive market as such; but collectively any capital gains tax proposal will affect all stakeholders alike; hence their resistance.

7. Capital gains tax on stock market investing has always been a major issue throughout reform years and afterwards. A golden opportunity to impose capital gains taxation was lost in early boom years when market was finally emerging from doldrums that had afflicted it so long. During the boom years, capital gains were extraordinary on stock trading and investing. There were proposals around, but they did not go far. Finally, when it did come through, its enactment had the anticipated impact on the market as exhibited by declining turnover at stock exchanges with severe implications for traders and brokerage houses who stand to lose a good part of their trade related income.

8. A decline in the volume of daily turnover can not be entirely ascribed to capital gain tax, though a good deal of trading activity is affected by the prospect of tax obligations. During the boom years, 2005 through early 2008, the average turnover is variously estimated at around Rs 40 billion in value of trading per day, and another Rs 10 to 12 billion in trading of stock futures. At the height of market frenzy in March 2008, just before market collapse, the daily trading value occasionally recorded Rs 200 billion and more. In contrast, daily trading value towards end of 2010 was down to about Rs 2 billion per day, and in early part of 2011, it was further down to Rs 1.5 billion per day. During FY2011, the daily trade is off by about 40 percent of what it was a year before; all of this, however, can not be ascribed to tax on capital gains. Market doldrums have their own antecedents.

9. Pakistan missed a great opportunity to levy capital gains tax in the early 2000s across the board, not only on stock investing but also on real estate investing, specially up-scale housing, together with urban and rural

landed property, which traditionally has been a safe investment for many specially those who received 'rent' via influence peddling in high places of government, and those corporate business owners involved in tax evasion. Introducing capital gains tax on housing and property are seen as opening up Pandora's Box whose resolution was considered beyond realm each time capital gains tax proposals were floated in the past.

10. One could argue that capital gains on stock investing are not the same as capital gains on real estate and property; but perhaps only in Pakistan. In most other countries, capital gains are treated at par, regardless of their origination. For illustration, consider capital gains tax on urban housing property which has been on the books for a long time, but it is a local tax, not federal tax. It requires lock bound authentication first of ownership of real estate and landed property beyond a shade of doubt not only for tax authorities but also for owners, the claimants and the courts. This authentication resides at local government level with notorious flaws and weaknesses in property ownership records. For capital gains tax, *transaction* and *transfer* are the trigger event, and much easier to track down and verify in case of stock holdings; but not for real estate and property holdings except in a few urban areas, thereby leaving stock investing and share holdings as the only viable arena for introduction of capital gains tax.

11. At local government level, capital gains tax has never been a material revenue source owing to its implementation in a checkerboard fashion and its dilution with exemption, widespread practice of false declaration of sale price at a fraction of market transacted price, or flat non-compliance and non-payment with no follow-up by the tax authorities.

12. This practice of severe under pricing and false declaration on property sale has prevailed in the sub-continent for a long time. In India, authorities came up with a solution that has worked to the dismay of many false declarers of property sale values. This involved straightforward buying of the property at declared price by a state corporation at the time of recording of the sale and transfer, with no recourse allowed under the law to the declarer, the owner seller of property against forced sale at declared price to state corporation. Is it possible to enact something similar is an intriguing proposition.

Stock Exchanges - Demutualization

13. Recently, in early 2008, the government has enacted an ordinance on *demutualization* of all the three stock exchanges in a bid to improve transparency and public's confidence in the operations of stock exchanges. This has been done in the background of perceptions of front running, insider trading and conflicts of interests between those who effectively control day-to-day operations of stock exchanges, namely brokers who thus far have dominated Board of Directors and at the same time, set operating rules governing stock trades and transactions by investor's at large because often their decisions were seen to benefit the group of brokers to the detriment of investors at large.

14. This ordinance is a step forward and has been under consideration for several years, but was not implemented owing to opposition by influential broker members of stock exchanges, mainly the KSE. Demutualization means separating ownership from trading rights at stock exchanges; diversifying ownership of stock exchanges by limiting ownership of existing brokerage firms to 40 percent of shares of KSE, LSE, and ISE and offering 20 percent of shares to public. The remaining 40 percent of shares are to be offered to large strategic investors comprising of both local and foreign financial institutions and investment firms which is expected to facilitate enhanced FDI inflows as happened in other emerging markets after demutualization of their stock exchanges on a similar pattern.

15. This dilution of ownership of stock exchanges will help to diversify existing composition of Board of Directors by enhancing the number of new members on the Board, thereby curtailing influence of existing member-owners, namely brokerage firms who held sway all along these years on the operations of stock exchanges. This step was necessary to put a wedge between ownership and trading rights at stock exchanges in line with similar trends now prevailing in other countries.

16. At present there are a good number of inactive brokerage firms who are still part owners as members of stock exchanges. They are required to either become active or forfeit their brokerage licenses and thereby cease to be owners and members. If this happens, the diversification and dilution of ownership will become more pervasive along the new rules of relative shares of ownership promulgated by demutualization ordinance. The process began with fits and starts, and was spurred on by the involvement of international financial institutions, this time ADB, who extended a loan to the government for capacity building, technology transfer, and improvements in the operations of stock exchanges, payments and clearance system.

Capital Markets Issues

A Summary

17. A number of leading issues concerning capital markets of Pakistan need to be resolved and these are summarized below.

18. **First**, the *issuer base* is narrow and trading is concentrated in about 30 large corporate stocks. Trading volume relative to market capitalization is high, reflecting strong speculative and short term interest in a narrow market which makes it highly volatile. Valuations of sound companies are often low, and for them, environment is not conducive to raise capital from stock markets. During the past four years, the number of listed companies has *declined*, though newly listed capital has increased mostly in FY04. Many companies have sought listing not so much to raise capital through capital market, rather to obtain tax advantages without active trading in their stocks or dividend payouts.

19. **Second** issue is *investor confidence*. Investing in stock market has not been an attractive proposition for a number of small private investors largely due to asymmetric information and a variety of uncertainties. They have stayed away from the market because of a long held view, howsoever unsubstantiated, that stock market is practically an exclusive club of insiders who manipulate the markets through their access to privileged information. Building investor confidence will be the key for future growth through improved transparency and governance, together with the development of wider range of market instruments, its infrastructure and information system.

20. **Third** is the issue of replacing *badla* system of financing carry-over transactions (COT) in stock markets as already discussed above.

21. **Fourth**, *institutional investor* base of capital market is poorly developed consisting of contractual savings institutions like insurance companies and pension funds. Largest among them these are SLIC and EOBI; both are government controlled with high administrative costs and poor returns. Much of their investment is in government debt, and their investing is not transparent. Life insurance companies are a small player in the market because their income base is relatively small and has not grown fast. As a sub-sector, both insurance companies and pension funds between them have a large potential of substantial growth and participation in financial markets. For this potential to be realized, insurance sub-sector has to be restructured, but as mentioned earlier, the stumbling block is the vested interest of

ministry of commerce who would like to maintain the status quo, inimical though it is for the growth of this sub-sector.

22. **Fifth, mutual funds** likewise, are still a small participant in capital market with a small number of investors, with assets of less than 6 to 8 percent of total stock market capitalization. With the establishment of new open-end mutual funds, lately there has been a turn around as both the number and diversity of mutual funds has expanded fast, offering a variety of mainstream funds as in other emerging markets. A major push is still needed for the development of mutual funds industry.

23. **Sixth,** performance of stock markets has not invigorated *foreign portfolio investment*, relatively speaking, and is unlikely to pick up given the precarious foreign exchange position, weak macroeconomic fundamentals with price instability and exchange rate instability. There is no turn-around in the FDIs; annual flows are getting smaller and smaller each year since market crash. Likewise, the same is the case with foreign portfolio investment which peaked in FY07 at about \$3.3 billion. Apparently, the increase in foreign investment portfolio in the mid-2000s was part of a global phenomenon of investing in emerging markets, but investors fled the scene owing to uncertainties thereafter, despite superlative performance during middle years of the decade. Obviously, past performance is not guarantee for future; that sums it up all.

Chapter 10: End

Chapter 11: Globalization, Capital Flows and Financial System

Thematics

Globalization - An Overview

Financial Market Development; *Structural Changes, Financial Regime, Regulation, Processes, Institutions*
Financial System Development, *Deepening and Diversification*
Integration with Global Finance; Impact on the Economy

Resurgence of Capital Flows

Financial System level Concerns: Comparative
Market Level Concerns
Regulation and Liberalization
Capital Inflows - *Implications, Financial, Economic*
Macro-Financial Management; Challenges of Stability
The Role of Private Sector
Volatility of Capital Flows - Limits of Response

Foreign Investment Inflows and Capital Markets - Pakistan

Overall Trends - Total Net Inflows
Comparative Trends - Asian Countries, Emerging Market Countries
Typologies; Underlying Factors; Business Friendly Index
Net Foreign Portfolio Investment Inflows; Origination
Trends; Comparative Experiences; Causes
Net Foreign Direct Investment Inflows; Origination
Trends; Comparative Experiences; Causes
Requirements

Capital Flows; Pakistan - Leading Issues

Investment Promotion; *Performance Record, Prognosis*
Incentive Packages; Targeting; Performance
Search for Inflows; Foreign Currency Accounts
Capital Flows, Reforms, Integration with Global Finance
Comparative Experiences: Lessons of Experience
Prospects - The Future

Chapter 11:

Globalization, Capital Flows Financial System and Market Development

Theme of Closing Chapter

1. This is the last chapter of the book, the closing chapter. It attempts to bring together leading elements of analysis, assessments, perceptions and vast material presented in two volumes of this book; but it does so around a theme espoused here, that future development of financial system and markets, their institutional and financial deepening; their diversification and resilience to withstand shocks; emergence of a strong corporate sector within a modernized industrial organisation as a leading client of financial markets; all of it is increasingly beholden to integration with global economy and global finance. That is the cardinal lesson of comparative experiences of emerging market economies over the past couple of decades.
2. The temptation is too strong to present a summary of findings, block by block, segment by segment of financial system and markets, a practice meticulously followed in applied studies, and leave the pieces fall as they may. Instead, an attempt has been made here to tie up together leading strands of analysis of a complex process of financial system development, of which financial market growth is an integral part. This has to be done in the backdrop of socio-economic cross-currents buffeting the society, and a financial environment in Pakistan that hardly bears any resemblance to what it was before. That is, it does not compare with structure and organisation of financial system and markets that prevailed a decade and half ago.
3. The economy of Pakistan is comparatively small; its resources are stretched and are inadequate for needs of accelerated growth. It's financial system, likewise, is of moderate size; it's financial markets are too confining to play their central role of resource mobilization for economic growth. Their reach is limited to only a part of private corporate sector that participates in capital markets. For savings mobilization, there are no active deposit

markets as such where deposit instruments may be traded, though there is a fairly decent size of deposit base. But for growth, diversification and deepening of financial markets, the future lies in enhanced integration with global finance. This is the *central theme* that we will pursue in this chapter.

4. Since early 1990s when reforms began a great deal has changed. This is now post reform-era. Whether one likes it or not, Pakistan's financial system is getting increasingly integrated with global system of finance with all its potential, prospects, pitfalls and shortcomings, if one were to focus on just those. Instead, we ought to dwell upon how integration with global financial system can promote depth of domestic financial system and markets; and how it promotes economic growth, technological transfer, reinvigoration of middle class of technocrats and professionals; broadening horizons of energetic young educated people to new ideas and new vistas. In other words, a societal change that can not be viewed solely from the lens of the world of finance. That would be a more worthwhile endeavour. That may need yet another book of its own, far more interesting and meaningful than just a book on global finance. There are already many of them.

5. We have to recognize, howsoever grudgingly, that if this integration helps to augment capital inflows, may be not on the scale of China or India, rather in modest terms, it would significantly augment investment in the country, accelerate transfer of technology, may lead to establishment of new manufacturing units for export markets. Once this process begins the industrial organisation its structure will leapfrog; something Pakistan has not been able to do thus far. It would spawn a new era of growth and changes best exemplified in '*Singapore Story, from Third World to First*' by Lee Kuan Yew, to name one among others. The transformation of Singapore occurred over the past several decades, riding mainly on indomitable *enterprenurial* zeal of its people, both local and those in Chinese diaspora, rather than merely beaurucratic tinkering with incentive packages. Critics would say that it is the same old argument dressed up in fancy expressions.

6. We have always harbored in Pakistan an ambivalent attitude towards foreign investment. On paper we have done all kind of reformist improvements, but the country is not business friendly, regardless of what rating it earns on this scale. At the same time, whatever the state of business friendliness, the process of opening up to global system of finance has been going on all around, and in Pakistan as well; and it is irreversible. There can not be a march backwards in times past to the autarchic model of growth that held sway during much of the post WWII period until the watershed decade of 1970s. That era is gone, forever.

7. Developing countries like Pakistan have to find ways to join the mainstream of global finance, because withdrawing into a shell of isolationism is not the answer to a myriad of economic and financial challenges or crises the country is facing. Ambivalence towards globalization aside, a large swath of the society is keen to join this march of mainstream global economic and financial order attested by hordes of aspiring emigrants from Pakistan; except a few vociferous elements of society, the reactionary and regressive fringes, who would like to march backwards for whatever ideological reasons one could think of.

8. Just look at fresh MBA graduates, recently minted, who would prefer several times over to seek a job with a large multinational company, a foreign bank or a foreign business rather than with local companies and businesses. There is no shred of ambivalence here; no mulling over benefits of globalization; and no show of any 'discontent'. This is true in Pakistan, so it is all over the Indian sub-continent. This is not to cast aspersions on the theme of discontent best exemplified in '*Globalization and its Discontent*' by Joseph Stiglitz. That viewpoint holds on its own turf. But where from such job opportunities would come, if Pakistan does not inculcate a business friendly attitude towards companies or businesses, domestic or foreign; or does not provide enabling environment, or does not ensure availability of facilitating infrastructure, at least at par if not better than those offered by competing countries. In parallel, there has to be a pool of trained labor force, available and eager to work, instead of sullen attitudes often encountered. Simply tinkering with rules and regulations or incentive package is not going to be enough. Such has been the experience in the past; and such are the lessons of recent history of economic growth.

9. But multinational corporate jobs would not arrive on the wings of hope or aspirations alone. Pakistan will have to work hard to seek them out, rather than shunt them out of the country and this is not going to be easy. Lucrative jobs like this will grow only if corporate sector grows. This is as basic as one can get; but somehow it eludes a wider recognition. Instead, in Pakistan we are still caught in the syndrome of colonial era thinking patterns. Fears of exploitation of resources and people and those emerge first; that there are ways to ensure operations of private corporations and multinationals that are more suitable for local economic and financial benefits, with some give and take in between, is not well understood, much less appreciated.

10. So much about attitudes; let us get back to our theme. The leading concern throughout this book has been mobilization and allocation of financial resources in the economy which primarily occurs through operations of financial system, while *real resources* destined to *real economy*,

follow suit; not the other way round. One could argue that fiscal system is central part of this edifice, but only the taxation part of fiscal system. The other part is financing of fiscal program beyond tax proceeds through borrowing from financial system. Financing of deficits in Pakistan is being done through banking credit system and financial markets operations, as well as *para-market* operations of unfunded debt.

11. All three constitute the mechanism of financial resource mobilization discussed in relevant chapters of both volumes of this book. Their mechanisms are critical to a fairly large flow of financial resources to public sector that are mobilized by the financial system as government borrowings, outside of fiscal sphere. How good and how efficient the financial system is in doing so is critical for sustained development of the economy; while the issues of allocation of these resources are not far behind.

12. In Pakistan, government borrowings have been massive and have crowded out other segments of the economy as substantiated by the analysis presented in this book. Therefore, governments' financing of fiscal deficits significantly alter allocations of resources in the economy. The mechanisms of public borrowings, both domestic and foreign, operate through financial markets, whether domestic or global. We are thus back to the central role of financial markets. This interlink is not so obvious. Among these, domestic debt markets, both short term and long term, have largely provided liquidity to Treasury through banking system, i.e, through floating debt; and also through mechanisms of unfunded debt. One could argue that unfunded debt is part of fiscal operations, but only to the extent of charting out its contribution to government budget. A large part of financial savings were mobilized through NSS instruments of borrowings that are hardly different from government bonds, except that their pricing is not market based, nor these instruments are traded in the market. Not as yet, but there are proposal circulating to launch their trading in financial markets.

13. Once again, government can obtain resources via foreign borrowings from bilaterals or multilaterals and it has been doing this for a long time, facilitated by relaxed standards of performance in cash lending by international financial institutions (IFIs) that served both the lenders and the borrowers. But only a part of government borrowings had a discernible impact on economic growth. A good part seems to have evaporated in thin air; it has vanished; it may be lying at off-shore financial centers. Foreign debt has grown to the point where fresh borrowings do not represent much by way of net financial inflows. It is a revolving foreign credit, sufficient enough to pay for debt servicing and other external liabilities to stave off technical insolvency, or bridge financing until the next round.

14. This is the essence of standby agreements with IMF. Pakistan has relentlessly pursued this process, for it had no other alternative. That is why the next tranche release of IMF standby is a banner headline whenever it is imminent with blow by blow coverage of what is transpiring in the latest round of review to enable release of the IMF tranche. This is followed by parallel disbursements by other IFIs as support to policy reforms predicated on certificate of good health. This has suited both parties. Tranche release has acquired the status of a national event over the past two decades, except for a brief interlude during mid-years of the decade of 2000s.

15. In between are key concerns of stability. Economists would like to see this as a central feature of economic management; but mechanisms to achieve stability operate via financial system, not so much through fiscal system. The entire apparatus of monetary management operates via money markets and currency markets. The central bank is in the thick of monetary management, not so much in exchange rate management, because exchange rate can not be managed except via through monetary controls. This process takes care of domestic resource flows through financial markets.

16. The other part of foreign capital inflows occur through operations of capital markets as foreign portfolio investment (FPI). This inflow alters macro-financial balances of net foreign assets, which loop back into net domestic assets, operationalised and processed through some part of financial system. There are critical liquidity management concerns of central bank which are dealt through interventions in money markets. At this juncture, we have traversed back to the loop to issues of managing monetary stability involving stable levels of interest rate, exchange rate and general price level. But foreign financial inflows do not occur just because they are needed to assist with maintaining stability, nor they occur because foreign exchange reserves are needed to shore up foreign currency liquidity. They are driven primarily by promise of economic growth and a guaranteed repatriation of profits and capital as warranted.

17. Where does financial globalization fit into this? If only Pakistan could attract large net inflows of foreign investment it would considerably mitigate the need of bridge financing, and also lower the burden of debt servicing, though some would argue, it would enhance outflows by way of repatriation of profits, dividends and capital gains. This is well known. But that would occur only if foreign investment inflows are invested directly to enhance production capacity, merchandise trade and profitability of recipient segments of domestic corporate sector. Once we arrive at this juncture we are transiting from financial system into the realm of economic growth of the

economy at large. That is the domain of development economists to figure out what has been the impact of foreign direct investment, and what burden of reverse flow of repatriated profits and outflows occur through mechanisms of banking and financial system.

18. A synthesis of these diverse elements is a complex and rather ambitious undertaking and has been done not in the vein of summary of finding of an applied study, rather a distilling of leading observations that fall out of the analysis presented in 24 odd chapters in the two volumes of this book. This synthesis requires a multi-disciplinary approach which is the hall mark of *macro-financial analysis*. It draws upon analytical apparatus of four leading disciplines; namely systems analysis, development and financial economics, financial management and accounting. Such multi-disciplinary approach is the only way possible to proceed and is followed here.

