

## Reasons for Debt Specialization: Understanding the Perspectives of Small and Large Organizations

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### Abstract

*Debt specialization (DS) has become widespread among organizations in recent years. However, the reasons for its existence and prevalence have yet to be fully examined, especially among small and large firms. This paper aims to empirically determine whether both small and large companies pursue DS strategies for similar reasons. We use seven years' panel data for 2009–15 for 419 nonfinancial companies in Pakistan, listed on the Pakistan Stock Exchange. The results of the comparative analysis confirm the existence of DS across organizations. Small firms follow DS to reduce expected bankruptcy costs, economize information asymmetries and decrease agency conflicts due to limited ingress to the debt market. Large companies include fewer types of debt to reduce operational risk and flotation costs and for building a good reputation. We suggest several theoretical justifications for these results, based on tradeoff and agency cost theory.*

**Keywords:** Debt specialization, bankruptcy cost, information asymmetry, agency conflicts, operational risk.

**JEL classification:** G32, G33, G38.

### 1. Introduction

Debt structure composition has become a contested topic in the corporate finance literature after the remarkable work of Rauh and Sufi (2010) who explain the heterogeneous nature of debts. Financial managers face difficulty in designing their debt structure composition in the presence of multiple debt sources, that is, in determining whether to follow a debt specialization (DS) strategy or diversified debt structure. DS implies dependence on a single (or fewer) debt type(s). This conversation is

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essential for academics to establish the field of debt structure and for financial managers to design corporate strategies in a way that helps achieve an optimal debt structure. The existence of DS has been confirmed in developed countries (Colla et al., 2013) and most recently in emerging economies (Khan et al., 2016). The question is why it takes place, which we examine through a comparison of small and large organizations.

The literature emphasizes that the primary purpose of adopting DS is to reduce liquidation costs and monitor expenses and constrained access to the debt market (Povoa & Nakamura, 2014). Additionally, Li et al. (2015) and Tengulov (2015) contend that organizations that have few investment opportunities, face more fluctuations in stock prices, and maintain inferior accounting systems utilize DS. On similar grounds, Colla et al. (2013) state that low-leverage, small, new and unrated firms, with low levels of profitability and tangibility, prefer this strategy, while Khan et al. (2016) provide theoretical justifications for the existence of DS among large firms.

We move a step forward by empirically testing the reasons for adopting DS among small and large companies, based on an extensive dataset for Pakistan. Our findings contribute to the literature in several ways. First, the study provides insight into the emerging debate on DS by explaining the reasons for its existence separately for small and large organizations. Second, it reveals the strategic perspective of financing choices that help achieve an optimal capital structure.

## **2. Literature Review**

Most other studies provide evidence for the existence of DS specifically among small, new, less profitable, growing and risky companies (see Colla et al., 2013; Tengulov, 2015). These companies use DS strategy as a cost minimization mechanism. Khan et al. (2016) postulate that, if small, new, less profitable firms utilize this approach as a cost minimization mechanism, then large and mature companies might also employ it for the same reasons: to reduce their operational risk, economize flotation costs, and so forth. Mature, profitable and reputable companies have extended access to the debt market, but when they add new debt, then new creditors demand special covenants for their loan contracts for protection. This demand for special covenants increases the cost of debt and eventually the cost of financial distress, monitoring and agency conflict, thereby compelling them to adopt a DS strategy. Mature, large and profitable companies may also implement this approach due to their excellent market reputation, which gives them a better bargaining position to select debt instruments according to their requirements.

Based on this deliberation, the current study provides five possible explanations for the existence and relevance of DS strategy across organizations: limited ingress to the debt market, lower expected bankruptcy costs, economizing information asymmetry costs, reducing agency conflicts and lowering flotation cost.

