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RELATIONSHIP BETWEEN INFORMATION RATING AND CAPITAL STRUCTURE DECISIONS; EMPIRICAL EVIDENCE FROM EMERGING MARKET OF PAKISTAN

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ABSTRACT

We examine the financing behaviors in the capital structure decisions of the firms. The literature in this domain indicates that firms in developing and developed countries follow pecking order and trade-off theory, respectively. However, mix evidence is also available for both theories in a few countries. We use three models to examine the financial behaviors of the manufacturing firms in Pakistan. In the first model, simply deficit and net debt issuance are regressed, and the results confirm the financing behavior is consistent with modified pecking order theory in the capital market of Pakistan. Further, an interaction term of financing deficit and information rating is introduced in the second model of the study to test if information asymmetry is an important factor behind the financial choices in the capital structure of the firms. To estimate the information asymmetry in the capital market, a modified information rating scale adopted from Karachi stock exchange over five dimensions to estimate the transparency is used for each of the sample firm from 2010 to 2014. The results of the second model show negative relation between interaction term and net debt issuance; consistent with pecking order behavior. The third model is the extension of the first two models in which the study examines the direct relationship between leverage and information rating in addition with firm's characteristics. A deviation from previous works in the form of positive relation between information rating and leverage is shown in the results while firm characteristics are consistent with pecking order behavior. Hence, the study shows that information rating is influential on pecking order behaviors with a slight change due to circumstantial changes in capital market of Pakistan.

Keywords: Information Asymmetry, Capital Structure, Information Rating, Pecking Order Theory
JEL Classification: G32

INTRODUCTION

Firms seek finance to invest in their operations and confront a fundamental choice that either they should use internal financing, debt or issue equity. Each source has its own peculiar effect on the outcome and reputation of the firms. Therefore, the firms adopt a specific strategy while taking financial decisions regarding the capital structure of the firms. A firm's good progress depends upon the appropriate capital structure formation. Modigliani & Miller (1958) propose in their relevance theorem that the size of debt and equity in capital structure depends upon the flow of cash generated from its operations. It suggests that a firm's value is independent of the composition of capital structure of the firm and no friction exists in the capital market. If the assumption of perfect markets is relaxed, the composition of capital structure becomes a vital value determining factor (Villamil, 2008). Myers & Majluf (1984), give an insight into components of capital structure in a preferred order when capital markets are imperfect and information asymmetry exists.

Pecking order theory states that firms finance first through the retained earnings, if the internal source is not sufficient to fulfill the deficit then they go for debt financing, if debt outpace the limit which can lead to bankruptcy then firms opt the equity financing as a final alternative to avoid the adverse selection cost of capital in the presence of information asymmetry. Consequently, one of the parties takes benefit and others have to bear loss (Myers &Majluf, 1984).If a firm uses its own internal source, gives a positive signal about the positive future return in the market. Firm decides later that weather it should finance via debt or equity; this puts a good image of the firm's financial condition to the investor (Leland & Pyle, 1977).

Healy & Palepu (2001) argue that investors and entrepreneurs are always logical and value investments according to the exposure of information they have. If savers are unable to differentiate between good and bad business ideas, businessperson absolutely would claim their ideas as the "good" one. If this problem is not fully resolved, the capital markets will undervalue good ideas and overvalue the bad ideas due to the relative information available to them.[1]Transparency and disclosure has been worked out widely in developed economies but a little work is done on developing economies. In Pakistan, the corporate governance infrastructure is in developing stage after Security Exchange Commission of Pakistan instigation its code of corporate governance in 2002. SECP has revised the code in 2012 to improve governance system to enhance the transparency and disclosure in Pakistan (Zaman, Arslan, & Sidiqui, 2014). However, literature on capital structure still lacks much work on emerging economies like Pakistan. Therefore, it is

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1 For further on this issue see; Markets for Lemons (Akerlof, 2008)

needed to explore capital structure dynamics in Pakistan from perspective of informational efficient market and observe financial choices of the firms in presence of information asymmetry. This study provides direct evidence regarding the effect of information rating on capital structure decisions in Pakistani firms in the presence of Corporate Governance Code in Pakistan since 2002. A definitive information rating scale is used instead of old measures of information asymmetry. It is helpful for policy makers to revisit their policies. The study has policy implications for corporate managers and investors as well. The findings of the study may help them in rational decision making.

In our study, Pecking order theory is tested likewise Shyam-Sunder & Myers (1999) and most recently Pan, Lin, Lee, & Ho (2015) approach. The first model examines the financial behaviors of manufacturing firms in the market of Pakistan. In the second model, an interaction term of financing deficit and information rating is introduced to test if information asymmetry is an important factor behind the financial choices in the capital structure of the firms. A modified information rating scale, developed by Karachi Stock Exchange authorities over five dimensions, is used rather than old proxies to estimate the transparency of the firms from 2010 to 2014. The third model investigates the direct relationship between leverage and information rating along with firm characteristics.