19. Over the past four decades, dominant trend as stated earlier has been enhanced globalization in spite of 'discontent' or controversy surrounding it. Instead of abating, globalization has intensified and speeded up, both in product markets and in financial markets as measured by the size of international trade and net international capital flows. Cross-border movements of goods as foreign trade occurs first followed by factor movement, namely, movement of labor and capital. Globalization trends in all the three spheres have followed this sequence. It is unlikely to reverse because economic and financial forces lined up behind globalization are too permeating to allow a reversal of this trend. Globalization is intensifying as world economies get more integrated both in terms of international trade and finance and it is now on a stronger footing than it was before. The polar opposite of globalization, namely isolationism or autarchy is not the answer to what ails globalization, but that is a vast topic on its own and will take us away too far from the theme of this Chapter.

20. In part, the controversy emerged because globalization is seen in different perspectives and with different interpretations as to what it means. In the arena of international trade, for developing countries with weak industrial base and impaired competitiveness, globalization means that their industries will have harder time surviving in export markets, now that quotas and quantitative restrictions have largely been eliminated. With liberalization of imports, these industries will have equally hard time surviving even in domestic market as competition from imports intensifies, now that barriers to international trade and effective protection levels have been significantly reduced. This process is further intensified with local consumer preferences for imports. Hence, globalization is perceived as a detrimental factor to industrialization and growth in developing countries.

21. Curiously enough, same arguments are put forth in advanced countries by supporters of domestic consumer goods industries who can not withstand the onslaught of cheaper imports. One stage ahead, now the same goods are being manufactured under license in emerging economies; or at plants and production facilities relocated overseas by leading merchandisers in the US and Europe owing to substantially cheaper costs at vastly competitive prices in international markets. This global shift in manufacturing location is ongoing in case of sophisticated electronic consumer goods or information technology gear, requiring technical expertise that did not exist in emerging market economies before. In advanced countries, this is seen as exporting jobs overseas and loss of jobs locally, closing down of local industrial plants and relocating them overseas. There is a vociferous opposition in the US and Europe to this type of globalization and foreign merchandise trade.

22. At the same time, in developing countries which are not a favored destination of these foot loose industries, if globalization means investments in plants and industries by foreign companies, all the better. But if it leads to enhanced presence of multinational companies, it is not widely favored. This ambivalence is not resolvable. It is not possible to prevent entry of multinational companies and at the same time pitch for improved direct foreign investment, or discriminate against some companies just because they happened to be foreign, too big, and too influential.

23. *Financial globalization*, namely capital flows have occurred on the heels of liberalization of trade and are not an issue for recipient country as long as net inflows are positive and help accumulate foreign reserves. It is only when net inflows reverse and in a hurry, globalization is then seen as facilitating unsustainable levels of capital outflows. This spawns all sorts of issues, intractable to many not privy to how international financial mechanisms operate on a turf which is anything but a 'level playing field' for its participants. If outflows gain momentum, they may derail safeguards, cross the threshold, and degenerate into financial crises.

24. The causes and consequences of capital flows which occurred as part of financial globalization at unprecedented scales in the past need to be looked at preferably in a comparative setting as done in **Section 1** below. This is followed by analysis of capital flows in Pakistan at country level and also at comparative level followed by analysis of their impact on issues of economic growth and stability in **Section 2**, together with comments on implications for financial system growth. These two sets of consideration appear to be the same, but there is hardly any comparison between Pakistan's experience and those of emerging market countries as evident from the analysis presented in Section 2 below.

Section 1: Resurgence of Capital Flows
The Economy and Financial System Operations
Major Issues and Concerns

1. With the opening up of capital accounts, together with a system of incentives for attracting overseas financial savings, and globalization of financial markets, many Asian and Latin American countries (LAC) experienced massive capital inflows, almost uninterrupted throughout in the past as discussed above. These inflows have been punctuated by foreign liquidity crises, degenerating into full blown financial crises, which have thrown up new challenges for them. Prior to these capital flows, in earlier times, bank loans guaranteed by governments dominated capital flows, and were mostly used as gap-filler for fiscal or balance of payments deficits. Interest and exchange rate risks were borne by the guarantor, the government, and sovereign risk was not an issue. The debt crises of early 1980's, especially in Latin American and East European countries, sharply curtailed their borrowings, though East Asian countries fared much better. Beginning in the mid-1980, private capital flows returned, but as foreign direct investment and portfolio investment. Both the size and speed of these inflows during the late 1980's and 1990's has been spectacular. These private capital flows now constitute about 80 per cent of total net flows to developing countries.

2. This resurgence of capital flows is largely attributed to the stability and growth performance of East Asian countries, together with financial sector reforms and liberalization, opening up of capital accounts, and promotion of domestic financial markets and their integration with international markets. This liberalization process has loosened the grip authorities once enjoyed over financial intermediation by banking system. Their concern has shifted from size and allocation of financial intermediation to public and private sector enterprises to ensure, somehow, that banking liquidity and credit is channeled to productive uses, away from over-concentration in a few sectors, and prevent emergence of speculative bubbles which may endanger solvency of the banking system. Whether this can be accomplished in the existing framework of regulations and controls when degrees of freedom of authorities concerned are significantly curtailed in a liberalized environment, or whether this trend requires charting out new game rules to strengthen the existing framework of regulation, remains to be ascertained.

3. While a great deal has been achieved to improve functioning of financial system and solvency of banking system has been considerably strengthened, the sheer magnitude of capital flows, especially the meteoric rise of equity investment, has exposed fragility of financial system and limitations of financial markets. Of particular importance is the concern how good are financial markets, and how sound is domestic placement of counterpart liquidity of capital inflows, i.e., how good is the allocative mechanism? How good is management of foreign reserves with substantial exposure to unpredictable exchange rate and interest rate movements in global financial markets? How alert are authorities to prevent rise of conditions that may trigger capital outflows; and how strong is financial system to sustain a massive capital outflow as have repeatedly occurred with the onset of financial crises during the past three decades? We are back to the same issues identified above.

4. *At macro-financial level*, the issue is how to maintain stability of price level, interest rates and exchange rates to safeguard stability of capital flows. While East Asian countries have been more successful at maintaining macro-economic stability, and thus have enjoyed a more smoothly-rising trend of capital inflows, the experience of many other countries has been punctuated by crises prompted by external shocks, which has made the task of maintaining economic and financial stability much harder.

5. *At market level*, there are several issues such as growth of debt versus equity markets; maintaining investor interest in competitive environment, given rapid globalization and growth of emerging markets; improving access of foreign investors to domestic securities markets through lowering barriers on ownership; improving legal and regulatory structure. It also involves dealing with concerns regarding statutory regulations versus self-regulation; developing securities market infrastructure; asymmetric risks; and systemic risks concerning volatility, settlement and payments risks.

6. Above all, how to ensure efficiency of market operations; how markets can exercise control over investment behavior and through what mechanisms, apart from the discipline imposed by credit markets and banks or by regulatory authorities; and finally how markets can encourage efficient use of capital which is a perpetual concern. These issues have been a major preoccupation of all stakeholders over past couple of decades as presented in various studies and readings listed in the Reference. Invariably these discussions boil down to issues of stability and growth in a macro-financial perspective in the context of comparative experiences in frontline emerging market Asian and Latin American countries. But issues regarding allocation of resources by financial markets do not evoke same intensity of concern and response as growth and stability issues do.

Regulation and Liberalization

7. While several East Asian countries have been ahead in opening up their capital accounts, for most of them it is still a recent phenomenon, though their financial systems began absorption process within a regulatory framework whose skeleton was charted out much earlier; a good part of which remains intact. The immediate impact of large inflows has been to substantially increase domestic liquidity and banking system credit, how effective routine liquidity control mechanisms have been is open for debate, both from the point of view of interest rate and general price level stability concerns, and from the point of view of preventing speculative bubbles; that is, the solvency concerns.

8. For example, there are discriminatory reserve requirements for foreign credits. Access is limited to formal foreign exchange market to service foreign debt; a market composed of central bank and the rest of the financial system, whereby central bank is under obligation to buy or sell international reserves at prices fixed in advance. There are restrictions on issue of stocks and bonds in foreign countries by local companies. There still are some legal restrictions to investment by foreigners, or rules regarding investment funds of foreign capital; and restrictions on the individuals and companies regarding their access to foreign exchange markets to carry out foreign investments and capital contributions, or to purchase hard currency for portfolio. There can not be liberalization in the sense of 'free for all'. These aspects need to be dealt with to ensure a smoother integration of domestic financial markets with global markets.

9. Regardless of the stage of financial liberalization, capital inflows represent new opportunities to banking system, while authorities are saddled with maintaining stability and growth, and ensuring sustainability of capital inflows. This implies how the framework of regulations is to be modified to ensure that financial resources are allocated by various markets to maximize growth impact while maintaining viability of foreign capital inflows. This remains to be seen. Apparently, memories are still fresh with foreign debt crisis which in many instances, were associated with indiscriminate exposure to foreign indebtedness, as in some Latin American countries without due regard to the use of banking liquidity and credit.

10. One step back is the concern with framework of banking laws, system of supervision and control, regulation of banking business, and system of safety net as to how does it help to harmonize globalization of financial intermediation in concert with stability and growth objectives. Among these,

there is the issue of explicit insurance, or the private perception of the implicit insurance on the deposit side, as well as and from the angle of foreign financial markets, the implicit guarantee of the real exchange rate. This by itself is sufficient to lead to competition among banks for foreign funds based on expected return, and having garnered those, it may lead to speculative bubbles owing to pursuit of large speculative returns.

11. The issue is: are there inconsistencies between system of regulation and supervision and perception of implicit insurance and implicit guarantee? Similarly, are there problems of high credit concentration in a few sectors, involving massive extensions or renewals of loans if interest rate movements are substantial; are these issues symptomatic of massive capital inflows and banking system liquidity alone, or do they emerge because of weaknesses of regulatory framework put together as a preventive mechanism against abuses of the system rather than stability mechanism.

12. Given experiences of East Asian and Latin American countries, there is now a broad-based understanding that opening up of capital account is the culmination of liberalization process, not the start of it. The experience has also shown that capital account liberalization will lead to currency appreciation; but the factors that contribute to currency appreciation also lead to greater availability of resources to the government via the banking system. Governments maintain that controls are needed to stabilize flows, and also help with taxation of capital gains and enable imposition of *wealth* tax on financial assets, but in their perception unhindered globalization of capital markets circumvents ability of governments to do so. But incidence of these taxes falls relatively more on those segments of economy whose access to international markets is limited, and thus eventually it ends up being a tax on domestic savings.

13. An open capital account may force authorities to rely more on taxing income and consumption rather than savings. Therefore governments need to put in order both domestic fiscal operations and financial system operations, before allowing foreign financial intermediation through open capital accounts. This is easier said than done. Putting together a credible fiscal package is the task at which governments in Pakistan have shown a remarkable adaptability to live with deficits year after year with impunity. The intricacies of budget preparation are known; the direction of taxation efforts is clear; but there is lack of will to take on entrenched groups of non-tax payers in the country. Putting together and implementing reform package for financial system was not easy either; it turned out to be convoluted and very expensive, but it was accomplished over the past decade and a half. That is not the case with the fiscal management.

Capital Inflows – Issues of Macro-financial Stability

14. The monetary authorities have their hands full in maintaining stability of internal and external payments together with a stable price level, and also are facing policy challenges regarding financial integration with the globalized financial markets. There is a consensus now that financial integration could make price and exchange rate stability two opposing objectives, because the opening of capital accounts reduces the influence of monetary authorities on interest rates and hence its capacity to control aggregate spending. If the domestic interest rate is higher than international interest rates, there will be capital influx and greater liquidity which could result in inflation and a drop in the real exchange rate, because inflationary pressures will come from the non-tradable sector. This will result in higher current account deficit which is counterpart of capital inflow. To maintain control over inflation, and to prevent a drop in the interest rate, authorities have to sterilize the monetary effects of capital inflows, or could settle for a combination of sterilization, and exchange rate appreciation.

15. The need for *sterilization* arises only if capital inflows are massive and sustained as they are in case of China and India as noted above. These inflows are usually accompanied by large account surpluses as well, though not necessarily, because the two do not have any direct causal linkages as such. The immediate impact of large capital inflows coupled with current account surpluses is build up foreign exchange reserves. A good part of the reserves is used for convertibility into domestic currency, and these purchases of domestic currency lead to an increase in monetary base. To counter this trend, central bank could intervene and purchase foreign currency and sterilize its monetary effects through reserve requirements and placements of instruments of internal debt.

16. From thereon, the routine cycle of monetary expansion takes over through operations of banking credit, because an increase in monetary base via non-borrowed reserves enhances banking capacity for expanded credit. If the process is not checked through sterilization measures such as sale of treasury bills as part of open market operations, it may cause an appreciation of exchange rate, which in turn will cause a slow down in exports, and may also cause an increase in rate of inflation, the rise in domestic price level via monetary expansion.

17. This is a simple description of why sterilization may be needed and what it entails in outline, and how the mechanism operates. But in practice this is not so straightforward. Often countermeasures to check impact of

massive capital flows often backfire; for example the effort to curb domestic monetary expansion may cause domestic interest rates to rise, and this may attract even more inflows of FPIs. The monetary authorities, therefore, have not only to maintain a stable price level, though price stability has different thresholds in different countries, they also have to maintain a level of interest rate consistent with objective of inflation control as well as viable real exchange rate for external balance. If domestic interest rate consistent with a stable price level is higher than international interest rates, capital inflows will occur and will drop the real exchange rate, but if real domestic interest rate is allowed to drop, then both policy objectives are compromised.

18. In periods of low international real interest rates, combined with massive capital inflows, there is a tendency towards real exchange rate appreciation. One option could be to remain passive, let the currency appreciate together with real wages as measured in terms of importables, but then it will be harder to reverse this trend without severe costs. In such situations policy options are limited, since it is hard to determine how transitory this interest rate phenomenon is, but even a fully flexible exchange rate system is not equipped to cope with this situation. Therefore, authorities need to have some freedom to target interest rates and to keep domestic and foreign rates apart. Otherwise, the accompanying fluctuations in aggregate demand level will be untenable, and fiscal measures would provide only limited stabilizing influence. Besides, it will be impractical to adjust expenditure levels in response to every change in international interest rate levels. These are the type of dilemmas that policy makers face.

19. In an attempt to achieve multiple objectives outlined above and to counteract the impact of capital flows, central bank have moved to sterilize its monetary effects through mechanisms mentioned above. This is very likely course of action taken if capital inflows are perceived to be temporary. But this is unsustainable if amounts involved are large and capital flows are in to stay. This intervention could be a major cost for the central bank, because interest rate earned on foreign balances is lower than interest rate at which it can place its internal debt. These losses could contribute to quasi-deficit, higher domestic expenditures and corresponding inflationary pressure. The central bank loses control of its monetary policy, accumulates reserves beyond those desired, and ends up losing on interest rate differential. Such are the implications of sterilizing capital inflows.

20. Capital inflows occur not just because domestic interest rate is higher than external interest rate, but this differential is adjusted by expected devaluation and country risk. Inflow of capital will occur if expected cost in local currency of obtaining a loan in international market is lower than the

expected cost of the same credit in the domestic market; or if the expected yield of investment, adjusted by country risk, is higher than the expected yield in the country of the origin. A decrease in the international interest rates or expectation of revaluation will also encourage capital inflow. These arbitrage relationships are now fairly well established. This assumes that financial markets operate reasonably well, within a framework of regulations which allows private investors borrowers to take advantage of this type of arbitrage relationships. It also assumes that central bank interventions via sterilization do not tilt the balance in favor of government to capture savings to finance deficits.

The Role of Private Sector

21. These concerns have to be addressed in the context of private sector activities regarding capital inflows and operations of financial markets. While authorities concerned are engaged in search for effective levers of control to ensure solvency and stability, attention has to be paid to the perspectives of international bankers, global fund managers, and overseas institutional investors as to what type of financial arrangements, rules and regulations they would like to see developed and put in place to promote functioning of financial markets.

22. There is a good deal of diversity among countries concerning development of their financial markets. Generally, in most Asian countries, equity markets are well developed, but debt segment of markets is underdeveloped, and there is hardly any secondary market in debt instruments. There is a need of major improvement in regulatory framework to allow emergence of a well functioning market at national level, together with improvements in infrastructure facilities.

23. Over the past couple of decades, there has been a dramatic shift in the composition of capital inflows as documented in several studies cited in the Reference. Beginning early 1990s, foreign direct investment and portfolio capital replaced syndicated bank loans that prevailed earlier. Since direct investment is governed more by medium to long-term considerations, these inflows are not subject to same volatility as portfolio investment is. The rise of portfolio capital flows has brought to the fore issues of sustainability and constraints of domestic financial markets. Given the transformation of asset management in source countries, and emergence of large institutional investors in search for high expected returns in global market, especially

emerging markets and comforted by high credit ratings, portfolio investment surged both in Asian and Latin American countries mainly through bond placements and some through equities, thereby placing financial markets at center of the process.

24. Institutional market participants faced the task of upgrading their capacity and mechanisms to contend with the size of inflows, while authorities were saddled with the type of issues enumerated earlier, together with need for a more sophisticated response such as sterilized interventions, and a more versatile legal and regulatory structure. This task had to be accomplished in a hurry, to achieve in a matter of few years what took mature markets a much longer period. A part of surge spilled over in the purchase of financial instruments by institutional investors in the domestic markets, denominated in local currency.

25. The underlying considerations of foreign institutional investors were interest and exchange rate stability *vis-à-vis* the source country, the US, with implicit guarantee of maintaining this stability, especially the exchange rate. There was considerable enthusiasm for this type of market inflow but after Mexico's experience, there has been a closer scrutiny by institutional investors. This scrutiny turned out to be insufficient in face of East Asian crisis of late 1990s and even larger financial crisis in the US in 2008, originating mainly from excesses of institutional investors.

26. It is in this background that views and perceptions of those closer to financial market stakeholders need to be aired, with specific focus on market mechanisms, instruments, market infrastructure, and control mechanisms. At one end of spectrum is the need to quickly upgrade capacity of domestic financial markets, enhance the supply of securities, redress the imbalance between debt and equity finance, which spills over operations of banking system, and enhance market capitalization.

Volatility of Capital Flows

Limits of Response

27. At other end of spectrum are challenges posed by volatility of capital inflows that the authorities are facing. The hopeful attitude is that capital inflows are here to stay since they are primarily based on expectations of short-term capital gain in the wake of rising asset prices, though with intervening instabilities, even market crises. Part of the surge in capital

inflows is attributable to interest rate differentials between originating countries and recipient countries; and another part is attributable to rate of relative increase in asset prices, provided exchange rates remain stable. But even if increase in asset prices slows down in originating countries and if interest rates begin to rise, capital inflows in recipient are likely to slow down even though yield differentials are reasonable.

28. This could well be anticipated, but only so long as capital movements remained within certain limits engendered by a realistic evaluation of these expectations. The risks of portfolio investment with regard to potential capital outflow at first sign of trouble, or a modest herd behavior, could perhaps be accommodated or even safeguarded against. But recent experience suggests otherwise.

29. There are more pressing concerns in the event massive capital outflows do occur in a developing country like Pakistan though conjectural it is; because there is no likelihood of such a contingency to arise in the immediate future; there are no massive inflows to begin with. But if it were to happen, financial system of Pakistan simply does not have sufficient depth or safeguards to sustain major outflows. The ensuing liquidity crunch could easily jeopardize growth, make the balance of payments position untenable, and create a serious crisis.