### ***2.1. Limited Ingress to the Debt Market***

The first contrast in the financing decisions of companies originates from their capacity to access debt financing. Small businesses have restricted access to long-term debt because of information asymmetries and agency problems. Therefore, they cannot approach public debt markets (Arena, 2011) and specialize in fewer types of debt. Companies borrow from those sources that are easily accessible. Povia and Nakamura (2014) consider the restricted access of firms to the debt market to be the primary cause of DS. A company with greater access to the debt market borrows from multiple sources while businesses with limited access depend on fewer debt types (Tengulov, 2015). Previous studies show that a firm is likely to issue either equity or rely on fewer kinds of debt when there is restricted access to the debt market (Lemmon & Zender, 2010). Sometimes, the high borrowing costs associated with debt may limit a company's accessibility and compel them to specialize in fewer, less expensive, debt types.

### ***2.2. Lower Expected Bankruptcy Cost***

Managers consider the expected bankruptcy costs associated with each type of debt instrument when they decide their debt structure. The probability of bankruptcy is higher for those companies that have a higher value of financial distress. In this situation, these companies borrow from fewer lenders to minimize their chances of bankruptcy. Since they may also encounter difficulties in renegotiating their debt with numerous lenders (Pessarossi & Weill, 2013), very few choices are available to them in times of financial distress.

Tradeoff theory states that companies face bankruptcy costs in the form of direct costs (legal fees, credit cost, restructuring cost) and indirect costs (loss of creditors, customers, employees) at the time of bankruptcy (Baker & Martin, 2011). Barclay and Smith (1995) argue that these costs have different implications for large and small companies. Large companies have significant economies of scales and are therefore likely to have higher leverage than their smaller counterparts. Ding et al. (2016) argue that when firms manage their earnings efficiently, they can reduce

their cost of debt and financial distress. This leads larger businesses to rely on fewer debt types and follow a DS strategy.

### ***2.3. Economizing Information Asymmetry Cost***

The information-based explanation includes information confidentiality, monitoring benefits and information collection costs, which affect the choices of debt financing. High information asymmetries often cause losses to debt holders (Derrien et al., 2016) and customers, and increase the cost of debt. Agency cost theory supports this notion by explaining that firms bear high costs due to information asymmetries, which can cause disputes among different debt holders. Large companies can resolve this and create better financing facilities by disclosing their research and development or marketing strategy. At the same time, such companies may lose their advantage over competitors (Kale & Meneghetti, 2011). Therefore, they choose to specialize in fewer debt types.

Some corporations may present themselves for monitoring – especially new or small businesses – to build their credit reputation (Denis & Mihov, 2003) and eliminate the information asymmetry (Chemmanur & Fulghieri, 1994). In this situation, they prefer a DS strategy to avoid monitoring and information collection costs because if they switch to other types of financing, they may face the extra charge of monitoring and information collection. These costs increase the overall expenses of the firm (Bruche & Segura, 2017). Therefore, small and new businesses may be more inclined toward a DS strategy.

### ***2.4. Reducing Agency Conflicts***

Companies can lower their financing costs by removing agency conflicts between different stakeholders (Povoa & Nakamura, 2014). Initially, companies may focus on resolving the agency conflict between debt holders and shareholders (Jensen & Meckling, 1976). Colla et al. (2013), however, provide a new direction to agency cost theory by highlighting the agency conflicts between different types of debt holders.

A company may face financial constraints to the debt market due to agency conflict (Locorotondo et al., 2014), which forces them to borrow from fewer debt sources, thereby indicating a positive relationship between agency conflict and DS. Greater disputes between different debt holders lead toward the use of fewer debt types. This argument is in line with Lou and Otto (2015) who argue that more dispersed debt structures generate a

conflict of interest between different debt holders. Therefore, they will return to concentrated debt structures and rely on fewer debt types.

### **2.5. Lowering Flotation Cost**

Flotation cost is the fixed cost associated with the issuance of public debts, bonds or debentures (Blackwell & Kidwell, 1988). The issuance of bonds benefits large companies in the form of economies of scale, but its cost is relatively high for small businesses. Hence, small companies are constrained from issuing long-term debt, especially bonds or debentures (Beattie et al., 2006). Large public limited corporations prefer public debt when they do not face agency conflict or monitoring requirements and need large funds to finance their investment projects. Government-owned companies also favor bonds because they are less information-sensitive for regulators and have a high probability of approval (Pessarossi & Weill, 2013). This empirical evidence suggests that public limited companies are more inclined toward bonds or debentures when they can minimize their flotation costs. Otherwise, they will likely approach other types of debt.