LITERATURE REVIEW

In literature, pecking order is a theoretical model which addresses the preferences of financing choices of the firms to avoid adverse selection cost and distress cost, in the presence of information asymmetry in capital markets (Myers & Majluf, 1984). In past few decades, ample literature is available on the influence of pecking order behavior over the firm's financing preferences. Some studies favor the pecking order behavior suggesting that it is a good predictor of real market phenomenon (Shyam Sunder & Myers, 1999; and Fama & French, 2005). The new equity offerings are perceived as overvalued and will decline in future as market corrects this mispricing. Therefore, the large corporations avoid issuing equity and favors pecking order hierarchy (Asquith & Mullins, 1986; Masulis & Korwar, 1986; Mikkelson & Partch, 1986). Firms in US based on the initial public offerings (hereafter IPO) layout that IPO firms may have less sensitivity towards pecking order financing choices (Helwege & Liang, 1996).

Baskin (1989) shows in his study that 378 firms listed on fortune 500 in US follow pecking order behavior. Nor et al., (2012) provide the similar results Malaysian firms. Chazi, Terra, & Zanella (2010) use a sample of six middle-eastern countries and reports that firms use both pecking order and trade-off approach while making capital structure decisions. Beattie, Goodacre, & Thomson (2006) report that firms from United Kingdom maintain an ideal level steady with trade-off theory but 60% of those firms use hierarchy of sources. Kovacs (2010) in his study observes that equity issuing firms are low in information asymmetry as compared to other firms and time-variation of information asymmetry is an important element for them. Bhaduri (2015) investigates the corporate sector of India and reports that firms do not have full disclosure of information having proper regulatory framework; therefore follow pecking order theory. Booth et al. (2001) investigation on ten developing countries further confirms the study. Berrell, Park, Song, & Zeng (2008) layout that Chinese firms follow preferential choices in their capital structure decisions.

On the flip side, the research based on developed economies to test the pecking order hypothesis, uncovers different results as compared to developing economies. Byoun (2008) favors target capital structure. Graham & Harvey (2001) held a survey in USA from 392 CFOs. They find that firms are profound towards staying financially flexible. Therefore, 44% CFO's favor the tight debt target ratio, 34% favor flexible target debt ratio and 19% have no target. Chakraborty (2010) reports that Indian family owned businesses firms follow a combination of both pecking order and trade-off theory. In turkey, Karadeniz et al. (2009) evaluate the lodging companies listed on Istanbul Stock Exchange (ISE) indicating that both pecking order and trade-off theories are not completely able to explain capital structure of Turkish lodging companies. Leary & Roberts (2010) reports that it all depends upon the examiner that whether he tests this theory while keeping conditions liberal or strict (i.e. "modified" pecking order). Fama & French (2005) address the problems relate to both theories i.e. pecking order and trade-off and come across a result that combination of both theories can better explain the firms' financing decisions to build a good capital structure.

In the extant literature different proxies have been used by different researchers. Four proxies to measure information asymmetry are firm size, volatility of stock returns, institutional ownership and proportion of independent directors (Hutton, Peterson, & Smith, 2014). These are also a measure for firm risk as well. Firms with a few tangible assets, large firm size, and high market to book equity are also the measure of information asymmetry (Harris & Raviv, 1991; Frank & Goyal, 2003; and Lemmon & Zender, 2010). On contrary to these proxies, Pan et al. (2015) introduce a more definitive and direct measure for information asymmetry in Taiwan market. In the current study another definite information rating scale is used to rate the disclosure of information developed by Karachi Stock Exchange authorities to rank companies on the basis of information quality they provide to investors.

Firm's leverage is taken as a function of its information asymmetry in addition with its firm's characteristics (Frank & Goyal, 2009; Bharat et al., 2009; and Pan et al., 2015). According to Shyam-Sunder & Myers (1999), a broadest measure for leverage is the ratio of total debt to market value of the asset. Financial slack, Tobin's q, firm's size, tangibility and firm's profitability are taken as the measure for firms' characteristics (Pan et al., 2015).According to pecking order theory, if information rating is high the firms use leverage in their capital structure. There is a negative relationship of leverage with slack, tangibility, growth opportunity and profitability. While Pecking order theory and trade off theory both presume a positive link between firm sizes and leverage (Myers & Majluf, 1984).

METHODOLOGY

Sample and Population

The population of the study is all listed manufacturing firms at Karachi Stock Exchange. Moreover, total 66 firms from 14 manufacturing sectors have been taken as sample on the basis of their profitability from 2010 to 2014. The profitability is the criteria for sample size in the study because firms having good profits are better illustrator of financial behaviors in the presence of information asymmetry in the capital market.