30. How massive this crisis could be depends on how large capital outflows are. Authorities can launch only a limited response so long as capital outflows are of manageable size. Such a response via market intervention by central bank to support the domestic currency in the face of dumping by foreign portfolio investors could also be very costly. Central bank will be forced to prematurely recall their overseas placements of foreign reserves, and even that may not suffice to prevent emergence of payment crisis if foreign portfolio investors, in hoards, want to convert their local currency holdings into foreign currency. Even afterwards all these measures may not suffice to prevent emergence of payment crisis. The existing safety net mechanisms are woefully inadequate to cope with such a situation in most developing countries including Pakistan. Often proposals have been floated for installation of deposit insurance for banking system. How this would help financial markets is not clear, besides introducing one more layer of distortion that may enhance moral hazard in banking. But this is all highly speculative and purely conjectural.

Section 2: Foreign Investment Inflows and Capital Markets - Pakistan

1. Over the past two decades, total net inflows of foreign direct investment (FDI) and foreign portfolio investment (FPI) in Pakistan have been fairly small during most years, except during the boom period of stock market, FY04-08. These net inflows were much smaller relative to inflows that occurred elsewhere among emerging market economies as discussed below. Looks like that Pakistan has not been on the radar screen of foreign private investors. Reasons for this poor performance are varied but economic and financial strands are identified below.

2. In early years of the decade, *total net inflows* in Pakistan, both FDIs and FPIs, had a lackluster performance in early years of the past decade, but picked up momentum in FY03 onwards. A sustained increase in *total net inflows* started in FY04 when they were US\$1.2 billion, rising to an all time high of US\$ 8.3 billion in FY07. (*Data Set 6.2*) But after the stock market crash, these net inflows dwindled back to about \$2.1 billion in FY10, the same they were in the middle of the decade. The total net inflow over the entire 10 year period was an estimated \$26.8 billion, or \$2.7 billion per year, though this average is not very meaningful given volatility of these inflows as follows. Among these ten years FY00-10, during first three years net inflows were negative for first couple of years but showed a surplus in the third year of a small amount. During last three years of the decade there was a sharp downturn in the level of annual net inflows.

3. Thus, for six years out of ten, there is not much to say about performance of net inflows; it was not satisfactory by any standard, much less by leading developing countries benchmarks. Net inflows, however, rose very fast during FY04-07, but only for four years out of ten. Thereafter, they nosedived and did not recover their lost momentum. (*Data Set 6.2*) No recovery in these inflows is being anticipated either, given the turbulent circumstances country is facing now with no end in sight to the turmoil around; nor there is much prospect of improvement in current situation strong enough to lure back foreign investors.

4. These conclusions are rather revealing. They fly against commonly held belief that premature opening of capital accounts aggravated external financial position of the country. Perhaps they did. That opening of capital account was out of synch is well established. The sequencing of reforms

followed in Pakistan deviated both in principle and practices from established practices of appropriate sequencing of financial reforms and restructuring, garnered from comparative experiences as discussed in chapter 14 of **Volume I**. It jeopardized sustainability of inflows that did occur. The domestic corporate structure was simply not upto maintaining standards of its profitability or promise of performance. The specter of asymmetric information was too difficult for foreign portfolio investors to contend with; weaknesses of trading mechanisms and targeted speculation underlying short selling did the rest.

5. These are long term trends and do not square with analysis and evaluation given in almost every report of those days which regularly appeared in the media as well as in formal reportage. These evaluations were rather too ebullient during boom years that lasted upto end of 2007. In those times, both FDI and FPI flows were at their peak coinciding with height of the boom of stock prices with upward momentum that did not show any sign of abating until the onslaught of crash. This coincidence strongly suggests that once the threshold of value investing is crossed, FPI inflows, if not FDIs, ride stock market index, herd behavior and speculation, all rolled into one. At that time, stock market of Pakistan was considered as best performing among developing countries; and KSE was regarded as one of the most liquid stock exchanges among all. Indeed it was so, though for a period of few years but without much sustainability.

6. These trends together with good economic management in those years and a strengthening foreign exchange reserve position helped Pakistan to garner the designation of 'emerging market' economy, to be counted in the same league as frontline Asian or Latin American countries. But this status was short lived; it was cut short by stock market crash of 2008 and subsequent events, economic, financial, and socio-political. Net inflows nearly disappeared, and did not regain upward momentum, even though stock market recovered a good deal of lost ground within couple of years, followed by an anemic country economic performance, forcing Pakistan to seek IMF bail out.

7. The trends of total net inflows of foreign investment need to be decomposed into two parts; net FDIs and net FPIs. From the perspective of financial markets, we need to look at FPIs first, then FDIs; because FDIs do not impact financial markets, or capital markets in a direct manner; FPIs do. Hence, for operations of financial markets, we need to focus on foreign portfolio investment not foreign direct investment as such; but the two can not be compartmentalized in this fashion. The reason is that if a company is seeking equity finance for its expansion, and if it happens to be a subsidiary

of large foreign company, it may also attract FPIs as long as it is locally owned public company listed on stock exchange. In such cases the distinction between a subsidiary of multinational company and a locally owned company gets blurred, not in terms of instruments of finance used, but in terms of its ability to raise long term investment finance from capital markets and its attraction to foreign investors that helped to originate direct capital flows in the first place.

8. The implications of these trends for developing countries like Pakistan are obvious. If there is a fraction of shift in the tide of foreign investment inflows towards these countries, it would mean a great deal of boost to investment in local industrial capacity and also in the size of operations of capital markets. It is not easy to attract such inflows in a fiercely competitive arena like this, provided investment incentive regime is brought close to competing regimes being offered by comparator Asian countries. They started at preparation of these packages with a sharp look at what other countries were offering, and proceeded implementation nearly three decades ago in the early 1980s.

9. But revamping of incentive regime was not the only thing done. It was accompanied by aggressive pursuit of foot loose industries from advanced countries, particularly USA and Japan, extending beyond investing rules and regulations, best captured and described in the experience of Singapore from early days of start to recent times. The same type of effort was made in Malaysia and Thailand who emulated experiences of Korea and Taiwan in their early phases of industrialization. There is a great deal to be learned from these comparative experiences over the period of last four decades captured in most of the items listed in Reference.

10. In Pakistan, often there are announcements of yet another round of relaxation in rules of foreign investment, enactment of *one-window-operation*, tax exemptions or other such incentives, as though foreign investors are lined up and are just waiting for such tinkering with rules or exemptions. As for various investment promotion agencies, they hardly had any meaningful role during nationalization. After reforms and privatization, they have been at investment promotion for a long time, but there is little to show for their promotional efforts. The most meaningful of all changes were liberalized rules of foreign ownership of domestic companies, repatriation of profits and capital, and preferential treatment accorded to foreign investors which brought Pakistan's incentive regime almost in line with those prevailing in frontline Asian countries. Still, foreign investment levels are nowhere near the levels witnessed elsewhere. The missing ingredients remain to be unraveled. Some are identified in the discussion below.

11. If we look at *business-friendly index*, for 2010 (Data Set 6.7b), Pakistan's ranking is 83 as compared with 134 for India; 102 for Sri Lanka, for China, 21 for Malaysia, and 19 for Thailand. The least friendly are a few Western African countries with rankings all the way down to about 180. Among the most friendly, the derby is won by Singapore with a ranking of 1; while UK ranking is 4 and USA ranking is 5. Looking at these rankings, one could argue that Pakistan's ranking is better than Japan with 111, or Switzerland with a ranking of 118; hence Pakistan is relatively more business friendly than these countries. But this is hardly the case; this is a statistical oddity. This demonstrates limitations of such indices when it comes to interpretation in the context of ground realities that determine business and investment environment in a country.

Net Foreign Portfolio Investment (FPI) Inflows

12. In Pakistan, net FPI inflows started in earnest in early 1990s at the onset of financial reforms, defined as sum of inflows minus outflows. These inflows are not to be confused with Special Rupee Convertible Accounts (SCRA) discussed below, because these were foreign currency deposits mostly of overseas Pakistanis. FPIs' inflows in early 1990s were boosted, in part, by dollar based foreign mutual funds that were started on the heels of privatization of large public sector enterprises. There was a sizable inflow of FPIs, the largest being about \$ 1.2 billion in 1994.

13. Within a few years, these dollar based mutual funds had lost nearly three fourth of their original investment value and folded up, but not before the reasons for closing Pakistan fund operations were widely reported, causing a serious damage to FPI scenario of Pakistan. Among these was Morgan Stanley's fund established in 1994, which raised about \$200 million for investment in Pakistani stocks for its mutual fund investors, but within couple of years it was down to less than half of its market value and was closed down in 1998 when fund's market value was around \$27 million, a loss of about 87 percent to original investors.

14. Most managers of these funds were generally aware of risks of investing in stocks of companies in emerging market countries, but they were not privy to risks in capital market of Pakistan, nor about their origin or sources - in short they faced the classic *asymmetric information* risk. They were unprepared to face volatility in a narrow market confined to a limited number of investment grade stocks of international standards. It required a familiarity, if not in-depth knowledge of ground realities of local corporate

sector and its operative modes. These shortcomings came to haunt foreign fund managers, documented in the saga of Morgan Stanley fund which was widely publicized. Anecdotal though it was, it damaged rather irretrievably, prospects of equity finance inflows to Pakistan for years to come, which has transpired during the past decade and half. There was an abrupt decline in FPI inflows in mid-1990s, as abrupt as it was at the time of start. From 1996 onwards, small FPI inflows did occur, but mostly as 'captive' inflows; captive to privatization proceeds that were correctly recorded as FDIs, which they were; not FPIs. The resurgence of FPIs petered out, and stayed that way until brief resurgence in boom years.

15. Going back in time, net inflows of FPIs were negative during first four years, FY00-03; that is, there was *net outflow*, a withdrawal from capital markets of Pakistan amounting to \$1.4 billion. (*Data Set 6.2*) Thereafter, net inflows returned in modest amounts starting with \$314 million in FY04, and began to rise, reaching close to \$1.0 billion in FY06 and then jumped to \$3.3 billion in FY07. Thereafter there was a precipitous fall to \$32 million net inflow during FY08, a negligible net amount because the reversal of flows had already begun in early months of 2008, just before the peak of boom in stock prices in April 2008. The reversal turned into a rout, and during FY09 there was a net FPI outflow of \$1.0 billion, followed by another net outflow of \$64 million in FY10. For Pakistan, the era of net FPI inflows had come to an end, at least for the time being.

16. In their heydays, FPI inflows were thought to have contributed to stock market boom in Pakistan, but that is stretching the point. The reason is that total net inflows during three boom years, FY05, 06 and 07, amounted to \$4.9 billion. If all of these inflows were in stock market and stayed there, until end December 2007, which in itself is a dubious assumption open to question, the counterpart equivalent rupee inflows were no more than 7 percent of total stock market capitalization at end of 2007. FPIs were not a factor in stock market growth of Pakistan in boom times, and in current turbulent times there are no net FPI inflows either. If not FPI inflows, then what financed boom time growth of stock market? (*see Chapter 9*) Net FPIs in Pakistan during the entire decade of 2000s amounted to \$2.7 billion, or only \$267 million per year. In contrast, if we focus on a single year, net FPI inflows in comparator Asian countries during 2005, were as follows: China \$20 billion; Mexico \$10.2 billion; Brazil \$6.6 billion; India \$12.1 billion, Korea \$3.3 billion; Thailand \$5.1 billion; and Turkey \$5.7 billion. (*see Data Set 6.7*) What transpired in one decade in Pakistan, it happened in one single year. A single year inflow among these countries was larger than sum of a decade long inflows in Pakistan.

17. Let us now extend this analysis to nine comparator Asian countries. This classification may seem to be arbitrary; but it can be re-arranged as needed, though it does follow patterns of classification commonly adopted in such analyses and serves the purpose. Note that this sub-set excludes Korea, since Korea is no longer a developing country on several criteria, GNI per capita being one of them. The total net inflows of FPIs in these comparator Asian countries in a single year, 2001, were \$4.5 billion, though they constituted not even one percent of total global net inflows estimated at \$405 billion in 2001. In Pakistan these inflows were *negative*. (see *Data Set 6.7*) During 2009, total FPI inflows of these nine comparator countries had grown to \$49.3 billion; nearly eleven times of what they were in 2001, though they were still a fraction of global inflows, constituting 5.4 percent. But this increase was confined mostly to China and India. In 2009, China received \$28.1 billion in net FPI inflows and India received \$21.1 billion; while inflows and outflows of the remaining seven countries cancelled each other out.

18. Let us raise the bar to next level to a sample of eleven emerging market economies, though actual number of these economies is nearly three times larger than the sample shown in *Data Set 6.7a*. There is duplication in the sample since this set includes same Asian economies, namely India and China who are also included in comparator Asian countries. This time the list included Korea. Such overlaps are unavoidable; yet, their analysis is rather revealing. In 2001, total net FPI inflows in these eleven emerging market economies were \$16 billion, or about 3 percent of total global flows, still a fraction of the global net inflows. Nearly a decade later, in 2009, total net FPI inflows in the same 11 countries were \$128 billion, eight times more than what they were in 2001. These inflows to emerging market economies amounted to about 14 percent of global inflows of \$912 billion in 2009. In Pakistan these inflows were negative in that year. That is rather sobering.

19. At global level, this scenario shifts rather dramatically in favour of advanced countries as shown by the data given in *Set 6.7b* here. Once again, the sample shown here is a limited one and includes only 12 advanced countries, not all of them. But the picture that emerges from this limited sample is rather instructive. In 2001, net FPI inflows to these 12 advanced countries alone were about \$381 billion out of total global net FPI inflows of \$504 billion. This pattern of distribution did not change; that is, net FPI inflows in 2009 among these 12 countries were \$534 billion; more than half of global net inflows of \$912 billion.

20. This analysis, tedious though it is, points out unmistakably that advanced countries have been largest recipient of global net inflows of foreign portfolio investment. But this was not at the expense of emerging

market economies or developing countries taken together. That is, net FPI inflows to advanced countries did not preempt such inflows as occurred in the rest of the world, marginal at best though they have been; a footnote and no more. These inflows originated mostly from advanced countries or oil exporting countries, and ended back up there; it was an inter-category transfer. It also means that when it comes to portfolio investments by retail investors, their preference is to stay in advanced capital markets with a few exceptions of BRIC countries; namely Brazil, Russia, India and China or Eastern European countries. What these trends will be in this decade is hard to predict, but the tide is certainly flowing in those directions.

Net Foreign Direct Investment (FDI) Inflows

21. In Pakistan, net FDI inflows were positive for all years, rising from their lowest level of Rs 323 million in FY01 to about Rs 5 billion in FY05 and again in FY06. (*Data Set 6.2*). Thereafter, net FDIs declined to Rs 2.2 billion in FY10. The total net FDI inflows during the past decade amounted to Rs 24 billion, averaging to almost Rs 2 billion per year. This is not a large amount in comparison to similar net FDI flows to emerging market countries discussed in detail in paragraphs below. In the *first half* of the decade, largest part of FDI was on account of privatization of two big public sector banks, namely UBL and HBL. If the FDIs inflows of these two banks are netted out, there was hardly much left of total net FDI inflows over this period. Next large recipients of FDI have been communications and energy sectors. The remainder of FDI is lightly sprinkled over a large number of Pakistani industries. A good part of investment in these units was undertaken by foreign companies that have been in operation in Pakistan for a long time through their local subsidiaries, reflecting growth prospects, risk and returns for private investors over that time period.

22. During the *second half* of the decade there was some overseas investment via privatization of PSEs in power and other sectors, where some of these sectors were their mainline businesses activities overseas, but not all. They acquired these PSEs, for what ever reasons may be ascribed to their acquisition; but it was not propelled by re-establishing these privatized PSEs in their own line of industrial activity as a going business concern. The point is that during the decade of 1990s onwards until mid-2000s, the character of FDI was selective investment by overseas investors who had entered Pakistan market in sectors other than manufacturing and exporting. For example, in case of foreign acquisitions of banks and Islamic financial

institutions, overseas investors were prompted as part of the trend in Pakistan regarding opening up and entry of new foreign banks. In this sense, the character of FDI in Pakistan is vastly different from those that took place in most emerging market countries, where the main purposes was local assembly and manufacturing for export markets, not domestic market.

23. This type of FDI inflows on the global scene occurred during past three decades at massive scales, starting in early 1980s in countries like Korea, Malaysia, China, and some in India, undertaken by large manufacturing companies of advanced countries. These included not only large Japanese *zaibatsu*, the trading conglomerates like Panasonic, Sharp, Toshiba and others, that are most commonly recognized. But these FDIs included even larger investments by US and European manufactures in new plants and industrial units for assembly line operations or manufacturing as per their domestic uses and specifications for re-export.

24. They shifted their production facilities owing to significant cost-price advantages, established their subsidiaries, and started operations mainly for exporting back to their country of origin or to other overseas markets. They closed down their manufacturing plants in their countries, causing a lot of uproar over 'job exporting', resulting in considerable opposition to trade agreements that were being negotiated at that time. This was rather odd, because such opposition to liberalize foreign trade usually came from developing countries. Subsequently, investment in IT related service centers overseas, followed similar pattern with a predictable outcome, namely it eliminated domestic service network of local companies in country of origin of FDIs, but enabled them to enhance their reach of services at a fraction of the cost in their own countries.

25. In this background, we need to look at trends of FDI inflows in Pakistan and contrast them with inflows in context of comparator countries or emerging economies as listed in *Data Set 6.7* based on the same classification we followed in the analysis of FPIs above. As mentioned earlier, the size of net FDI inflows in Pakistan during *entire decade* of 2000s was US\$ 24.1 billions, averaging \$2.0 billion per year. In contrast, in the middle of the decade, inflows of FDIs during *a single year 2005*, in leading developing countries were as follows. In India these inflows were \$2.3 billion; in China \$79.0 billion; in Mexico \$18.0 billion; in Brazil \$15.0 billion; in Thailand \$4 billion; in Indonesia \$5.0 billion, and in Malaysia \$6.0 billion. In Pakistan FDIs inflows in 2005 were \$1.4 billion; much smaller and nowhere near inflows that occurred in these countries.

26. If we look at FDI flows in nine Asian economies, the *comparators*, their total net FDIs were \$53.2 billion in 2001, while that of Pakistan were only Rs 383 million; less than 0.5 percent of net inflows into comparator countries taken together. (see Data Set 6.7) At close of the decade in 2009, total net FDI inflows of these comparator Asian countries had risen to \$129.4 billion, of which Pakistan's FDIs were \$2.4 billion, much higher than what they were in early years of the decade but still very low. As the data shows, China and India have done exceptionally well to attract net FDIs from abroad. Net FDIs to India increased from \$5.4 billion in 2001 to \$ 34.6 billion in 2009, more than a six-fold increase over nine year period. China tops the league, no matter how it is reconfigured. Net FDI inflows to China were already very high in 2001 at \$ 44.2 billion; they were \$78.2 billion in 2009; and these are annual flows. This amount is more than half of all net FDIs to Asian countries in 2009. The impact of these net FDI inflows is double digit annual growth of Chinese and Indian economies for sustained period.