## **3. Research Methodology**

The data for this study is from the annual audited reports and analysis reports of the Pakistan Stock Exchange (formally, the Karachi Stock Exchange) and State Bank of Pakistan. This includes all publicly traded nonfinancial companies listed on the Pakistan Stock Exchange during 2009–15. We exclude missing or zero data for total debts and assets, leverage outside-unit intervals (Lemmon et al., 2008) and delete outliers by winsorizing all continuous variables up to the first percentile at the upper and lower levels. The final data then comprises 2,001 company-year observations for 419 nonfinancial companies for seven years.

DS is the inclusion of fewer or even single debt types in the debt structure of organizations (Khan et al., 2016). It is measured using the Herfindahl–Hirschman index (Hanssens et al., 2016) ENREF\_18, based on the types of debt available in the debt structure of these organizations. Six types of debt – short-term secured debt (SSD), other short-term debt (OSD), long-term secured debt (LSD), long-term unsecured debt (LUND), debentures (DEB), and other long-term debt (OLD) – prevail among Pakistani organizations. To measure DS and construct different organizational characteristics, we use similar definitions and measures to Colla et al. (2013) and Khan et al. (2016). The Appendix provides detailed descriptions of the variables used in our analysis.

The proxies for measuring the reasons for DS are carefully selected from the literature. Colla et al. (2013) highlight the measurement issues related to these causes. We have tried to employ theoretically and empirically relevant proxies. This study uses default risk as a proxy for bankruptcy cost, measured by the Altman z-score (Albring et al., 2011) and expect that the high value of default risk for small businesses indicates a high probability of bankruptcy. Earnings volatility is used as a measure of operational risk for large and mature companies, following Li et al. (2015). High earnings volatility will increase the likelihood of bankruptcy for large and mature firms. We use quality and return on assets as a measure of information asymmetry.

Business group affiliation and regulation is used to measure debt market accessibility for organizations, whereas Arena (2011) uses credit rating as a measure of restricted access to the debt market. Our measure of agency conflict is growth opportunities and the market-to-book ratio, which serves as a proxy for growth opportunities (Kaya, 2011). A lower market-to-book ratio is an indication of the existence of agency conflict. Asset maturity is also used as a proxy for agency conflict (Meneghetti, 2012). Companies with larger asset maturities conveniently reduce agency disputes through collateral provision to debt holders. Finally, the premise for lower flotation costs is tested using size (Pessarossi & Weill, 2013). Small companies face higher flotation costs. Therefore, this study expects a negative relationship between flotation cost and DS.

#### **4. Results**

Table 1 presents the descriptive statistics for our sample. We segregate small and large firms, following Khan et al. (2016) who define small firms as those that belong to the lowest (first) quartile, while large corporations fall in the largest (fourth) quartile of the data. There are 1,225 (61 percent) company-year observations for small firms and 776 (39 percent) company-year observations for large organizations. Our findings show that the characteristics of the companies in our study are significantly different by size, except for age and return on assets.

**Table 1: Sample overview: small and large companies**

Variables	Small companies		Large companies		Test of differences between samples	
	Mean	Median	Mean	Median	t-test	Wilcoxon test
Size	2.29	2.46	4.37	4.31	-70.11**	-27.36**
Age	25.92	21.00	27.47	23.00	-1.66**	0.37
Asset tangibility	0.69	0.74	0.63	0.68	3.42**	-4.65**
Sale growth	1.85	0.15	0.37	0.18	0.96	-1.39
Dividend payers	0.58	1.00	0.62	1.00	-13.96**	-12.78**
Book leverage	0.52	0.56	0.59	0.61	-4.89**	-5.08**
Default risk	1.25	1.30	1.98	1.35	-5.20**	-3.78**
Quality	0.32	0.42	0.30	0.36	0.16	-0.71
Business group affiliation	0.58	1.00	0.51	1.00	-1.04	-1.04
Market to book ratio	0.71	0.31	1.38	0.87	-2.55**	-11.05**
Return on assets	0.05	0.01	0.05	0.04	-0.10	-6.24**
Earnings volatility	0.14	0.07	0.07	0.05	6.85**	-6.14**
Regulation	0.87	0.00	0.84	0.00	-9.06**	-8.71**
Asset maturity	3.11	1.42	3.33	1.41	-0.59	-1.19

\*  $p < 0.05$ , \*\*  $p < 0.01$ .

#### **4.1. Presence of Debt Specialization**

First, we employ a threshold analysis to assess the use of a given type of loan over the threshold boundaries from 10 percent to 90 percent. This is computed as the fraction of company-year observations in the sample that obtain a substantial amount of their loan from a single source. Panels A and B present the results for small and large organizations.

The evidence provided in Table 2 affirms the presence of DS among small and large businesses. Within the small companies' subsamples, 15 percent of company-year observations rely predominantly on a single type of loan. About 24 percent (93 percent) attain more than 60 percent (30 percent) of their loans from one type of debt, while 5 percent (15 percent) obtain more than 90 percent (70 percent) from a single source of financing. Within the large companies' subsamples, 14 percent of company-year observations exclusively follow a DS strategy. About 23 percent (98 percent) obtain more than 60 percent (30 percent) of their loans from one type of debt, while 6 percent (14 percent) obtain more than 90 percent (70 percent) of their loans from a single source.

**Table 2: Thresholds analysis**

Types of debt	Thresholds								
	10%	20%	30%	40%	50%	60%	70%	80%	90%
Panel A: Small companies									
SSD	0.27	0.22	0.18	0.14	0.10	0.06	0.03	0.00	0.00
OSD	0.24	0.20	0.15	0.11	0.09	0.07	0.06	0.04	0.03
LSD	0.38	0.25	0.15	0.10	0.06	0.03	0.01	0.01	0.00
LUND	0.33	0.20	0.15	0.11	0.07	0.05	0.03	0.02	0.02
DEB	0.42	0.24	0.18	0.08	0.05	0.02	0.02	0.00	0.00
OLD	0.54	0.24	0.12	0.06	0.03	0.01	0.00	0.00	0.00
Total	2.18	1.35	0.93	0.60	0.40	0.24	0.15	0.07	0.05
Panel B: Large companies									
SSD	0.27	0.23	0.18	0.14	0.09	0.05	0.03	0.01	0.00
OSD	0.23	0.21	0.16	0.12	0.09	0.07	0.06	0.02	0.03
LSD	0.37	0.25	0.16	0.10	0.06	0.04	0.02	0.01	0.00
LUND	0.35	0.20	0.15	0.11	0.07	0.05	0.03	0.03	0.02
DEB	0.44	0.26	0.23	0.07	0.02	0.00	0.00	0.00	0.00
OLD	0.52	0.24	0.11	0.06	0.04	0.02	0.01	0.00	0.00
Total	2.18	1.39	0.99	0.60	0.37	0.23	0.15	0.07	0.05

Conditional debt structure is the second way to investigate the relevance of DS among our subsamples. In this method, we impose the condition that the use of a given debt type must exceed 50 percent of the total debt. We then compute the mean and median (in square brackets) of debt ratios for all debt types from the subsets of observations that follow the condition. Table 3 shows that the values of the primary diagonal for large companies is smaller than the values for small organizations. In Panel A, the values of the main diagonal indicate that the conditional mean use of a given loan type on which the condition is imposed is between 61 percent and 79 percent, showing a stronger tendency toward specialization among small companies. In Panel B, the values for each debt type range between 52 percent and 76 percent.