27. If we raise the bar a notch further up and look at *leading emerging economies* consisting of 11 countries listed here in the Data Set 6.7a, the total net FDI inflows of these 11 countries were \$121 billion in 2001, rising to \$183 billion by 2009. The number of emerging market economies is much larger. For notional comparisons, however, as the data shows, the total amount of FDIs in these 11 emerging market economies was \$121 billion in 2001 and rose to \$183 billion in 2009; thereby raising their share in global net FDI inflows slightly from 14 percent in 2001 to about 16 percent in 2009.

28. It could be argued that Korea, India, China, and Brazil are no longer an emerging market economy. They have already emerged since they constitute BRIC (*Brazil, Russia, India, China*) countries if we include Russia in the group. Their combined impact on international trade and finance is immense. If we expand this discussion to include the size of foreign exchange reserves then the significance of BRIC countries acquires a significant turn away from post-war structure that has prevailed so far. But again, tempting though it is, let us return to the subject at hand, namely net foreign investment flows.

29. Looking at global FDI inflows, an inescapable observation is that *advanced countries* are the prime destination of net FDI inflows as shown in Data Set 6.7b, not emerging market economies, and certainly not odd-lot developing countries. Of the global net FDI inflows of \$884 billion in 2001, \$381 billion went to a sample of 12 advanced countries listed here; but certainly more if we expand the list to include all advanced countries. In 2009, these inflows increased to \$ 539 billion out of total global net FDIs of \$1161 billion. There has been not much redirection towards emerging economies or towards developing countries as in previous decades.

30. The share of emerging market economies has stayed nearly the same at end of the decade as compared to what it was at the start of the decade; while share of net FDIs to developing countries is only about one tenth of total global net flows. These FDIs to developing countries do not amount much, but they can make a vast difference to a single developing country like Pakistan. Further, whatever net FDIs have occurred in developing countries, they are small indeed in global comparative sense, but these are *net inflows* and their direction is clear. However, given the noise factor against globalization, it would intuitively appear that capital flows have gone into reverse gear, from developing countries to advanced countries. This is simply not the case.

31. Overall, FDIs vastly improved depth and diversification of industrial base of recipient countries and was accompanied by technology transfer, enhanced production efficiency, competitiveness, and re-orientation of local industrial base towards exporting. This type of depth and diversification could not possibly have been achieved by these countries on their own; focused as most of them were on domestic market. It enabled the recipient countries to leapfrog various stages of industrial revolution that took Western countries centuries to accomplish. This pattern of FDI in emerging market countries represented a break from the old mode of captive investing by subsidiaries of foreign companies for expanding their local domestic market operations.

32. This diversification and deepening of industrial base via FDI investing has not happened in Pakistan on the same scale as in other developing countries. That is, whatever FDI inflows have occurred, they did not contribute much to the diversification and growth of indigenous industrial sector in Pakistan with a few exceptions, in the way they did in other emerging market countries. This requires a more detailed analysis of origination and destination sector than is possible here.

33. These interlinkages of FDIs with local economy are well known and their long term impact on economic development is not questionable, reservations apart, regarding globalization and role of multinational companies. But what is not so well known are the interlinkages of FDIs with local financial markets, since their impact is not so directly visible. It occurs in an indirect fashion. Primarily, FDIs enhance corporate valuation and capitalization levels of local recipient of FDIs via equity market operations if they are listed and traded on stock exchanges, which they are in most cases. This translates into greater financial leverage of these companies to raise long term finance through local capital markets for their investment needs.

34. The impact is obvious in case of foreign mutual funds who may invest into stocks of such companies as part of their strategy to diversify into equity markets of emerging economies. In due course, this enlarged capitalization base also affects banking system operations. It enhances capacity of such corporations to obtain larger banking credits for their working capital needs. But these effects are not noticeable unless a critical mass of net FDI inflows is reached, or until an accompanying increase in net FPIs occurs and is large enough to require sterilization of inflows to counter its impact on domestic liquidity levels.

Section 3: Capital Flows - Pakistan

Leading Issues

1. Why Pakistan has been unable to attract foreign investment except for some inflows entailed with privatization is not difficult to comprehend what the country has been going through over the past years. Economic or financial trends are important but they simply do not capture the gamut of reasons that have afflicted these inflows for a decade or longer. The chaotic situation that has prevailed throughout this period would include a degenerated law and order situation that can not be dressed up as internal insecurity lapses; deterioration of civil society and plunge into uncivil war; changes in political regimes with not much evidence for transparency and governance; crumbling infrastructure; bombings and terrorism; and hostile attitudes of reactionary segments of society. Nonetheless, an attempt has been made below to analyze what have been the root causes of dismal performance of foreign investment in Pakistan.

2. The drive to attract foreign investment in Pakistan, both direct investment in industry and manufacturing and telecom sectors, or portfolio investment in securities markets has been going on for decades in fits and starts, but notable success has eluded thus far as discussed earlier. Various government agencies such as Investment Promotion Bureau have been at this promotion but have not succeeded in their endeavors. At ground level, the officialdom has remained recluse to this effort. There has been a lot of deal making no doubt with great deal of benefits to deal makers, but the sum of all these have not amounted to much over the past decades. There have been

a few bursts of inflows, but those quickly tapered off for a variety of reasons. This is a vast subject; therefore we have to confine ourselves to an outline of what transpired with regard to investment promotion efforts during the reform years through current times with regard to portfolio investment since it is central to the development of financial markets.

3. The first step towards encouraging foreign investment was undertaken as part of reforms that began in earnest in early 1990s. In parallel with privatization drive, the investment regime comprising of a vast apparatus of licensing and controls at various layers of government that was central to domestic private investment, commonly referred to as the *license raj*. In the process, during 1990s, investment regime was gradually liberalized which involved improving, replacing or eliminating controls over investment that had prevailed before. Specifically, the government liberalized restrictions on capital inflows and outflows involving foreign exchange transactions, permitting foreign investment in manufacturing, services, infrastructure and agriculture without licensing or prior government approval.

4. This was the hardest part of reforms. In current times towards the close of this decade, the prevailing investment regime bears no resemblance to what it was in early 1990s. No doubt a good deal has been achieved if one were to take closer look and compare it with what it was before. Yet, the investment regime that prevails now in Pakistan is still behind investment regimes that have prevailed among East Asian countries since early 1980s, regardless of the business friendly index rating ahead of some leading emerging market countries or even advanced countries.

Search for Inflows - Foreign Currency Accounts

5. Apart from issues that have always nagged foreign portfolio investment, a start was made allowing foreign commercial banks to enter the domestic market, permitting establishment and incorporation of foreign owned and controlled investment banks. In parallel, banks were permitted along with non-residents to invest in corporate debt securities in Pakistan. Under foreign currency accounts scheme, banks were allowed to hold foreign currency deposits under FE-45 from non-residents, institutional as well as private individuals, and from residents under FE-31. At the height of these transfers, the *total amount* of foreign currency deposits, not inflows, of this type stood at \$9.7 billion in FY98.

6. Subsequently, after nuclear detonations in May 1998 and imposition of sanctions these deposits were frozen, and were eventually reorganized under FE-25 scheme that have survived thus far. After the freeze on convertibility, the amount outstanding, the stock of FCAs deposits, not inflows, was dramatically reduced to \$3.9 billion in FY00, and was further down to \$2.6 billions by FY03. There was some increase in the second half of the decade from \$2.9 billion in FY04 to a peak of \$4.2 billion in FY08; and down to \$3.9 billion in FY10.

7. That was the profile of foreign currency deposits in Pakistan over the past decade. These are stock outstanding, not inflows per year. There was hardly much change in these which means that there was no net increase in these inflows during the decade. These deposits were utilized by the banking system for foreign currency *credit financing* under strict rules and regulations of SBP; not for investment financing in capital markets. This is critical to underscore. These foreign currency deposits had no role in bond or equity markets of Pakistan. For investing and trading in stock market by foreign investors, Special Convertible Rupee Accounts (SCRAs) were introduced in early 1990s but their impact was limited. Foreign investors were required to establish SCRAs with authorized dealers in foreign currency, mainly banks. For outflows, SCRAs were to hold dividends, profits, royalties, technical fees payable to foreigners abroad. Rules and restriction concerning access to banking credit by foreign investors were streamlined and private domestic investors were allowed to obtain long term foreign currency loans, but with some limitations.

8. Perhaps more significant were relaxation or liberalization of rules governing foreign currency transactions as part of opening up of capital accounts. A good number of these had to do with payments abroad for various purposes that were strictly controlled by SBP under foreign exchange regulations that were operative for several decades and were piled upon each other. These rules were and still are largely inscrutable except for those closely involved with foreign currency transactions. These rules present a daunting challenge to ordinary investors engaging in investment activities in domestic markets. These were precursors of liberalized foreign trade and exchange regime, unified and market based exchange rate, and open capital accounts that prevail today. The relaxations came gradually. By late 1990s foreign exchange regime was largely open and liberalized. The arrival of licensed money changers in mid-1990s and their reorganization in foreign exchange companies to trade foreign currencies on market exchange rates was a milestone in this process as discussed in Chapter 6 earlier on.

Reforms and Liberalization – Issues of Sequencing Revisited

9. Issues of sequencing of reforms have been discussed in part in Chapter 14 of **Volume I**; but these need to be revisited here. In hindsight one could argue that the process of reforms was not well staged or well sequenced. By late 1990s, there were sufficient comparative experiences to guide as to what sequencing of structural economic and financial reforms would be most appropriate and should be pursued. The process of reforms was not driven by sequencing needs or comparative experiences; it was driven more by exigencies of foreign financing needs than by design.

10. These exigencies kept emerging throughout the decade and culminated into economic and foreign currency inflow crises that kept erupting with periodic regularity as evidenced by nearly a dozen IMF standby agreements executed during the 1990s. Pakistan proceeded with open capital accounts *before* achieving a domestic capability to withstand the onslaught of liberalized foreign trade and capital inflows and outflows. That is, before having a sound foreign trade balance based on domestic exporting capability, similar to the more successful developing countries.

11. There is a great deal of substance to this argument, because Pakistan has been unable to achieve a viable export base even at the close of the present decade. The structure of exports has undergone some change no doubt, but those changes are not substantive. Processed raw cotton and textiles are still the largest exports; while imports are more sophisticated and much more diversified including ordinary consumer items or fancy consumerism depends on how one classifies them. This is not to say that Pakistan needs to return to some variant of import-substitution regime; because the reform process is largely irreversible.

12. As discussed in Section 1 when portfolio investment in emerging economies became preferred destination of FPIs, Pakistan was also considered a potential member of this group of emerging economies that could possibly take off. Hence, as a part of massive global growth of FPIs, Pakistan did receive some attention of foreign investment banks and mutual fund companies who opened up their operations here in Pakistan. But after a few years of their operations and massive losses on these emerging market funds opened specifically to attract foreign mutual fund investors, most of these funds closed down. This failure was highlighted and duly noted by foreign investors, and Pakistan has not recovered from this loss of investor confidence overseas.

13. This recapitulation is essential in this context here. In sharp contrast to this experience, within Pakistan the attitudes towards foreign investors have at best been ambivalent. Those concerned with the promotion of foreign investment seem to believe, unrealistically, that tinkering with investment regime or relaxing some internal rules, or announcing elimination of certain cumbersome administrative procedures, or proclaiming installation of 'one-window operations to streamline entry into Pakistani market will ignite the interests of foreign investors. There is hardly any appreciation that in case of FDI, potential investors are remotely interested in bureaucratic tinkering with investment rules; rather they are forever comparing Pakistan as a destination relative to other countries who may provide far superior package of incentives, a much promising business climate, superior infrastructure and facilities, and above all a welcoming attitude of the public at large. There never has been a comparative study of investment incentives in Pakistan vis-à-vis competing countries.

14. There are two more factors at work here against inflows of foreign investment. One is the *predatory behavior* of those responsible to facilitate new installations and facilities of foreign or domestic investors alike. Second is the ambivalent and non-welcoming attitude of the public at large except for a small group of those who are likely to benefit from new installations and facilities. The attitude is irreverent and uncaring if not hostile unless compensated for. A part of officialdom and public seem to believe that somehow there is a long line of foreign investors who are trying to sneak in exploit or to deprive the country of its resources and to bundle the benefits, given half a chance. Pakistan is not a welcome destination of FDI.

15. The same is true of FPIs, though it is even more jilted. These FPIs are truly foot loose and can turn back as fast or much faster than they came in. This has been proven time and again during the financial crises that erupted, for example in mid-1990s in Mexico, the famous *tesobono* crisis¹, or bursting of the real estate bubble and ensuing crisis in East Asian economies in late 1990s. In most cases, the crises first emerged as foreign liquidity squeeze, and then quickly degenerated into a crisis, because the size of capital flows was just too large that could be accommodated in normal times. After all, no

\ 1. *Tesobonos* were US\$ linked treasury bills issued by Mexican Treasury sold largely to US-based Mexican or other investors with the pledge to redeem these *tesobonos* at maturity in Mexican Peso, but at prevailing US\$-Peso market based exchange rates. As soon as the word got out that Mexico is overextended and can not redeem the pledge, the Peso went into a free fall, triggering a massive financial crisis not confined to Mexico only but spread international with a rapidity that was new at that time. Something similar had happened in Pakistan in mid-1998.

financial system can sustain a sudden reversal of magnitudes beyond level of routine outflows; much like a commercial bank who can not sustain a run for deposit withdraw on a short notice. Until central bank intervenes effectively, what begins as a liquidity squeeze, it could degenerate into a rout if expectations of imminent devaluation begin to gain strength. That is what transpired in *tesobono* crisis of Mexico.

16. Since Pakistan has never seen anywhere near the magnitude of FPI flows involved, it never experienced such an abrupt reversal at such scales. Besides, FPI investors had already learned in early 1990s that Pakistan does not match the requirements to be classified as emerging economy in the sense widely interpreted. Meager inflows or reversals did occur as discussed above, regardless of official classification^{\2}.

17. Foreign investors are generally reluctant to invest directly into stock market and buying shares of local companies on their own for a myriad of reasons. Most investors are unfamiliar with the corporate scene in foreign countries, much less having any informed ideas about performance of leading companies, rules and procedures concerning treatment of foreign investment, taxation and repatriation of capital gains or dividend earnings or profits, exchange rate risks, transfer and settlement risks. On top of all this are usual market risks of investing, modes of local stock market operations. The preferred mode of investment by foreign investors is to buy into shares of *emerging markets mutual funds* floated within the country of FPI origin. Alternatively, foreign investors may buy into mutual fund shares floated in the US or European countries, mostly for lack of any credible expertise on the type of exposure to foreign non-global firms that would be suitable for their investment strategies and perspectives. In addition, there operational factors such as obtaining cover for exchange rate risk, tax treatment of capital gains in the country of destination and country of origin, transfer risks owing to foreign liquidity risks.

\ 2. There was a front page of coverage of *Time* magazine portraying 'for sale, the largest ghee corporation' of Pakistan, followed by comment to the effect 'no takers' or something close to it. In the article inside, the contrasts between domestic and foreign attitudes came sharply across. A few years later, this was followed by launching of government guaranteed US\$ based bonds in New York. Again, the attitudes of officials were contrasted with those of potential bond investors in stark terms, portraying the make-believe world of the those involved with bond float.. These contrasts came clearly across, and were not much help at confidence building among potential US or other foreign investors in Pakistani public sector enterprises or in its financial markets.

18. The reason of poor performance of FPI in Pakistan is both historical and recent. Investor interest the emerging markets in a substantial manner appeared on the horizon in the early 1990s, which coincided with the onset of financial reforms in Pakistan. At the start of reforms Pakistan got classified as one of the emerging markets as discussed above, together with their sordid outcome. As if these reasons were not sufficient to explain poor performance of FPIs in Pakistan, more driving factors are the aftermath of 9/11 events, intensified war on terrorism; terrible 'law and order situation' or such euphemism routinely indulged in by authorities and media to cover organised lethal terrorist attacks on population centers, a virtual siege around public places and prominent hotels where foreigners stay, kidnappings of prominent travelers including Pakistani businessmen and returning non-resident Pakistanis.

19. In a situation like this, talk of foreign investment is not very meaningful. Whatever FDI is occurring is primarily engineered by group linked investors in local companies and financial institutions. Above all, since early 2008, the lackluster performance of stock market over the past two years is hardly conducive to encourage a larger PFI inflow. Whatever remnants of investors were on the scene in 2008 have long fled the market. There are far better options open to these investors in other emerging markets in Asian countries or elsewhere.

Chapter 11: End

	Foreign Private Investment										End Period, US\$ millions				
	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10				
4															
5	-77	174	-5	532	1220	2079	4436	8309	5367	2622	2145				
6															
7	472	323	486	771	906	1459	3450	5026	5335	3695	2209				
8	472	360	488	798	951	1525	3521	5140	5410	3720	2209				
9				674	763	1211	2925	4229	4144						
10		206.9		150.0	78.0	73.4	79.4	61.9	100.8	141.9	103.0				
11															
12	-549	-149	-491	-239	314	620	986	3283	32	-1073	-64				
13			0	22	314	620	986	3288	37	0	0				
14	73	-140	-8	22	-28	151	351	2310	20						
15															
16	544	182	475	820	921	1678	3873	6960	5429	3210	2789				
17	470	322	485	798	949	1525	3521	5140	5410	3720	2201				
18	74	-140	-10	22	-28	153	352	1820	19	-510	588				
19	3920	3796	3292	2598	2878	3436	3646	3838	4238	3940	3940				
20	978	1542	2098	2296	2671	3282	3543	3755	4168	3881	4509				
21	204	241	198	150	167	205	219	232	289	319	336				
22	2942	2254	1194	302	207	154	103	83	70	59	51				
23	1400	1526	1761	2078	2486	2961	3407	4065	4689	5137	5777				
24	1140	1276	1421	1682	2002	2428	2817	3373	3812	4138	4693				
25	14.6	15.8	11.2	7.2	6.7	6.9	6.4	5.7	6.2	6.2	5.8				
26	17.9	18.9	13.9	8.9	8.4	8.4	7.8	6.9	7.6	7.7	7.2				
27															
28	52	63.4	60.1	57.8	58.2	59.7	60.2	60.4	68.2	81.0	85.3				
29	SaF Data Set														
30	Source: SBP data series intiable 9.4 through 9.9 in various issues of Annual Reports.														
31	\ 1 These data taken from BoP financial accounts data in tables 9.4 of various Annual Reports.														
32	\ 2FDI and FPI data for FY02-10, taken from Table 9.9 of various SBP Annual Reports; for FY00-01 from table 9.1 in AR 01 report. Do not match with BoP data used here.														
33	\ 3From Table 9.8, AR 10 and others, data on Reserves in US\$, converted into Rs at exchange rates shown. Includess balances held with the banking system														
	Includess balances held with the banking system in old FEs 45, 31, and new FE-25 started in FY99; resident and non-resident; institutional, non-institutional														