**Table 3: Conditional debt structure**

Condition	1	2	3	4	5	6
<i>Panel A: Small companies</i>						
1. SSD > 50 percent	0.679 [0.643]	0.206 [0.193]	0.078 [0.059]	0.021 [0.000]	0.002 [0.000]	0.035 [0.018]
2. OSD > 50 percent	0.089 [0.002]	0.787 [0.775]	0.024 [0.000]	0.013 [0.000]	0.002 [0.000]	0.084 [0.025]
3. LSD > 50 percent	0.111 [0.099]	0.172 [0.152]	0.635 [0.585]	0.029 [0.000]	0.000 [0.000]	0.053 [0.033]
4. LUND > 50 percent	0.036 [0.000]	0.175 [0.156]	0.012 [0.000]	0.734 [0.711]	0.000 [0.000]	0.042 [0.009]
5. DEB > 50 percent	0.036 [0.036]	0.090 [0.090]	0.006 [0.006]	0.186 [0.186]	0.682 [0.682]	0.000 [0.000]
6. OLD > 50 percent	0.021 [0.000]	0.318 [0.338]	0.021 [0.000]	0.023 [0.000]	0.002 [0.000]	0.614 [0.578]
<i>Panel B: Large companies</i>						
1. SSD > 50 percent	0.631 [0.608]	0.230 [0.220]	0.072 [0.039]	0.021 [0.000]	0.003 [0.000]	0.044 [0.028]
2. OSD > 50 percent	0.114 [0.020]	0.762 [0.744]	0.028 [0.000]	0.022 [0.000]	0.001 [0.000]	0.073 [0.023]
3. LSD > 50 percent	0.128 [0.121]	0.172 [0.148]	0.631 [0.596]	0.019 [0.000]	0.000 [0.000]	0.050 [0.028]
4. LUND > 50 percent	0.028 [0.000]	0.193 [0.148]	0.008 [0.000]	0.747 [0.738]	0.000 [0.000]	0.024 [0.000]
5. DEB > 50 percent	0.104 [0.104]	0.121 [0.121]	0.105 [0.105]	0.002 [0.002]	0.523 [0.523]	0.146 [0.146]
6. OLD > 50 percent	0.007 [0.000]	0.312 [0.348]	0.011 [0.000]	0.012 [0.000]	0.006 [0.000]	0.654 [0.617]

Tables 2 and 3 present a similar trend of specialization for both subsamples, but their reasons for prevalence are different. Table 4 provides a theoretical and empirical justification for why small and large companies pursue DS strategies.

#### **4.2. Why Debt Specialization?**

Table 4 uses Tobit regression models to provide multivariate evidence for the reasons for using DS among small firms (model 1), large firms (model 2) and the total sample (model 3). First, we include traditional capital structure characteristics in columns 1 to 3, which show comparable results for all three models. This implies that small and mature companies maintain low asset tangibility and their book leverage ratios are more

inclined toward DS. The effect of sales growth and dividend payers remains positive in all three models, but these variables are unable to produce enduring results.

We then add default risk, quality, business group affiliation and the market-to-book ratio in model 1. The significant, positive relationship between default risk and DS supports tradeoff theory and explains why riskier companies are more inclined toward DS due to their high probability of default. Quality, a measure of information asymmetry, has a significant negative association with DS and supports the pecking order perspective: low-quality companies face higher information monitoring and collection costs and thus adopt a DS strategy.

**Table 4: Reasons for DS**

Variables	Small	Large	Total sample
	Model 1	Model 2	Model 3
Size	-0.182**	-0.081**	-0.086**
Age	0.001**	0.001**	0.006**
Asset tangibility	-0.260**	-0.167**	-0.008**
Sale growth	0.000	0.001	0.000
Dividend payers	0.012	0.079**	0.029*
Book leverage	-0.336**	-0.146**	-0.002**
Default risk	0.009*		0.006**
Quality	-0.010*		-0.004**
Business group affiliation	-0.046*		-0.014**
Market to book ratio	-0.008*		0.005**
Return on assets		-0.175*	-0.263**
Earnings volatility		0.169*	0.018*
Regulation		0.086**	0.008*
Asset maturity		0.016**	-0.017*
Constant	1.227**	0.766**	0.222**
LR chi-square	177.620	252.270	898.580
Pseudo R2	0.855	0.778	0.649

\*  $p < 0.05$ , \*\*  $p < 0.01$ .