Data Set 6.7 Financial System Indicators, Comparator Asian Countries												
	FPI net, million US\$		FDI net, million US\$		Forex Reserves billion US \$		Market Capitalization billion US\$		Market Cap/GDP			
	2001	2009	2001	2009	2001	2009	2001	2009	2001	2009		
5												
6	Bangladesh	-4	-154	79	674	1.3	10.4	1.1	7.1	2	8	
7	China	849	28,161	44,241	78,193	220.1	2452.9	523.9	5007.7	40	100	
8	India	2,950	21,112	5,472	34,577	49.1	284.7	110.4	1179.2	23	86	
9	Indonesia	442	787	-2,977	4,877	28.1	66.1	23.0	178.2	14	33	
10	Malaysia	-	-449	554	1,387	29.8	96.7	120.0	256.0	129	133	
11	Pakistan	-130	-37	383	2,387	4.2	13.6	4.9	33.3	7	21	
12	Philippines	125	-1,096	195	1,948	15.6	44.2	41.5	80.2	58	50	
13	Sri Lanka	-35	-382	172	404	1.4	5.4	1.3	8.2	9	19	
14	Thailand	352	1,334	5,067	4,976	33.1	138.5	36.3	138.2	32	52	
15	Total Comparators, US\$ billions	4.5	49.3	53.2	129.4	0.4	3.1					
16	Global, US\$ billions	504	912	884	1,161							
17	Comparators / Global, %	0.9	5.4	6.0	11.1							
18												
19		GNI Per Capita US\$		M2/GDP		Banking Credit / GDP		Federal Debt /GDP		Biz-Friendly Index		
20		2001	2009	2001	2009	2001	2009	2001	2009	2001	2010	
21	Bangladesh	350	580	39	58	48	60	36	-	-	107	
22	China	1,000	3,650	128	159	123	145	-	-	-	79	
23	India	460	1,220	55	71	55	69	60	53	-	134	
24	Indonesia	690	2,050	48	36	55	37	-	28	-	121	
25	Malaysia	3,540	7,350	131	141	147	137	-	53	-	21	
26	Pakistan	500	1,000	37	39	38	48	-	-	-	83	
27	Philippines	960	1,790	60	60	60	-	60	-	-	148	
28	Sri Lanka	830	1,990	37	35	45	40	103	-	-	102	
29	Thailand	1,900	3,760	113	113	129	137	-	29	-	19	
30												
31	SaF Data Set	Source: World Bank Financial Sector Data Base										
32	Prepared by: Hira Akram											

Financial System Indicators, Emerging Market Countries												
Data Set 6.7a												
Emerging Markets	FPI net, million US\$		FDI net, million US\$		Forex Reserves billion US \$		Market Capitalization billion US\$		Market Cap/GDP			
	2001	2009	2001	2009	2001	2009	2001	2009	2001	2009		
3												
4	Argentina	-89	2,058	2,166	3,902	24	-	-	-	-	-	-
5	Brazil	2,481	37,071	22,457	25,949	36	239	186	1167	34	73	
6	Chile	-217	316	4,200	12,702	33	-	-	-	-	-	
7	China	849	28,161	44,241	78,193	220	2453	524	5008	40	100	
8	India	2,950	21,112	5,472	34,577	49.1	284.7	110.4	1179.2	23	86	
9	Korea	10,266	25,661	3,528	1,506	103	270	220	837	44	101	
10	Malaysia	-	-449	554	1,387	29.8	96.7	120.0	256.0	129	133	
11	Mexico	151	4,169	29,808	14,462	45	100	126	341	20	39	
12	South Africa	-962	9,364	7,270	5,354	6.0	-	-	-	-	-	
13	Turkey	-79	2,827	3,352	8,403	20	75	47	226	24	37	
14	Thailand	352	1,334	5,067	4,976	33.1	138.5	36.3	138.2	32	52	
15	Total Emerging, US\$ billions	16	132	128	191							
16	Global, US\$ billions	504	912	884	1,161	1,309						
17	Comparators / Global, %	3.1	14.4	14.5	16.5							
18												
19												
20												
21	GNI Per Capita US \$		M2/GDP		Banking Credit / GDP		Federal Debt /GDP		Biz-friendly Index			
22	Argentina	6990	7550	-	-	-	-	-	-	-	115	
23	Brazil	3300	8070	46.0	66	73	98	-	61	-	127	
24	Chile	4600	9470	-	-	-	-	-	-	-	43	
25	China	1000	3650	128.0	159	123	145	-	-	-	79	
26	India	460	1,220	55	71	55	69	60	53	-	134	
27	Korea	10890	19830	68.0	69	84	112	-	-	-	16	
28	Malaysia	3,540	7,350	131	141	147	137	-	53	-	21	
29	Mexico	5580	8960	28.0	29	33	44	-	-	-	35	
30	South Africa	2830	5760	-	-	-	-	-	-	-	34	
31	Turkey	3310	8720	35.0	52	53	63	-	51	-	65	
32	Thailand	1,900	3,760	113	113	129	137	-	29	-	19	
33	SAF Data	Source: World Bank Financial Sector Data Base										
34	Prepared by: Hira Akram											

Data Set 6.7b												
Financial System Indicators, Advanced Countries												
Advanced Countries	FPI net, million US\$		FDI net, million US\$		Forex Reserves billion US \$		Market Capitalization billion US\$		Market Cap/GDP			
	2001	2009	2001	2009	2001	2009	2001	2009	2001	2009		
Australia	7,159	19,408	5,906	8,714	18.7	41.7	25	54	13	136		
Canada	2,713	23,349	27,711	19,898	34.3	54.4	701	1681	98	126		
Austria	-4,538	497	5,905	8,713	15.6	17.90	24,511	54	13	14.1		
Belgium	97,662	-3,241	73,634	-38,859	13.6	23.90	165,843	261	71	55.5		
France	13,650	68,285	50,343	59,989	58.6	131.8	1,175	1972	88	74.4		
Luxembourg	20,230	138,688	88,203	194,844	0.2	0.81	23,782	106	118	201.8		
Germany	76,894	11,806	26,171	39,153	82.1	197.1	1,072	1298	57	39		
Russia	542	33,690	2,748	36,750	36	439	76,197	861	25	70		
Japan	39,101	12,432	6,191	11,834	401.9	1049	2252	3378	55	67		
Switzerland	1,840	9,241	29	66	0.271	0.96	626	-	245	218		
United Kingdom	22,568	78,845	53,842	72,924	37.3	66.5	2165	2797	147	129		
United States	121,464	160,534	167,020	134,710	130.1	404.1	13855	15077	135	107		
Total, 12 countries, \$ billions	399	554	508	549	829	2427						
	GNI Per Capita US \$		M2/GDP		Banking Credit / GDP		Federal Debt /GDP		Biz-friendly Index			
	2001	2009	2001	2009	2001	2009	2001	2009	2001	2010		
Australia	20,250	43,770	67	99	95	144	27	24	-	10		
Canada	22,420	41,980	114	159	204	-	-	53	-	7		
Austria	24,210	46,450	145	203	125	141	66	71	-	32		
Belgium	23,900	45,270	119	136	119	109	105	92	-	25		
France	23,250	42,620	101	143	106	128	60	83	-	26		
Luxembourg	42,900	76,710	637	580	122	189	5	13	-	45		
Germany	24,020	42,450	166	193	144	132	38	47	-	22		
Russia	1,780	9,340	21.0	46	-	34	-	9	-	123		
Japan	35,120	38,080	225	224	299	321	-	-	-	111		
Switzerland	37,790	65,430	126	150	168	191	25	-	-	118		
United Kingdom	25,860	41,370	-	-	136	229	43	73	-	4		
United States	35,480	46,360	71	88	206	231	32	67	-	5		
SaF Data Set	Source: World Bank Financial Sector Data Base											
Prepared by: Hira Akram												

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Glossary

Access to Capital Markets: is the ability of a company to raise long-term funds from capital markets as equity or loan finance, based on its capital structure, financial strength, its current debt-equity ratio, management and ownership, its future performance outlook and potential profitability, and allied factors like industry or sector risks; access also means the ability to operate or do business in capital markets.

Accrual Basis: a system of accounting where receipts and payments are entered into accounts at the time of transaction instead of the time when cash settlement takes place. For example, revenues are recognized and entered into accounts when goods or services are sold independent of the actual cash inflows or cash receipts for the sale. Likewise, expenses are recorded at the time an expense is incurred, instead of the time of actual cash payment. This is in contrast to cash basis of accounting, where the transactions are recorded on the basis of receipts and payments or actual cash inflows/outflows which may distort the financial position for the accounting period concerned. The accrual basis of accounting is widely used in financial reporting and is part of GAAP (Generally Accepted Accounting Principles).

Arbitrage: is to take advantage of the difference in prices prevailing in two markets; for example, a purchase of a currency, a commodity or a security in one market for sale at another market for higher prices; or, borrowing at a lower rate in one market and lending at a higher rate in another; arbitrage is of several types such as interest rate arbitrage, risk arbitrage, or maturity arbitrage, depending on the type of transaction conducted.

Asset Classification: classification of assets based on the type, title, maturity, reliability or recoverability of the asset, or their risks; for balance sheet purpose assets are reported as current and non-current assets.

Authorized Dealers: are banks and money changers authorized by the central bank to hold and deal in foreign exchange; also, banks and some brokerage houses authorized to deal in primary market for government securities.

Balance Sheet Risks: are risks to which balance sheet items of a bank like loans and deposits are exposed to because of changes in interest rates, or exchange rates, or due to a mismatch of their maturities, or loan defaults that need to be mitigated.

Bank's Capital: is valued as follows:

- for *statutory and regulatory purposes*, a bank's capital is the share holder's equity in paid-up share capital held as preferred or common stocks and is the statutory minimum capital requirement for investiture and licensing imposed by the government or the central bank. This share holder's equity plus declared reserves of a bank, deposited with the central bank is *core capital*, also called *shareholder's funds* and designated as

Tier 1 capital for regulatory purposes; the amount of undisclosed reserves, revaluation reserves, hybrid debt capital instruments bank, provisions for loan losses and subordinated debt not exceeding 50 percent of core capital is called *supplementary capital* or Tier 2 capital which together with Tier 1 capital constitutes capital of a bank as per prudential guidelines and requirements.

- These statutory or regulatory definitions aside, if the bank is established as a limited liability or joint stock company which in almost all cases it is, the commonly used figure to denote capital is the *capitalized value* of bank's shares outstanding with investors which are being traded in the stock markets. Thus, bank's capital is the market value of original equity plus replenishments of equity if any, the paid up capital, held as preferred or common stocks issued and held by the owners or other investors. For market valuation purposes, *the net-worth of the bank* is more relevant though it is not the same as it's capital. The networth of a bank is denoted by current market value of *all assets* of a bank, including its capital plus loans and credits outstanding and other assets declared in the balance sheet of a bank, *plus* off-balance-sheet assets, if any, *less all liabilities* including deposits, borrowings and other liabilities lodged in the balance sheet of a bank, but does not include its franchise value, namely potential value of business growth of the bank in future.

Banking Risks: various types of banking risks broadly classified as:

first, risks associated with lending activities of a bank such as credit risks

or borrower risks, interest rate risks, loan portfolio risks concerning loan losses, credit concentration and overexposure risks, foreign exchange risks in case of loans advanced in foreign currencies.

second, risks inherent in funding activities concerning deposits, borrowings, mismatch of maturity structure between loan portfolio and deposit or borrowing portfolio, and cost of borrowings.

third, operational risks such as liquidity risks, risks in payments and settlements, risks of fraud, and risk associated with off-balance sheet activities; management of these risks depend on operational policies, procedures and practices, balancing of risks and returns, control system, reporting and information system.

Banking System: consists of commercial banks, investment banks, and other banking institutions such as trade financing banks, or savings banks, organized, established, *licensed and chartered under the banking law*, rendering a range of banking services under supervision, regulation and statutory control of a central bank to ensure compliance with rules and regulations governing banking operations and activities. In this sense, banking system may not include financial institutions organized and established outside the banking law; are not licensed as a bank, and thus are outside the statutory or regulatory control and supervision of the central bank, even though these institutions may be operating like a bank, and may be engaged in financial intermediation activities similar to those of regular banks. (*see Financial System*)

Bank Rate: is the rate of discount of the central bank; it is the rate used by the central bank for the rediscounting of treasury bills and other approved financial papers; it is the interest rate charged by the central bank on advances to banks against specified collateral; it is a benchmark rate affecting the entire structure of interest rates, and thus it is a very important tool of monetary control, affecting banking credit, money supply, prices and inflation.

Base Rate: is an interest rate used as the starting base or point of pricing of bank credit; for example, prime rate or LIBOR, or in Pakistan KIBOR is taken as the base rate and a margin is added to price a bank loan or a credit facility.

Bid-and-Asked Quotations: are price quotations in currency markets, or securities markets; bid price is the highest price a dealer or a purchaser is willing to pay for a security or a currency, whereas asked price is the lowest price a dealer is willing to accept for a security or a currency; the differential is the trading margin of the broker or the dealer; trading in these markets take place on the basis of these quotations, made by sellers or buyers.

Bond Indenture Agreement: is an agreement tendered by a bond issuer specifying its contractual obligations concerning a bond issue such as interest rate and date of maturity, repayment schedule, collateral, protective covenants, and call provisions of the bond, and stating type of the bond being issued; a contract of a bond issue outlining the covenants.

Bond Market: is the secondary market where bonds are traded among the final investors, who may be large institutional

investors or individual investors, through bond dealers or distributors who specialize in trading a variety of fixed income securities; the secondary market is further segmented into markets for government bonds, corporate bonds, or zeros market, each with its own coupon rate, yields and risk characteristics; however, the primary market for bonds precedes secondary market and consist of all the institutional players involved in the processes of bond inception and issue all the way through when the bond is finally traded in the secondary market. These are institutional players; bond issuer may be government or a corporation; issuers' bank, who carries out the market survey for the size of the issue and the interest rate; syndicate of underwriters, usually investment banks or underwriting companies who buy the bond issue at face value, and thus become owners of the bond assuming market risks until bond is floated and sold in the secondary market to final investors through firms and dealers engaged in the business of fixed income securities; these distributors assign portions of the bond issue to final buyers either directly or through brokerage firms who collect the intent to purchase from potential investors as to the amount and the price of the bond which provides a test to underwriters whether the bond issue is priced correctly; therefore, in primary bond market, there is no bond trading of the type that occurs in secondary market. Bond markets are less volatile for top grade bonds such as treasury bonds, and top rated corporate bonds, but is highly volatile for other types of bonds such as junk bonds; thus investments in top rated bonds may be less risky than stocks, but at times bonds could be as risky as stocks, specially long-term bonds which are relatively more interest sensitive; in general, when interest rates rise, bond prices fall; and conversely, if

interest rates decline, bond prices increase; stock and bond market may fluctuate independently of each other thus offsetting investor's risks, provided investor's portfolio is diversified into bonds and stocks in adequate proportions, and his exposure is such that losses in one market are offset by gains in another.

Bond Market Risk: is the risk of decline in bond prices since the market value of bond is inversely related to interest rate; therefore, if interest rates are likely to raise, then bond holder faces the risk of reduction in the market value of bond; typically, bond market is less volatile for top grade bonds are such as treasury bonds, and top rated corporate bonds, but highly volatile for other types of bonds, specially the co-called junk bonds; therefore investment in top rated bonds may be less risky than stocks, but at times, bonds could be as risky as stocks, specially long-term bonds which are relatively more interest sensitive. The stock and bond market may fluctuate independently of each other, thus offsetting investor's risks, provided investor's portfolio is diversified into bonds and stocks in adequate proportions, and his exposure is such that losses in one market are offset by gains in another.

Book Value: is the stated or recorded value of an asset in the books of accounts of a company; the book value of depreciable assets is reduced every year by the amount of depreciation applied; but book value may increase in case of plant and machinery if spent amounts are enhancing and adding to the value of the assets and increasing their production capacity; thus the book value of an asset may increase or decrease with the passage of time and it may be different from their resale or market value; on sale or disposal of an asset, if the amount realized is less than its book value, the loss is to be

absorbed by the company; and if the value realized is higher than the book value, then the realized difference is profit.

Borrowing: the term *borrowing* in daily usage is regarded synonymous to terms like *credit*, *debt*, and *loan*, but is interpreted somewhat differently depending on the context; it is commonly meant to obtain a *loan* or a *credit*, or to enter into a debt liability in the amount of money obtained as a *loan* or a *credit* from a lender for a period of time at a rate of interest and at terms of repayments as agreed between the borrower and the lender, backed by a collateral or loan security; while the term *borrowings* is interpreted as the total amount of *debt* outstanding with a single borrower, the total value of the loan portfolio of the borrower; hence these two terms are not the same as *credit* or *loan*.

Call: this term has several meanings depending on the context such as:

- in banking business, a bank may demand repayment of a loan before the due date if the borrower has not met the conditions specified in the loan agreement such as obtaining insurance for collateral tendered.
- in securities market operations, call is a type of option authorizing the buyer to buy a specific quantity of asset at a fixed price within a stated period for a fee or premium.

Capital Flight: is a massive outflow of funds in foreign currency from the host country caused by the fear of adverse exchange rate or interest rate movements, or to take advantage of higher returns abroad, or in anticipation of adverse rules and regulations affecting foreign investment, or enhanced

insecurity due to political or economic upheavals and to avoid risk of being frozen in an unstable country; this transfer of funds may be legal or illegal, but in most cases, it involves currency transactions through the banking system, if allowed, or through informal barter or swap arrangements, or through *hundi* system, or through over-invoicing of imports and under-invoicing of exports.

Capital Gain or Loss: capital gain is the increase in the market value of an asset held over its acquisition cost which is the original price plus cost of transaction paid by the investor; conversely, capital loss is the decrease in the market value of an asset over its acquisition cost during the accounting or the reporting period. The assessment of possible capital gain and their expectations are central to any investment activity and is the main element in wealth creation.

Capitalization: for companies and businesses capitalization is issue of shares to raise equity finance; or conversion of retained earnings into capital by issuing bonus shares; or capitalization of costs by charging an expenditure to the cost of an asset, or adding expenses on the improvements and modernization of existing assets to the cost of the assets; involves determining the market value of assets based on costs incurred less depreciation, or cost of replacement; it is not the same as investment.

Capitalization Issues: is the issue of shares of common stock, or preferred stock to raise equity finance; or it is the issue of additional shares to the existing shareholders; or it is a transfer of funds from retained earnings or reserves to the share capital account, and therefore in effect it is capitalization of retained earnings or reserves.

Commercial Paper: are unsecured promissory notes of relatively low risk and short maturity of 3 to 6 months, issued by highly rated large corporations who usually maintain backup credit lines with their banks to ensure payment at maturity; notes, bills, and acceptances arising out of commercial, industrial or agricultural transactions of short term maturity, self-liquidating and used as trade financing instruments for non-speculative purposes.

Central Bank: is the apex institution of the banking and financial system and is entrusted with its management with the prime objective of maintaining its soundness and stability, vital for the economy as a whole. Foremost, a central bank is a monetary authority as well as a regulatory authority; both these roles are critical in modern times to ensure a sound and stable banking and financial system. As for the traditional view of the role of a central bank regarding currency issue, banker to banks, banker to the government and lender of the last resort, all those are subsumed under these two pivotal roles, empowering the central bank to carryout a range of functions to ensure financial soundness, stability and growth of the banking and financial system, but thus stability and growth of the economy.

- As the *monetary authority* and as a custodian of the public confidence in the currency and its value both domestically and abroad, the main function of a central bank is to maintain price stability and exchange rate stability. For price stability, the central bank articulates and implements monetary policy; manages supply of money and banking credit; conducts open market operations and thus affects liquidity of the banking system; and sets the discount rate which serves as the peg rate for short term interest rates in

money markets. Central bank issues its own currency backed by gold and reserves under a fractional reserve system which is not a legal tender, rather it is a promissory note, but it is widely treated by the public as good as a legal tender. As banker to the government, the central bank provides credit to the government and manages government's borrowings operations, domestically and abroad. All these actions of a central bank, collectively, affect availability of credit and interest rates, which affect the level and direction of economic activity and in turn have an impact on the general price level, thus on the rate of inflation in the country and growth of its economy. Central bank manages foreign exchange system of the country, and in most developing countries it is the prime holder of foreign exchange reserves. The central bank actively intervenes in the foreign exchange market as feasible, in attempts to stabilize or maintain a desired level of exchange rate with significant consequences for international trade, transfers and capital flows which materially impact on the balance of payments of the country.

- As the *regulatory authority*, and as the custodian of public confidence in the banking and financial system, the central bank operates a system of banking supervision and regulation and takes appropriate actions to maintain financial strength, soundness and solvency of the banking system. As banker to the banks, central bank is the lender of the last resort to banks in financial distress and takes actions based on its early warning system well before their financial distress degenerate into wide-spread banking crisis or insolvency of concerned banks. On their part, banks are required to

follow the rules, regulations and guidelines as stipulated by the central bank concerning capital adequacy, liquidity, risk management, defaults and non-performing loans in their portfolio and have to make mandatory provisions for bad loans as classified under these rules and guidelines. These stipulations have a direct impact on the quality of the portfolio and profitability of banks as well other financial institutions whose supervision is entrusted to the central bank.

Central Bank Rediscount: is the rediscounting mechanism of the central bank operated mainly to regulate liquidity and money supply, or to affect the level of interest rates through changes in the rediscount rate; involves discounting by the central bank of a treasury bill or a bill of exchange for a bank which has earlier discounted that bill for its client.

Conversion: in finance, it is conversion of an asset into another asset through trade or exchange; in bank lending, conversion of an expired loan into a new loan; in deposit accounts, conversion of a current account to a term deposit account; in foreign exchange trading, it is conversion of a currency into another at an exchange rate, like converting dollars into rupees or otherwise; in dealing with maturity dates, conversion is transformation of maturity of one asset into another, such as converting a fixed deposit into saving or current account; in securities market transactions, conversion of stock or bond for a specified numbers of shares or stock provided conversion price of securities is the same; in manufacturing, conversion of raw material into finished goods.

Cost of Capital: it has various components including, cost of preferred stock, cost of

common equity, cost of retained earnings, and cost of debts; when the cost of capital is determined on the basis of the relative proportions of these components in a capital structure, it is weighted average cost of capital; also interpreted as the minimum rate of return a company must earn in order to satisfy the rate of return expected by investors; also the discount rate used for capital budgeting decisions.

Core and Supplementary Capital: is calculated mainly to assess the capital adequacy of a bank; it needs to be uniformly defined and adopted by all banks to allow meaningful comparisons of networth of banks and their cross section analysis. The Basle Capital Accord of 1988 and its subsequent amendments and updates being adopted by several countries since then define core and supplementary capital as follows.

- **Core Capital:** also called **Tier 1** capital constituting shareholders' equity in paid-up share capital or common stock held, plus disclosed reserves. For purposes of bank supervision, the Basle Accord prescribes that core capital should be 50 per cent of the capital base of the bank, and the other 50 per cent may be supplementary capital as defined below.
- **Supplementary Capital:** also called **Tier 2** capital, consists of undisclosed reserves, revaluation reserves, hybrid debt capital instruments, general provisions or reserves for loan loss, and subordinated debt limited to 50 per cent of tier 1 items. (*see Capital Adequacy*)

Coupon: is the interest certificate attached to bearer bonds, which can be detached and

presented for payment on respective due dates.

Coupon Bond: a bond paying the bond holder a regular amount on specified dates as coupon payment through its maturity.

Coupon Payment: the periodic payment received by the coupon bond holder as part of the bond indenture agreement.

Coupon Rate: is the interest rate paid on bond's par value; or the rate of interest stated on the face of a security; or the ratio of the annual coupon payments on a bond to its par value; it is the interest rate on par value of the bond fixed for maturity period of the bond; it is the obligation of bond issuer, the borrower of long-term funds in capital markets; for bond investors, coupon rate is a fixed rate of return but it is only a part of the total return on a bond, the other part being capital gain or loss at the time of sale based on the market price relative to purchase price or issue price of the bond paid by purchaser at the time of purchase; coupon rate is determined by market conditions as assessed by the underwriters at the time of bond issue, such as long-term interest rates on comparable borrowings, the size of bond issue, maturity of the bond, and above all financial depth of the borrower.

Credit Risk: is the risk of default by a borrower to a lending bank; the risk of nonperformance by the borrower, or non-repayment of a loan, forcing the bank to make provisions from current income, hence causing a reduction in current profits or eventual loss; credit risk may emerge from a market downturn, or a recession, or a slack in business and financial activities, causing losses to the borrowers, and transmitting these losses to nonperformance on credit obligations; or may emerge from an

unrealistic assessment of future income and profitability used as the basis of credit appraisal; or may emerge from an insufficient collateral base or illiquidity of collateral; or may emerge from an outright and deliberate default by the borrower, if the borrower is able to get loan write-offs; or fraudulent lending and borrowing practices.

Creditworthiness: of a borrower depends on the assessment of the credit risk associated with the borrower, focusing on the character, business capability, financial strength and collateral value, and capital of the borrower; together with an assessment of industry risks associated with the borrower's business activities; creditworthiness of a bank, similarly is based on the financial strength of the bank, its track record and business success, its client base; and its capital and shareholders; creditworthiness of a country is the ability and willingness of a country to repay its debts which are based on an assessment of country risk, sovereign risk, and transfer risk with prime concern for the country's overall external financial accounts.

Default: in banking, it is failure of the borrower to repay principal amount and interest due on the debt outstanding; it is declared after the lender and the borrower have exhausted all possible means to clear the overdue payments and there are no further prospects of repayment, and the only resource left to the lender is to proceed for liquidation of collateral, and if the realized value of collateral is insufficient to cover the amount of overdue payments, then take a loan loss on its balance sheet against shareholders' funds. The default may be caused major losses in the business of the borrower, persistent downturn sales, revenues and income, that is, a genuine default; or the default may be willful, with the intent of defrauding the lender and may

have no link with the financial position of the borrower. There are several types of default, some of these are:

- **loan default** is the same as above but pertaining to a specific loan; that is, the repayments on a single loan may be overdue, but the borrower may still be current on his other loan obligations and other debts outstanding.
- **repayment default** is the failure of the borrower to make repayments of principal and interest due on dates specified in the loan agreement; at this point the borrower may not be declared in default, but if several repayments accumulate, and are overdue, the borrower may be declared in default.
- **contract default** is the non-compliance of contractual obligations by the parties concerned; these may be obligations, or performance clauses of the contract.
- **systemic default** is the wide-spread default of borrowers affecting the entire banking system.

Default Risk: is the risk that a borrower will not repay the debt outstanding, or the interest and principal due on a loan; same as the credit risk and hence the most important risk in the banking business that needs to be covered primarily through ascertaining the quality of the collateral tendered. In the evaluation of credit-worthiness of the borrower, default risk is the over-riding concern, and is evaluated as a composite of collateral, credit performance history, potential of the line of business of the borrower, financial strength, third party recourse, and other considerations pertinent to the borrower to qualify for the loan.

Deficit Financing: is the extra-budgetary finance secured by the government; if

government's budget exceeds estimated budget deficit already included in the budget, the government will have to access items beyond the budget to cover the amount of excess deficit, mostly through domestic borrowing from the central bank or from the banking system, usually below the market costs through short-term instruments such as treasury bills and treasury certificates or long-term instruments such as governments bonds; deficit financing is the major source of increase in money supply and thus a major source of inflation; the central bank, as banker to the government, may extend credit to the government, or to the government agencies or government owned enterprises to fill in their financing gap; since these credits are asset items on the balance sheet of the central bank, these assets provide the backing for bank notes, the currency or the legal tender, the liability of the central bank, promoting the central bank to issue new currency; hence the term deficit financing is usually interpreted as printing money with significant inflationary consequences; to the extent the government borrowing is done from the banking system, and the banks become the holders of treasury bills, certificates or bonds, or advance credit to the government, its agencies or enterprises, the deficit financing may not be entirely inflationary; since it depends how the credit system absorbs deficit financing.

Effective Interest: is realized interest cost or interest income of a financial instrument or a financial asset over a specific time period based on nominal interest rate, maturity, and transaction costs.

Equity Finance: is the amount of capital invested as equity in a business venture with profit or loss sharing obligation on the part of the investor as against loan finance.

Exchange Rate Risk: is the risk associated with changes in exchange rate depending on the type and size of exposure of those engaged in foreign finance such as the borrowers or lenders of foreign loans, dealers in foreign exchange, traders engaged in imports or exports, guarantors of obligations denominated in foreign currencies, and, in general, the foreign currency holders.

- *for the borrower;* in case of depreciation of the local currency against the currency of the foreign loan obligation, the borrower may face a substantial increase in debt servicing burden, because the borrower's business operations, and turnover, sales, and profits are in the local currency; generally a devaluation will increase the domestic currency costs of repayment due on a foreign loan, and will increase the equivalent amount of external debt liability.
- *for the lender;* it is the reverse of the borrower's risk, if the lender has accepted to receive repayment in a currency other than the currency of the loan, without a risk cover charge; if the loan is in a hard currency, a depreciation of exchange rate in borrowers' home country, may enhance risk of default or non-payment, but this does not constitute exchange rate risk.
- *for the guarantor;* the exchange rate risk on a foreign loan is similar to that of the borrower, but may occur only in the case of default by the borrower covered by the loan guarantee.

Financial Instruments: are financial papers and documents acknowledging financial commitments or obligations; contractual agreements specifying legally enforceable

financial liability; papers facilitating financial transactions, transfers, payments and settlements. In banking these are:

- savings or *deposit instruments*, which are assets of the depositors, but the liabilities of the deposit money banks and other deposit taking institutions.
- *credit instruments*, or instruments of indebtedness, which are liabilities of the borrowers, but assets of lending institutions.
- *transfer instruments*.
- *payments and settlements instruments*.
- *financial markets instruments* for investment and equity finance, such as stock, shares, bonds, and bills.

Financial Market Risks: various types of risk facing investor both in money markets and capital markets, classified as:

- *market risk* that the price or value of assets may decrease at the time of sale resulting in capital loss.
- *interest rate risk*, that an increase in interest rate will cause a decline in the market price of a bond or a debt security or stocks and shares.
- *default risk* that the issuer of a bond may default on repayment or redemption of the bond.
- *inflation risk* that increase in general price level will reduce the real value of financial asset.
- *currency risk*, that changes in exchange rate of domestic currency will adversely affect the rate of return on financial assets held in foreign currency.

Financial Futures: are standardized futures contracts whose market price is established at trading in a regulated commodity

exchange; financial futures represent a commitment to buy or sell a specified quantity of a specific financial instrument in the future like all other futures contracts.

Financial Markets: consist of money and capital markets; the money market segment deals in short-term financial instruments, mostly debt instruments to cover short-term financial needs issued by banks, companies and government such as deposit certificates, bills of exchange, commercial papers, and treasury bills; the capital market segment deals in long term financial instruments, both for long-term debt financing or equity finance issued by companies, financial institutions, or the government. In general, these are markets for financial instruments or financial assets of various maturities, risk and return characteristics involving savers, investors and intermediaries conducting transaction to facilitate the flow of household and institutional savings in to short and long term debt or equity instruments at prices determined by supply and demand conditions and interest rates.

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- *inflation risk* that increase in general price level will reduce the real value of financial asset.
- *currency risk*, that changes in exchange rate of domestic currency will adversely

affect the rate of return on financial assets held in foreign currency.

Floating Exchange Rate: a system whereby the exchange rate is allowed to adjust according to the market forces of supply and demand, and there is no intervention by the central bank or the government to maintain the exchange rate at a target level, as is the case with fixed exchange rate system. There are various types of floating exchange rate: (see *Fixed Exchange Rate*)

- A *free floating* exchange rate system is without any intervention by the authorities in the foreign exchange market; currently, major international currencies such as US dollar, Japanese yen, German mark and a few others are in a free float and their exchange rates are determined by international markets in foreign exchange.
- A *managed float* system, also called dirty float, is a system of exchange rate determination when market forces are only partially operative and are mixed with interventions to maintain a desired level of exchange rate.
- A *band float* is a system of formally specified or designated range of an exchange rate; within the range, exchange rate movements are allowed to occur almost freely; but if the exchange rate moves out of the band, the authorities may intervene.
- A *snake float* is a system where exchange rates of several currencies in the basket move together with in a band in a harmonious fashion, maintaining their relative position, more or less, with each other.

Financial System: of a country consists of a vast institutional and market mechanism of

mobilization, allocation and transfer of financial resources between suppliers and users; suppliers of financial resources are savers, mainly households but also businesses and corporations, while users are mainly businesses, investors, and government, whose activities lead to economic growth depending on how successful investors are in their ventures and how efficient the financial system is in helping them to do so. There are two major operational structures within a financial system; one structure is devoted to the system of *indirect finance* involving mobilization, allocation and transfer of resources by financial intermediaries of a large variety, mainly banks and non-bank *financial institutions* who are engaged in financial intermediation between users of financial resources, the borrowers, be in public sector or private sector, and suppliers of financial resources, the savers, mainly households; these intermediation activities and operations are overseen by a regulatory authority, typically the central bank, responsible for maintaining confidence of the public in the currency and the banking system through ensuring stability and solvency of the banking system. The second structure is devoted to a system of *direct finance* through financial markets between suppliers of funds, the savers and who are investors mainly households, and also businesses and corporations who invest in private or public securities, private or public bonds and stocks of companies listed on stock exchanges through operations of a variety of *financial markets*, mainly money markets, foreign exchange markets, bonds and stocks markets; their operations are regulated by securities and exchange commission responsible for ensuring public confidence mainly by insuring transparency in listing and trading of securities transacted in these markets. Besides, financial system

consists of *financial infrastructure* facilitating operations of financial institutions and a variety of markets both for direct and indirect transfers such as deposit markets, credit markets, funds markets, debt markets, securities markets and their infrastructure such as rating and reporting systems; the *payment and settlement system* and securities depositories facilitating transactions and transfers; also a *safety net* and institutions such as deposit insurance corporations, or risk mitigation mechanisms that reduce volatility in the operations of credit markets or financial markets. Operations of financial institutions and markets are governed by a legal framework and are facilitated by an efficient *legal infrastructure* including a body of laws rules and regulations pertaining to every aspect of financial intermediation, trading and transaction, together with an enforcement mechanism and a system of courts for adjudication and arbitration of financial disputes, debt recovery, bankruptcy, liquidation and foreclosure.

Foreign Exchange (currency) Trading Risks: there are several types of risks as listed below:

- *Market Risk;* the risk that the market exchange rate moves against the position held by the trader.
- *Counterparty Risk;* the risk that the party with whom the trader has entered into an agreement cannot honor the agreement.
- *Transfer Risk;* more a function of country risk, that rules and regulations may change preventing the international transfer of funds; new exchange restrictions or embargo in a crisis situation.

- *Settlement Risk;* arising from trading with counterparties where settlement may not occur immediately and the exchange rate may move within the value date of settlement, causing a loss or gain; a counterparty may default on the agreement within the value date; to counter the risk, the effective value date (time) may be advanced, or a limit may be stipulated per trading day.
- *Interest Rate Risk;* for some currency transactions, like a swap, the real exposure may not be to currency rate movements, but to interest rate changes for the currencies or countries involved, since it is the key difference between spot and forward positions.

Foreign Exchange Reserves: are the balances held by a central bank in major international currencies like US dollars, Japanese yen, British pound sterling, with other central banks abroad, to ensure payment and settlement due in foreign currencies on account of payment obligations arising from imports, repatriation to foreign investors, or repayments on external debt whether government or private foreign loans; these reserves are a critical indicator of foreign exchange position expressed in terms of coverage for x-months of imports.

Foreign Private Investment: is undertaken by foreign private investors such as financial institutions, major investment funds, investment banks, multinational companies, corporations and businesses, without sovereign guarantee tendered by the government or the central bank, but with reasonable assurance for transfer of profits and repatriation of principal amount invested in an internationally convertible currency; this transfer commitment is critical in maintaining investors' confidence and

amounts to an implicit guarantee for stable exchange rate since the investor undertakes the foreign exchange risk and transfer risk, in addition to usual business risks in an investment; these foreign private investments are recorded as gross capital inflow in the balance of payment accounts, and are financing item net of repatriation of profits and capital; there are two types of foreign investment:

- **Direct Foreign Private Investment:** is capital contribution in a local business, opening of subsidiaries by multinational companies, installation of local manufacturing facilities by foreign firms, franchises and distribution outlets of foreign firms.
- **Foreign Private Portfolio Investment:** is the equity investment, or shareholdings in a local company; by far the largest part of foreign private investment undertaken through securities markets, domestic and international, involving purchase of stocks, shares, corporate bonds and securities, and other financial market instruments; there has been a phenomenal growth in foreign private portfolio investment since the late 1980s, and governments of many countries have borrowed heavily through bonds and securities specifically issued and targeted for private portfolio investment.

Formal Finance: is finance arranged by formal financial institutions; in contrast to informal finance, formal finance is arranged through financial facilities made available under standardized arrangements that create contractual obligations between the parties extending and receiving finances, namely the lender and the borrower, and therefore are legally enforceable, with well defined and

widely acknowledged recourse and remedies; these financial facilities are loans and credits provided by formal financial institutions such as banks, specialized financial institutions, finance companies or non-bank financial institutions; whereas informal finance is provided by money lenders, friends or relatives which also entails financial liabilities but carries a mixture of financial and social obligation and are not so easily enforceable through legal measures in the event of non-performance or default by the borrower.

Industry or Sector Risk: are lending risks pertaining to a specific line of business activity or to an industry due to concentration of lending activities of the bank; such over-exposure of the bank in relatively risky industries or sectors is risky, because adverse business and financial trends associated with the sector may seriously affect bank's borrowers and impair their ability to repay their loans, causing loan losses or lowering the quality of loan portfolio of the bank; for example, if a bank's lending is concentrated in textile sector, and if the local textile industry is facing business adversities in its markets overseas, this may jeopardize local textile manufacturers or traders, thus transmitting industry risk into a credit risk faced by the lending bank.

Hedging: is the use of financial market mechanisms, instruments or techniques such as swaps, options and futures contract to protect against loss caused by price or interest rate fluctuations; for example, borrowers may buy or sell interest rate futures to protect against changes in short term interest rates; investors may similarly protect themselves against price changes; they may sell a forward contract in the futures market to protect against a fall in the

price; or they may buy forward contract to protect against a price rise.

High Grade Securities: securities issued by government authorities; or by companies of good reputation and earning capabilities; or securities backed or guaranteed by financially strong parties or institutions with good return with low or reasonable risks.

Indexed Securities: are short to medium term debt securities whose value at maturity or interest rate on the security is linked to a major interest rate, or an index of commodity prices, exchange rate, or other such indicators; these securities may be positively or negatively indexed, i.e. their value may increase or decrease if the reference index or the value of underlying instrument changes; indexed securities may have return characteristics similar to direct investments in the underlying instrument, but may be more volatile than the underlying instruments.