Business group affiliation is used as a measure of constrained access to the debt market. A group-affiliated company has better access to the debt market due to cross-securities. Financial institutions also consider them more appropriate loan grantees. Therefore, these companies are in a better position to utilize diversified types of debt. The negative and significant association between business group affiliation and DS is also evident from the results. The market-to-book ratio significantly impacts the

DS decision of organizations. This is expressed as ( $\beta = -0.008, p < 0.05$ ) and supports agency cost theory.

Along with traditional capital structure characteristics, model 2 includes return on assets, earnings volatility, regulation and asset maturity. This analysis provides some additional reasons for the prevalence of this strategy among large organizations, according to capital structure theories. Return on assets, a proxy for information asymmetry, has a significant, negative relationship with DS, thus supporting the pecking order perspective: a high return on assets reduces information asymmetry and increases confidence among investors, loan agencies and other stakeholders. It builds up the reputation of the company and gives it a good bargaining position to select the debt instrument of its choice. In this situation, large, mature and profitable firms adopt DS strategies as a cost minimization mechanism to enjoy the benefits of cost economization.

Earnings volatility measures the operational risk of large organizations. Such companies also face the likelihood of bankruptcy. The results support tradeoff theory by explaining that organizations with high operational risk move toward DS strategy to decrease their cost of financial distress. Regulation, a measure of debt market accessibility, is introduced in model 3, which demonstrates a positive and significant relationship. The regulation factor increases the creditworthiness of organizations and access to the unconstrained debt market. These companies are in a better position to approach multiple debt instruments, but prefer to follow a cost-minimizing strategy due to their better bargaining position. Hence, they adopt a DS strategy.

The positive and significant association between asset maturity and DS is also supported by the results. Asset maturity is used as a proxy for agency conflict: companies with larger asset maturities can reduce agency conflict through collateral provision to debt holders. This finding supports agency cost theory. The study also uses size as a measure of flotation cost: the negative relationship we find implies that larger companies adopt this strategy to minimize their borrowing cost. In model 3, the findings for the complete sample show that small, mature, dividend paying, regulated and growing companies face elevated risk in business operations and depend more on concentrated debt structure. However, profitable, group-affiliated and top-quality companies with substantial tangible assets, high leverage ratio and asset maturity employ diversified types of debt.

## 5. Discussion

This study contributes to the ongoing debate as to why DS occurs by providing new empirical evidence of the presence of specialization among large and small organizations. We present three primary results. First, the findings of our thresholds analysis and conditional debt structure reaffirm the existence of DS among listed companies, irrespective of their size. We find similar trends in specialization across size distribution. Our results are different from the literature, which focuses on the applicability of DS strategy based on comparisons by size.

Second, it reaffirms the dominance of short-term debt in the debt structure of public limited companies, followed by unsecured and secured long-term debt. These results are in line with Khan et al. (2016) who find that short-term debt is the most persistent type of financing among Pakistani firms. Companies follow a DS strategy due to fewer covenant restrictions (Alipour et al., 2015). However, Rauh and Sufi (2010) claim that 70 percent of organizations include at least two types of debt in their debt structure and that the most consistent types are secured and subordinated debt.

Finally, we offer five possible explanations for the presence of DS strategy across organizations. Small companies adopt DS due to limited ingress to the debt market and lower expected bankruptcy cost and to economize information asymmetry cost and reduce agency conflicts. Large enterprises follow DS to reduce operational risk and lower flotation costs and because of their good reputation.