Inflation: is a persistent increase in the price level, thus enhancing expensiveness; it is measured by the consumer price index (CPI), or the wholesale price index (WPI), or the general price index (GPI). Price increase results in a corresponding decrease in the *real value* of a unit of money, and thus a decrease in the real purchasing power of income, salaries, and wages. Inflation causes a decrease in the real net worth of financial assets, such as money balances and deposits with the banking system, and inexorably distorts consumption and savings in an economy with far reaching and severe consequences that may take years to overcome. Inflation is of various types; it may be cost-push inflation, stemming from rising prices of raw materials, indexed wages, or increase in energy costs; or it may be demand pull inflation, if domestic supply of goods and services is inadequate to meet

the demand; or it may be foreign inflation if import prices rise as happens in the wake of massive devaluations provided imports are a substantial portion of domestic supplies and are critical to the domestic economy such as oil imports. Thus, in an economy, inflation may emerge from various sources; however, the root cause of inflation is the excess of aggregate demand over aggregate supply; that is, a persistent excess of expenditures over production and income levels, financed from savings or borrowings, whether domestic or foreign. The excess demand may originate in the private sector or the public sector, or both. For the private sector, there are various limitations on excess of expenditures specially on consumption expenditures since it depends on income levels, taxes, and costs of borrowing, whereas excessive investment expenditures depend on private asset base, profitability and expectations related to investment. For the public sector, such limitations are not binding, and therefore, public sector can incur persistent budget deficits, and as sovereign borrower, it can finance its deficits-- the excess demand -- both from domestic and foreign borrowings. Further, if the excess demand, originating mainly from the public sector, is funded through deficit financing and borrowings from the central bank, it involves creation of money and excessive issue of currency, without sufficient backing of central bank's reserves of gold and foreign exchange. This results in excessive money supply, in a proper sense of this term, leading to an increase in the general price level. In this sense, excessive money supply, often described as the phenomenon of "too much money chasing too few goods", is a critical link in the chain of consequence of excessive and wasteful expenditures in the first place; but it is not the basic cause of inflation nor its starting point. If the excess demand of

public sector is financed from borrowings from domestic banking system, or from the general public, or from overseas, the inflationary impact will not be the same as in the first case, though it will result in expansion of banking credit and money supply and hence inflation. Inflation is a common feature almost in all countries at moderate levels, but persistently higher rates of inflation cause economic and financial chaos, a rapid erosion of purchasing power, a depreciation of nominal and real exchange rates, and a redistribution of real income and wealth against fixed income group who invariably suffer a major loss in their real income. Hence, inflation is seen as a regressive tax which affects the fixed income and lower income groups much harshly than others, with devastating social consequences.

Inflation Risk (portfolio): is the risk of erosion of real net worth of an investment portfolio; a decline in the real return on securities held in the portfolio. Inflation is a major risk to even a well diversified investment portfolio because inflation erodes away real return of an investment in securities, through some types of securities may be more exposed to such a loss; for example real returns on bonds and reserves may be less than real returns on stocks in inflationary times, thereby providing a relative edge in stocks to portfolio investors; for a portfolio investor safeguarding the net asset value of the portfolio is the main element in risk diversification, than holding a particular type of stock or bond.

Initial Public Offer (IPO): is the sale of shares by a company which has gone public, that is, opened its shareholdings and equity base to general public for the first time to increase its market capitalization, and has

newly listed on stock exchange to offer its shares for sale to the general public; a time-honored process of enhancing capital base of a company well beyond the equity of original owners of the company.

Insolvency: of an enterprise, a business, a company, or a bank occurs when the shareholders' funds including capital and reserves are insufficient to cover losses accumulated over a period because of sustained losses of the business. In this sense, insolvency gradually builds up over time and is rooted into the structure of business operations; it does not occur overnight owing to contingencies or sudden adversities of the market trends; the only recourse is substantial re-capitalization by the owners, or by new investors if they could be persuaded to invest; otherwise the business may end-up in receivership for re-organization and restructuring. If none of these recourses are feasible, then insolvency may lead to bankruptcy and closure, spreading the losses beyond owners to the creditors or clients.

Instability of Financial Markets: is characterized by fluctuations in key interest rates or in market price of securities, stocks, shares, bonds and other financial instruments, adversely affecting financial returns and upsetting financial flows and market balance; or in commodity prices affecting, turnover, sales, liquidity and profitability; or in money and credit markets affecting availability of loan finance or investment finance, thereby adversely affecting businesses and companies, causing a reduction in their level of operations and profitability; or in foreign exchange markets affecting foreign trade and foreign capital inflows.

Institutional Investor: may be a bank; or it may be a finance company, an insurance company, an investment fund or unit trust, a provident fund, a mutual fund, or a business company undertaking large portfolio investment in the financial markets, often exercising considerable influence over the market trends owing to their size and presence in the market; managing large amounts of deposits or savings, collected on retail basis, and investing them in money markets or securities markets; employing sophisticated market techniques, investment strategies, and exercising financial leverage, beyond the capacity of a single investor.

Inter-Bank Market: is a market where banks amongst themselves raise or place funds usually for short-term at a rate of interest determined by market forces reflecting scarcity of funds, but usually higher than the prime rate, either to meet their liquidity requirements or to deploy surplus liquidity; banks may also discount securities and commercial papers in inter-bank markets.

Inter-Bank Rate: is the interest rate prevailing in inter-bank money market; a short-term rate determined on the basis of market forces; it may change on a daily basis and is outside the direct purview of the controlling agencies such as the central bank; a good indicator of short-term bank liquidity levels.

Interest Rate Futures: are financial contracts designed to hedge against interest rate risk by transferring the risk to investors willing to accept it for a return; these interest rate risks are covered with forward contracts, where the purchaser of the contract loses or gains if interest rates fluctuate; however, in several developing countries, futures market

are still in infancy and have long ways to go before they become a viable market.

Interest Rate Options: are forward contracts to buy or sell a financial instruments at a price and at a future rate stipulated in the contract; also called fixed income option since the rate of interest of the financial instruments is fixed which pays fixed interest income to the holder of the instrument; the contract provides only an option, a right to buy and sell, rather than a binding obligation; the options are traded on securities exchanges, or over-the-counter market if issued by banks for government bonds, money market instruments or mortgage backed securities.

Interest Rate Risk: the risk arising from fluctuations in the market rate of interest as against a fixed rate of interest stipulated in a financial contract or embedded in a financial instrument, thereby causing a major change in the costs or returns.

- *for the borrower*, the interest rate risk arises if the loan is obtained on floating rate of interest, pegged to a benchmark or an index of market based interest rate; if the market rates rise, the cost of borrowing will increase proportionally.
- *for the lender*, the opposite of borrowers' risk; namely, the risk in variable interest loans is that market interest rate will decrease over the period of loan repayment, causing a loss to the lender.
- *for the investor*, the risk that fluctuations in interest rates may adversely affect market value of the security; for example bond, prices fall when interest rates rise, and vice-versa; or the return on investment may decrease in line with a decrease in market interest rate depending on the

type of investment, maturity, size of differential and the type of exposure. funds, a high degree of leveraging may force the company into bankruptcy.

- *for the saver*, the risk that a decline in interest rate will cause a loss if the saving instrument stipulates fluctuating instead of fixed interest rate and savers are unable to move funds into other types of saving instruments or actively participate in other segments of financial markets.

Interest Rate Spread: is the difference between interest rate on two opposite transactions; for example, if the interest rate on deposits is 10 per cent per annum and on lending is 15 per cent, then the spread is 5 per cent; if 12 per cent interest is charged to the borrower for a re-finance facility and the funds are reimbursed by the central bank at 9 per cent, then the spread for the lending bank is 3 per cent.

Leverage: is use of borrowed funds to increase return on equity and is measured by the proportion of debt to equity in a firm's capitalization, the leverage ratio; leveraging affects the structure of capitalization through the use of senior capital and other assets of the company for borrowings, and it causes a faster growth in the assets of a company relative to equity, and faster growth in the debt outstanding which ranks ahead of junior equity in claims on returns; leveraging enables a company to enhance its business operations, thus it enhances profitability, return and dividends on originally invested capital, as long as the future rate of return turns out to be higher than the interest cost of borrowed funds. Leveraging also enhances company's exposure to financial risk consisting of business and market risks, and specially interest rate risk; if the rate of returns falters because of a market downturn, or if it is below the average interest cost of borrowed

Financial Leverage: is use of borrowed funds to enhance overall return on the original equity of investors, provided funds thus borrowed through issue of long-term bonds or other debt instruments enable the company to earn higher profits and returns relative to interest paid on borrowings;

- **Operating Leverage:** is the extent to which changes in EBIT are caused by changes in sales; when a production process becomes more capital-intensive, becomes more modernized or automated, fixed costs rise whereas variable cost per unit declines;
- **Total Combined Leverage (DTL):** is the composite of financial and operating leverages, and is measured by percentage change in earnings per share divided by percentage change in sales; total combined leverage indicates a firm's ability to use both operating and financial fixed costs to magnify the effect of changes in sales on a firm's earning per share.

Limit: in banking and finance, there are several types of limits such as:

- **Lending Limits:** (see *Limitations on Lending Activities*)
- **Loan Limits:** specified by the lending bank for a single loan, or a line of credit for a borrower.
- **Exposure Limits:** to various types of risks in lending or in portfolios management, as prudential guidelines or safeguard.
- **Foreign Exchange Limits:** stipulated by the central bank to control or regulate

dealings in foreign exchange by banks whereby a bank's open position cannot exceed specified limits; or, foreign exchange trading limits specified by a bank on daily basis to its foreign exchange trading department, or to each foreign exchange trader that cannot be exceeded at a close of the day.

- **Inter-bank Borrowing Limits:** stipulated by banks on borrowings from each other for various types of inter-bank loans.
- **Securities Trading Limits:** in various layers, stipulated by the institutions concerned to manage exposure in securities portfolio.

Macro-financial Analysis: concerns with the study, analysis, evaluation and assessment of performance of the financial system and its major components at the system level, the aggregate level; for the *system of indirect finance* concerning financial intermediation, it involves macro-financial aggregates, money supply, banking deposits, credit, reserves, liquidity; structure of interest rates and exchange rates; borrowings of public sector and private sectors; operations of the central bank, its system of control on banking operations, levers of control, and banking regulation and supervision as conducted by the central bank; structure of interest rates both on the deposit side and the lending side; operations and mechanisms of the banking system and other components of financial system such as nonbank financial institutions; the system of foreign exchange, its market operations and control mechanisms of the central bank; institutional aspects such as the legal infrastructure, the system of entry and exit of financial institutions, operations of payment and settlement system for the

banking system, operations and evaluation of regulatory mechanisms. For the *system of direct finance*, macro-financial analysis involves evaluations and assessments of the operations of financial markets, benchmarks and pricing, impact of changes in the interest rates and exchange rate on money and stock markets, interlinks with the system of indirect finance based on macro-financial aggregates such as size and depth of money markets, specially market for treasury bills; analysis of the size, structure, depth and trends of capital markets and its major components like bond and stock markets; levels of market capitalization; size, structure and impact of foreign portfolio investments, or direct foreign investment and corresponding capital inflows; evaluation of stock exchanges, over-the-counter and futures markets if any; analysis of the activities of market participants, brokers, dealers, market makers, and major segments of investors, operations and evaluation of listing and trading mechanisms, rules and requirements; evaluations of the mechanisms of payment, settlement, transfer, recording and safekeeping by depositories of stocks and shares traded in the capital markets.

Margin Call: in portfolio investment, margin call is made by the lender on an investor's account with a stockbroker or a dealer in securities if the investor has borrowed funds from them to buy securities by pledging the same securities as collateral, and the market value of the pledged securities has plunged down below a pre-agreed level thereby, impairing this collateral; in such a situation under the agreement of margin loan, the lending broker issues a recall of the margin loan in full or in some proportion of the amount outstanding which has to be repaid in cash by the borrower; failing that, the lender has

the right to liquidate part of investor's portfolio to satisfy margin call requirements; this eventually arises mostly due to market volatility and adverse movement in the market value of securities thus acquired; or due to over-exposure of the investor to risky stocks compromising the soundness of investor's portfolio; or due to lack of liquidity depth in the investor's portfolio with the broker or the securities dealer.

Margin for Collateral: is the excess of the market value of collateral over the amount of loan; lenders typically prefer to provide loan amount less than the assessed value of collateral, because in the event of default, there are costs in loan recovery and these are substantial losses in distress forced sale, even with performing collateral; hence a margin for collateral is maintained.

Margin Loan: in portfolio investment, it is the loan secured on market rates of interest by an investor from the brokerage firm or the securities dealer with whom the investor is maintaining his portfolio account, to buy securities as an addition to his portfolio on the margin; the collateral for the margin loan are the new securities acquired, or a combination of new securities thus acquired as well as other securities held in the portfolio; the amount borrowed is based on some proportion of net worth of the portfolio held under terms and conditions called margin maintenance requirements; the most important one among these requirements concerns the value of the securities, the margin positions tendered as collateral, typically specifying that if the market value of margin securities were to decrease, say by one third, owing to adverse stock market movements, the margin loan will be recalled and is payable in cash or securities of equal value; the margin maintenance requirements are higher for

volatile securities, otherwise typically it is one third of the purchase value; in times of booming securities markets, investors borrow margin loans in anticipation of quick capital gains well above the cost of margin loans; but if these anticipations turn sour owing to a market reversal, or a market decline, the investor faces huge losses plus the margin loan recalls; it is like borrowing costly funds to finance losses; hence in portfolio investment, margin loans may be seen an easy way to finance large capital gains at market costs, but they are also an easy way to incur losses on borrowed money; therefore prudent investing requires a tight discipline; part of it is built into the exposure limits on margin loans and its recall stipulations, but a more important part concerns investors own investment actions and policies.

Maturity Mismatch: for a financial institution a mismatch occurs when the maturity structure of liabilities and their underlying financial obligations no longer correspond with the maturity structure of assets and their underlying financial inflows and stream of income, causing illiquidity, eventually financial distress if a financial institution is unable to cope with the mismatch.

Maturity Structure: is the time period of assets and liabilities based on their classification according to their maturity period or the maturity dates; it reveals concentration of financing or funding requirements of liabilities falling due at various intervals; it shows availability of financial resources for assets maturing at various intervals; the maturity structure and its analysis provides a vital dimension to funding or financing decisions and portfolio management; a mismatch in maturity

structure may cause serious illiquidity and losses if not properly managed.

- *of deposits:* is the time profile of deposits held by a bank consisting of various types of deposits classified by their maturity period; it shows deposit funds available to the bank for specific period for its lending operations
- *of liabilities:* is the time profile of liabilities in order of their due dates; for a bank, it mainly consists of deposits, and borrowings.
- *of loans:* the time profile of loans outstanding; the loan portfolio of a bank classified according to the period of time for which loans are extended.
- *of payments:* the time profile of payments as per dates they are due.

Money: *in classic sense* money is defined as a measure of value, a medium of exchange, and a store of value; while this definition holds true it is insufficient for several reasons such as cash is not normally used now a days to store value beyond immediate transactional needs since it is a poor medium of storing value which erodes away over time with inflation; besides, keeping cash is hazardous, and there are superior instruments of short term savings available than cash savings. In economic sense, cash or nominal money is a unit of account and it does not have any intrinsic value of its own, being *fiat* money except for its command over real goods and services represented by the *real* value of money, essentially its purchasing power, the real money balances held whether for consumption or savings by the cash holders depending on their intertemporal time preferences; since real value of money always keeps changing because of movements in prices, therefore in economic

sense real money balances are all that matters arrived at by adjusting nominal money balances for changes in the price level; in so far as real money balances reflect command over resources like goods and services, there are costs and returns associated with these resources and these costs and returns are attributable in the transfer of real money balances, and a step removed in the transfer of underlying nominal money balances represented by interest rates through operations of financial system; therefore the classic definition of money is insufficient characterization of money unless the real value of money is reference with time line inclusive of changes in the price level. In finance, money or cash is a liquid asset; it commands a premium and provides a return, howsoever small or large to the cash holder like any other liquid asset; for those seeking cash for temporary liquidity, this liquid asset has a cost in the money market which often is higher than prime rate of interest in times of tight liquidity.

Moral Hazard: in banking refers to the risk of operational conduct contrary to the sound banking practices, prudential lending, or contrary to the intent underlying banking regulations or procedures while avoiding outright contravention of those rules and regulations; for example, a system of deposit insurance, may encourage banks to undertake excessive lending risks beyond the norms of prudent lending practices, since deposits are guaranteed by the deposit insurance institution, the major liability of the banks, though the purpose of deposit insurance to protect depositors, rather than encourage risky lending.

Money Laundering: is to convert illegal money or black money into legal money; if funneled through banks, it involves a series

of very sophisticated domestic or international transactions in such a way that the illegal origins of the funds and its criminality is not traceable. The size of money laundering operations is very large, estimated into billions of dollars per year, originating mainly from trafficking in drugs and other contrabands, illegal gambling, large pay-offs in bribes or extortions, or plainly stolen funds in large amounts, held in numbered accounts or third party accounts where regulatory controls do not require adequate disclosure, and usually denominated in major convertible currencies.

Net Interest Margin(NIM): in its simple version, NIM is measured as interest incomes less interest expenses divided by interest earning assets and expressed as a percentage; that is the difference between the interest income and interest expense expressed as a ratio of weighted average of interest earning assets over a specific period held in the portfolio of a financial institution; thus NIM can be expressed as the difference between total interest income divided by total interest earning assets, and total interest expenses divided by total interest earning assets where interest expense ratio also represents the break-even point on the costs of interest earning assets of a financial institution; in this sense NIM represents a critical benchmark of a bank's profitability.

Off-Balance Sheet:

- **Liabilities:** for banks, these are financial commitments extended or accepted arising out of their business activities but not reported in the balance sheet because these are not acceptable routine banking operations, but may be needed to facilitate or finalize banking transactions; these include items like third party general guarantees of indebtedness extended to their established clients; or hedging activities for portfolio risk management such as swaps and options for various types of interest rate exposures, or currency market exposures.
- **Conversion Factors:** are ratios applied to determine the credit equivalents based on the credit risk or exposure to determine capital adequacy of a bank; most of these items such as standby letter of credit, sale and repurchase agreement, underwriting agreements, interest rate swaps or Repo agreements, have 100 per cent or full credit equivalence, whereas transaction related contingent items have 50 per cent and self-liquidating trade-related contingencies have 20 per cent credit equivalence.
- **Finance:** for a banking institution those items of finance that are not recorded on the balance sheet of the bank even though they may be sizable and involve major implications for overall financing, balance and liquidity.
- **Guarantee:** the liability of a company incurred by issuing a guarantee which is not reported in the balance sheet but may involve future payment for a claim against the guarantee.
- **Income:** commission, fee or charges derived from off-balance sheet items.
- **Operations:** transactions or activities of a company in relation to off-balance sheet items which are not reflected in the balance sheet; for example, underwriting arrangement, issuance of standby credit and counter trade.

- **Risks:** risks in banking or business which are not reflected in the balance sheet because these risks are associated with off-balance sheet activities such as currency transactions; their exclusion however, is in contravention of sound banking practices because it does not mitigate the overall risks faced by a financial institution.

Peg Rate: a benchmark rate or a reference rate used as an anchor for stipulating effective rates; for example in case of foreign exchange rates, a major currency like US dollar, may be used as a peg to define Rupee exchange rate on a daily basis; the peg rate may be fixed for a defined period; or it may be a floating rate thus dragging the pegged rate in line with its own fluctuations.

Prime Rate: is the rate of interest charged by a bank to its prime borrowers; the base lending rate of major banks charged to large creditworthy borrowers; a reference rate or peg rate for other lending rates in a banking system, thus providing an anchor to the structure of interest rates on the lending side; a closely watched major indicator for the market for borrowed funds.

Pyramid (Financial): is a fraudulent financial scheme, a swindle, where clients are lured into investing with the promise of large returns over short periods in multiples of market based returns; returns are typically paid from new inflows to the old investors who may have reached the payout threshold in the pyramid structure; as the pyramid scheme grows, the number of "investors increases", but the amount needed for payout grows exponentially and the pyramid collapses under its own weight, leaving a large number of late entrants unpaid. Since the swindler is perched on top of the pyramid, and collects a fee for

each transaction, may even be a participant in earlier rounds, he collects an immense pay-off; financial swindles like these have occurred in several countries, developed or otherwise.

Real Value: is the nominal or the current value adjusted for inflation with respect to a base period; for example, real value of income, salary or wages received in the current year and expressed in constant prices, or expressed in terms of a base year prices; real value reflects the real purchasing power of income, wages or salaries; likewise, measures of real income, real investment, real savings or real expenditures reflect values of these variables in terms of constant prices or base year prices.

Recapitalization: usually it is the increase in the paid-up capital or equity base of a business or a financial institution concerned; involves changes in equity base or providing additional equity thus increasing shareholder's funds and altering capital structure and long term debts of a company a business or a financial institution through exchange of shares, new issue or replacement of bonds or exchange of bonds with shares.

Repurchase Agreement (Repo): is a contract of sale of securities with a simultaneous commitment to repurchase the same at a specified date and price; it is an arrangement to raise short term liquidity from the money market; also provide a means to maximize earnings on treasury bills and government securities if the banks and financial institutions enter into Repo with the central bank or other players of money market; for the counterparty, investment in a Repo transaction enables

short term placement of excess liquidity for earning a return.

Reserves, banking: at the aggregate level, it is the sum of both statutory and excess reserves held by a central bank on the deposit base of banking system; these are amounts deposited by the banks in their reserve accounts with the central bank free of interest charge; for a single bank, it is that portion of deposits which a bank sets aside and deposits it with the central bank to meet the statutory reserve ratio requirement stipulated by the central bank; in addition to these statutory reserves, banks also maintain additional reserves or excess reserves with the central bank determined by several factors such as the structure and type of deposits, the extent of use of cheques, and the amounts needed for the settlement of all types of liabilities and debts.

Reserve Ratio: is the prescribed ratio of cash reserve balances to deposits and liabilities that are subject to reserve requirement of central bank; typically reserve ratio in most countries is around 5 to 7 percent of a bank's time and demand deposit liabilities whose components are stipulated by the central bank.

Reverse Repurchase Agreement (reverse Repo): is the opposite of repurchase (Repo) agreement; it occurs when a bank or money market player having surplus funds purchases securities from the holder with a simultaneous agreement for resale of such securities to the seller at a future date and specified price; repos are used by money market institutions for securing short term investment income; or used by the central bank as a monetary policy and control tool, where repo transactions are fully collateralized by the government securities.

Reverse Swap: a transaction in the secondary swap market entered into with the original counterparty or a new counterparty offsetting the interest rate or currency exposure on an existing swap resulting in capital gains.

Risk Diversification: is to curtail or minimize risk of loss in the value of assets or investments, loan portfolio, or deposits held through diversification; a common method is to diversify investments in an investment portfolio in such a way that a decline in the value of one or few investments remains within tolerance limits, and is compensated by gains on other investments.

Securities (finance): in finance, a security is a financial asset such as a preferred stock or common stock, shares, bonds, commercial or treasury bills constituting portfolio investment; the counterpart of the security is the financial instrument to the issuer of stocks, bonds or bills to obtain medium long term debt or equity finance for an investment undertaking or capitalization; also security may be short term financing instrument for working capital and other financing needs.

Securities Market: is a market for stocks, bonds and other securities, composed of buyers and sellers of securities, and market makers who may conduct their transactions at a stock exchange, or over the counter market, OTC, not necessarily tied to a specific location or specific place; generally, the original issuers of securities are corporations, governments or other institutions, and purchasers are investors who may be individuals, businesses or financial institutions; subsequent trading of securities is however, conducted at the stock

exchanges, trading houses, and OTC markets.

- Primary Market:** consists of institutional investors, financial intermediaries, underwriters, and investment banks for the issue of a new security; afterwards, these buyers of a new security in the primary market may offer it for resale to the general public and to the investors in the secondary market. For example, in debt markets the public issue of corporate bonds or debentures is primarily purchased by the investment banks, the underwriters, and then resold to the public in the secondary market, mainly over the counter market (OTC); likewise, a new issue of treasury bills and government bonds is sold first to primary dealers registered with central bank, mostly banks and other financial institutions; in equities market, whether it involves floating a new issue of stocks or an initial public offering, the primary sale is to the underwriters or to broker-dealer firms, and then resale to the general public or investors in the secondary market.
- Secondary Market:** are markets for outstanding securities, stocks, bonds and other financial assets for trading by a variety of investors, or markets where institutional investors who initially bought the new issue from underwriters sell it to the public; the principal secondary market for securities is the stock exchange, over the counter market, and the network of dealers, brokers, clearing agents, market makers and individual buyers and sellers; for example, a marketable debt instrument, such as a bond is resold to new investor after the original issue is purchased by the institutional investors; such a resale

may be made directly or through an intermediary.

Securities Markets, Dealer Abuse: major types of dealer abuse are insider trading ahead of sensitive announcements known only to insiders which are likely to affect the market price of the security; false trade reports creating an impression contrary to the market behavior; false market positions at artificially depressed or inflated prices; backing off or not executing order or refuse to deal in a timely fashion, specially in volatile market conditions.

Securities Markets, Facilities: consist of facilities for listing, dealing and trading in various types of securities; securities depository and registration; payments, clearing and settlement facilities; ratings and standards; quotes and information; and financial services; these core facilities are supplemented by a network of brokers, traders, intermediaries; operating under a legal and regulatory framework, self regulation arrangements, together with monitoring and compliance mechanisms.

Securities Markets, Functions: the core function of securities market is intermediation between debt and equity finance needs of the borrowers, such as companies, businesses, and government, and opportunities for decent returns on securities portfolio of investors; the process of intermediation reconciles these needs; for example, the borrowers in the securities markets usually need large amounts of capital, beyond the capacity of a single investor, relying small household savings, or even beyond the capacity of institutional investors; further, the borrowers need long term debt or equity finance, whereas investors may not wish to lock-in for long term commitments and may wish to

maintain reasonable liquidity; borrowers would like to minimize the cost of capital while investors want to maximize their returns; securities market bridge this gap between the two parties.

Securities Markets, Laws and Regulations: are laws, rules and regulations concerning issue and listing of securities such as stocks, shares, bonds, or bills and routine operations of securities markets and stock exchanges; rules and regulations governing transactions and activities of brokers, dealers, and OTC market operators; this legal infrastructure is established to regulate, control and monitor activities of issuers, buyers and sellers and brokers in the secondary market.

Securities Market Makers: at stock exchanges market makers are broker-dealers, as member firms of stock exchange who are designated by the stock exchange, often called specialists, to trade on the floor not only with clients but also with other brokers and dealers for their own account; they may also be floor brokers or floor dealers. In OTC markets, securities dealers are market makers, trading and executing buy and sell orders for brokers who may be trading on their own behalf or on behalf of investors and clients.

Securitisation: is a modern banking process; involves conversion of bank loans and other assets into marketable securities for sale to investors to diversify banking risks and to enhance its financial leverage; the process of obtaining security against a credit or a bank transaction such as issue of guarantee.

Segmentation of Financial Markets: is a feature of new or emerging financial markets where terms of transactions in certain types of financial instruments and

securities is differentiated by categories of market participants or market segments; however, in mature and well functioning financial markets, segmentation may still occur through the unregulated activities of market intermediaries, or through hybrid financial instruments.

Self Regulation, Securities Market: are rules, regulations, directives and procedures enacted by stock exchanges to govern their market operations, binding on members of stock exchanges, dealers, brokers and market makers.

Soft Landing: is the opposites of *hard landing*; the two are a pair of opposites, characterizing the impact of corrective measures taken by a central bank over the short-run; in the context of macro-financial management, soft landing refers to how smoothly the economy settles down after monetary controls have been applied to counter a variety of destabilizing trends as shown by leading indicators, such as rising inflationary pressures and overheating of the economy owing to high growth rates in the major sectors, with ever tightening labor markets and consequent pressures on wage levels; or untenably low interest rates contributing to expansion of banking credit and liquidity, thereby compromising aggregate money demand balances, encouraging excessive consumer spending; or low interest rates, low cost of margin borrowings fuelling unsound investor expectations, leading to a ballooning of stock markets and emergence of speculative bubbles; or pressures on exchange rate that may destabilize or cause swift reversals in the capital flows and also cause major imbalances in foreign trade over a relatively short period. In circumstances like these, particularly if there are fragilities in an over-extended or

over-exposed banking system, if the central bank were to raise interest rates or tighten liquidity and credit controls, in doing so it must maintain a delicate balance in twisting these levers of controls that will cause a cooling down of the economy or an easing up of inflationary pressures, or even a mild recession as confirmed by leading indicators and thus achieve a soft landing; but if the application of monetary controls turns out to be too harsh, they may not stop simply at rectifying the economic imbalances that prompted monetary actions to begin with, or if the authorities overshoot the targeted macro-financial balances through higher interest rates in situations like above this may result in a jolting economic down turn, a recession deeper than anticipated with potential for deflation or shaking the investors confidence to the point where it may lead to stock market crash, causing wide spread losses; then it is a *hard landing*, an unintended economic and financial instability of reverse kind that may not be preventable if the destabilizing trends gather momentum of their own. Thus, there are severe limitations on corrective measures taken by a central bank, especially in a deregulated environment with globally linked financial markets, which restrict its degree of freedom, even presenting the central bank with monetary policy management dilemma of classic variety; viz, if the monetary authority were to be focused on achieving domestic price and interest rate stability to fine tune the domestic economy, the central bank cannot simultaneously maintain exchange rate stability and thereby stability in capital flows and foreign trade, which may derail the efforts of soft landing.

Solvency, financial: a bank or financial institution is considered solvent if its capital

base and overall financial strength is sufficiently strong to sustain any losses if they emerge at its current level of operations; its loan portfolio is healthy and reasonably free of nonperforming loans; its asset portfolio is sufficiently diversified and balanced with regard to risk-return characteristics; and its liabilities are manageable from its own asset base.

Stock Markets: are markets for listed stocks and shares, comprising of stock exchanges, over the counter markets, a network of dealers, brokers, intermediaries investment funds and investment trusts, and financial institutions; it also consists of facilities of listing, trading and dealing, clearing and settlements, payments, rating and standards, and information services; stock markets facilitate trading of stocks originally issued in the primary market by companies and corporations through their intermediaries to raise equity finance, and resold to investors and the general public in the secondary markets; buttressed by legal and regulatory framework; together with self regulation system and are routinely supervised by regulatory and oversight agencies; since trading in secondary market is in stocks already issued, it involves a transfer of sources of equity finance, freeing up resources of intermediaries to provide funding for issue of new stocks.

Sterilization (*money balances*): these are actions taken by a central bank to neutralize monetary impact of rising foreign currency balances held by domestic financial institutions, mainly as a consequence of rapid foreign capital inflows in the form of portfolio investment by foreign investors; the purpose of sterilization in the wake of rapid foreign capital inflows is to prevent undue appreciation of the exchange rate, or control rising domestic liquidity and an

increase in monetary aggregates owing to increase in foreign assets of banking system or build up of reserves beyond the level deemed appropriate by central bank; for example, if exchange rate were to appreciate beyond appropriate levels because of rapid capital inflows, it may hurt exports and may lead to enlarged foreign trade deficits; or the rising liquidity and other monetary aggregates may jeopardize domestic price stability and enhance inflationary pressures; for these reasons, sterilization of large money balances may be deemed essential and the central bank may simply place all these money balances in overseas reserve account; but that is an extreme measure negating the very purpose of attracting capital inflows; yet some central banks do just that type of sterilization.

Systemic Risk: for a banking system it is the potential risk that failure of a bank may trigger insolvency or failure of other banks if the bank is too big and is dominant institution in the banking system; or if there is a system wide financial weakness with regard to capital adequacy; or if a number of banks have unmanageably large, nonperforming assets; or if the size of impaired portfolio is substantial in the assets held by the banking system; or if the regulatory framework and the safety net is too weak to cope with a system-wide banking crises; systematic risks emerge after a prolonged period of mismanagement by the banks at the unit level, and a neglect on the part of the regulatory authority to redress the underlying weaknesses of the financial institutions concerned.

Tenor: is maturity of a note or financial instrument; designates the time when a draft is payable on sight when presented or a given number of days after it is presented, or a given number of days after the date of

the draft; it also means terms set for payment of a draft, that is, when presented it is a sight draft, or if payable at a future date, it is a time draft.

Term: in finance, *term* in strict sense of the word is the contractual time period, or the maturity period, or the number of years of validity or effectiveness of financial contract or a financial instrument; for example the term of a deposit refers to the number of years for which a deposit is made; or term of a loan is the number of years for which a loan is obtained; or the term of annuity is the number of year an annuity is paid; or term of a CD is the maturity period of a CD acquired; likewise, the expressions *term loan* or *term deposit* mean long-term loan or deposit with a maturity period of a number of years; but expressions like terms of a loan or terms of deposits or terms of a CD are used as short form for the full expression of all conditions attached, and are expected to mean not only their time period, that is, the maturity period, but also the interest rate and other conditions as stipulated in the financial contract.

Term Transformation: are financial intermediation activities of banks that provide a mechanism for matching of the term structure of deposits, mostly short term, to the term structure of loans, especially medium to long term loans; it is the central process of financial intermediation by the banking system and involves transforming the term structure of loanable funds, through lending mechanisms and instruments within acceptable levels of risk and costs, into term financing facilities to the borrowers; term transformation is critical for the growth of investment finance, equity finance or capitalization; the more efficient the banking system is in term transformation the stronger is the base for term lending and investment financing.

Translation of Foreign Exchange, Foreign Currency: is to convert and express accounting items, or a balance sheet, denominated in one currency in terms of another currency by using the exchange rate between the currencies prevailing on the date of the balance sheet; or the weighted average exchange rate over a period in case of income statement items; the translation gain or loss is usually reported separately in the equity section.

Treasury Auction: is the public sale by the Treasury of a new issue of government securities such as treasury bills of maturities of 3 months or less than a year, treasury notes of medium term maturities of 2 to 5 or 7 years, and treasury bonds of medium and long term with maturities of 5 to 10 years or more; these are regularly scheduled auctions but the size of the offering may differ depending on the amount the government needs to borrow; the auctions may be:

- **Single Price Auction:** is an auction where all investors submit a non competitive bid, specifying the amount of the securities they want to buy and the specific yield they want to receive; the auction begins at the lowest yield and keeps increasing until the entire offering is sold; but at the end, all investors receive the same yield rate, which is the highest accepted rate.
- **Multiple Price Auction:** is an auction where investors submit competitive bids of both the amount and the yield they would accept, and at the end of the auction they are awarded the same; however, this is true only for large size investors, usually institutional investors; but small investors are awarded the weighted average of all yields accepted from large investors.

Treasury Bills (T-bills): short term debt instruments issued by the government treasury to raise funds for the government or to regulate money supply through open market operation of the central bank; their market transactions are managed by the central bank on behalf of the Treasury.

Treasury bill Rate: is the rate of yield on treasury bills calculated on discount basis; also the rate at which treasury bills are being sold in the secondary market.

Underwriter: is an investment bank, or a group or syndicate of investment banks who undertake an underwriting commitment for a fee to handle the sale of a new issue of a security such as a bond or a debenture on behalf of the issuer and with compliance to registration, listing and rating requirements.

Underwriting: involves purchase of a new issue of a security by the underwriter from the issuer for resale to the public under an agreement and for an underwriting fee; the underwriting commitment involves purchase of the entire issue or part of it, designated for resale to the public with an underwriting spread, which is the difference between the cost of purchase and the resale price of the security; there are several types of underwriting arrangements such as private placement, public offering, negotiated underwriting, or standby underwriting.

Underwriting Risks and Costs: are of two types; first, the market risk that the new security may be perceived more risky and may be priced lower than the issue price causing a loss to the underwriter; second, the interest rate risk, or the risk that the interest rate may rise and may thus lower the price of the security on the bond during the intervening period when the

underwriter purchases the security and offers for resale to the public; the underwriting fee includes a premium for these risks together with the cost of underwriting.

Valuation of Stock: involves determining present value of the stock through discounting the stream of dividends, even or uneven, by a suitable discount rate for perpetuity, where the discount rate includes the risk factor associated with the stock and an expected rate of return, or the required rate of return; in this sense, the value of the stock is the present value of future dividends or future income on the stock, and may not be the same as the market value of stock traded on a stock exchange.

Vostro Account: means 'your account'; an account of a foreign bank or correspondent with another bank, usually in the local currency of account-holding bank, or in a hard currency.

End: Glossary

Data Set 7.6a		Domestic Debt - Outstanding, Public Sector										End Period, Rs billions									
		FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10									
34																					
35																					
36																					
37																					
38	Domestic Public Debt and Liabilities \ 1	1946	1854	1791	1903	2038	2273	2529	2813	3539	4487	5443									
39	Of this:																				
40	Borrowings from Financial System	1686	1777	1695	1914	2078	2162	2457	2707	3413	4418	5197									
41	Borrowed from Banking System	466	466	574	761	828	803	902	1141	1110	1841	2333									
42	Federal Bonds, PIBs - Banks	148	126	152	211	259	188	182	169	183	198	208									
43	Treasury Bills - Banks	106	126	222	405	411	415	410	657	559	749	1120									
44	Provincial Commodity Operations	55	52	31	22	25	34	108	99	127	336	415									
45	Banking Credit to Govt & PSEs	157	162	168	123	133	167	202	216	241	558	590									
46	Borrowed from Public	753	804	895	1040	1052	1034	1048	1115	1203	1468	1692									
47	of this: through NSS	672	712	792	910	899	871	882	940	1020	1271	1456									
48	through Prize Bonds	81	92	103	130	153	163	166	175	183	197	236									
49	Borrowed from SBP - T-bills held	467	508	226	113	198	325	508	452	1100	1108	1172									
50	Adjustments, n.i.e.,	260	77	96	-11	-40	111	72	106	127	69	246									
51																					
52																					
53	Total Domestic Debt		-4.7	-3.4	6.3	7.1	11.5	11.3	11.2	25.8	26.8	21.3									
54	Permannet Debt		-11.4	31.0	16.3	25.5	-6.7	-0.2	10.6	9.9	11.5	17.1									
55	Floating Debt		14.1	-24.5	-7.4	5.2	43.3	20.8	17.9	47.7	16.3	26.0									
56	Unfunded Debt / Total Domestic Debt		6.0	11.2	14.9	-1.2	-3.1	1.3	6.6	8.5	24.6	14.6									
57																					
58	Notes:																				
59	Borrowings, Fin System / Total Debt	86.6	95.9	94.6	100.6	102.0	95.1	97.2	96.2	96.4	98.5	95.5									
60	Borrowings, Bnk System / Total Domestic Debt	23.9	25.1	32.0	40.0	40.6	35.3	35.7	40.6	31.4	41.0	42.9									
61	Borrowings, Public, NSS / Total Domestic Debt	38.7	43.3	50.0	54.7	51.6	45.5	41.4	39.6	34.0	32.7	31.1									
62	Borrowings, SBP / Total Domestic Debt	24.0	27.4	12.6	5.9	9.7	14.3	20.1	16.1	31.1	24.7	21.5									
63																					
64	SaF Data Set	Source: SBP various AR and Statistical Bulletin																			
65	\ 1 Same as Table 5.7, but don't mess around with it because of recall values; linked data base features, deadly																				

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