This study makes several significant contributions to the literature on debt structure and could help practitioners in designing corporate financial strategies. First, it proposes a strategy perspective as a framework for debt structure choices. There is a general call to integrate capital structure decisions with financial strategy and examine how financing decisions are related to strategy (Baker & Martin, 2011; Bender, 2014; Priester & Wang, 2010). We link financing choices to DS strategy and thus contribute to the literature on debt structure and financial strategy.

Second, the study could help financial managers design their strategies by including appropriate types of debt to cope with the crisis and add value to their organizations. Management is more interested in inputs from functional areas of finance (such as capital structure) to design its financial strategy. Since this study explains the financing choices of

organizations, especially debt structure, it could help financial managers to include only those types of debt that have fewer contractual restrictions, incur the least cost and match the tenor of the assets.

Our study faces certain limitations that future research could address. First, although the theoretical and empirical rationale provides unique insight into DS strategy, a comprehensive view of the concept is still necessary. This is only possible if we identify more theoretically and empirically related antecedents (organizational and non-organizational) to identify the most relevant predictors of DS and provide a more in-depth understanding. Second, we have discussed the reasons for DS based on capital structure theories. We use different measures to explain these causes, but cannot distinguish between some measures because they may be used to test more than one reason for DS. For example, larger companies often have a credit rating, which reduces information asymmetry and agency conflict, but size is used as a measure of flotation cost. Similarly, companies with good earnings quality may have less likelihood of financial distress. Third, our empirical findings show trivial differences between small and large organizations. This is perhaps because we differentiate between organizations by equity capital. Future research could adopt other methods of differentiation for a more authentic view of the concept.

## **6. Conclusion**

This study provides insight into the existence and relevance of DS strategy across organizations. We explain that DS is a widespread phenomenon that is vital to all types of publicly traded companies, irrespective of size. The findings of our thresholds analysis and conditional debt structure confirm that short-term debt is the most persistent type of financing among Pakistani firms. We show that the main reasons for adopting a DS strategy among small companies are to minimize bankruptcy cost, agency conflict, information asymmetry and limited access to some segments of the debt markets, whereas large companies adopt this strategy due to their good market reputation and high operational risk and to reduce flotation costs.

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*Appendix***Description of variables**

<b>Variable</b>	<b>Measure</b>	<b>References</b>
Organizational characteristics		
Size	Logarithm of total assets	Leary (2009)
Age	Age is the time in years since the company announced its first IPO	Povoa and Nakamura (2014)
Asset tangibility	(Tangible fixed assets + inventory)/total assets	Booth et al. (2001)
Sale growth	(Salest – sales(t–1))/sales(t–1)	Albring et al. (2011)
Dividend payers	“1” if the company pays either cash or stock dividends, “0” otherwise	Morellec et al. (2015)
Default risk	Altman z-score = [1.2*((working capital)/(total assets))] + [1.4* ((retained earnings)/(total assets))] + [3.3*(ebit/(total assets))] + [0.6* ((market value of equity)/(total liabilities))] + [999 * (sales/(total assets))]	Albring et al. (2011); Alderson et al. (2014)_ENREF_3
Quality	Year to year changes in the total earnings of the organization	Shah and Khan (2009)
Business group affiliation	“1” if a company is group affiliated, or “0” if it is not	Bamiatzi et al. (2014)
Market to book ratio	Market value of equity/book value of equity	Kaya (2011)
Book leverage	Total debts/book value of assets	Graham and Leary (2011)
Return on assets	Annual net profit/total assets	Dewaelheyns and Hulle (2010), Meneghetti (2012)
Earnings volatility	Standard deviation of the five-year annual profit before tax and depreciation, scaled by the average assets	Li et al. (2015)
Regulation	“1” if the company belongs to the regulated industry and “0” otherwise	Graham et al. (2015)
Asset maturity	Sales/fixed assets	Shah and Khan (2009)
Debt structure		
Debt specialization	$\{[(SSD/TD)^2 + (OSD/TD)^2 + (LSD/TD)^2 + (LUND/TD)^2 + (DEB/TD)^2 + (OLD/(TD)^2] - (1/6)\}/(1 - (1/6))$	Khan et al. (2016)