Data Source and Collection

The study utilizes secondary data obtained from the annual reports of sample firms, the website of Karachi Stock Exchange and, balance sheet analysis published by State Bank of Pakistan.

Econometric Models

The study strives to capture those elements which are affecting the decisions about capital structure of the manufacturing firms in Pakistan market. To test the pecking order model the study is similar to the research of Shyam-Sunder & Myers (1999), Bharath et al. (2009), Lemon & Zender (2010) and Pan et al. (2015) by regressing the net debt issuance on the financing deficit as follows;

$$\Delta D_{it} = \alpha + \beta DEF_{it} + \varepsilon_{it}$$

Net debt issuance (ΔD_{it})is measured by taking long-term debt issuance minus the long-term debt reduction at time t for $firm_i$. This deficit (DEF_{it}) is defined by accounting cash flow identity by Shyam-Sunder & Myers (1999), Bharath et al. (2009) and Pan et al. (2015) as follows;

$$DEF_{it} = DIV_{it} + CEX_{it} + \Delta WC_{it} - CF_{it}$$

Where $DIV_{it}$are dividends, CEX_{it} are capital expenditures, ΔWC_{it} is the net change in working capital, and $CF_{it}$is the operating cash flow after interest and taxes. The pecking order model predicts that the slope coefficient β should be close to 1 according to the strict version of the theory (Shyam-Sunder & Myers, 1999) & lower than 1 but positive based on the modified version (Lemmon & Zender, 2010and Myers & Majluf, 1984).

According to pecking order theory (Myers & Majluf, 1984) the information asymmetry is a driver for financial decision in the capital structure of the firms. An interaction term of financing deficit and information rating estimates the relationship between the extent of debt issuance and information ratings in the study;

$$\Delta D_{it} = \alpha + \beta DEF_{it} + \gamma DEF_{it} * IR_{it} + \varepsilon_{it}$$

WhereIR_{it} is the information rating for $firm_i$ at time t.To score information asymmetry, industry specific panel data is collected through the transparency scale established by Karachi Stock Exchange authorities to rate the top twenty five firms. These indicators illustrate information disclosed by each firm. Using this scale each company is rated through the assigned weights against five indicators. After rating these indicators from 2010 till 2014, a mean value is calculated for each year. Then a dummy of 0 and 1 is generated. When rating of a firm is above the mean value, the dummy of 1 is assigned to that firm which means information asymmetry is low. If the rating is below the mean value it is assigned dummy of 0, which means firm is bad at disclosure and transparency consequently firm is using high debt.

Five indicators of information rating scale and their weights are listed in Appendix-A. The study also assess the effects of information asymmetry similar to Frank & Goyal (2003); Bharat et al. (2009) and Pan et al. (2015) by examining that how information variation brings change in leverage in addition with others conventional leverage factors.

$$Leverage_{it} = \alpha + \beta IR_{it} + \beta Slack_{it} + \beta Tang_{it} + \beta QRatio_{it} + \beta Size_{it} + \beta Pf_{it}$$

According to Shyam-Sunder & Myers (1999), a broadest measure of leverage is the ratio of total debt to market value of the asset. Financial slack, Tobin's q, firm's size, and firm's profitability are the measure for firms' characteristics.

EMPIRICAL RESULTS AND DISCUSSION

The table reports the statistics of the first model of this particular study. Change in debt is the dependent variable and deficit is the independent variable, their minimums, medians, maximums, means, standard deviations and observations are given.

Table 1: Descriptive statistics for 2nd model

	MIN	MDN	MAX	MEAN	STD	OBS
Δ in Debt	11.12	18.91	24.20	18.78	2.23	324
Deficit	15.43	22.24	22.23	25.58	1.57	330

Table 1 comprehends descriptive states for the first model of the ongoing scrutiny. These descriptive states are demonstrating the minimum and maximum values, mean and median values and the standard deviation from mean of the sample data. From the first model change in debt has a mean value 18.78 and the data has a standard deviation from the mean is 2.23. Deficit from the first model has mean value 25.58 and the deviation from the mean is 1.57.

The table reports the descriptive stats of firm's characteristics. Here leverage is the ratio of total debt to market value of the asset. IR is information rating. Slk is slack, the ratio of cash to total assets. Tan is tangibility, the ratio of fixed to total assets. Q-ratio is Tobin's q ratio to measure growth opportunity, the ratio of market to book equity. Size is the natural log of firm sales. Prof is the profitability, the ratio of total EBITDA to total assets.

Table 1: Descriptive statistics for 3rd model

	MIN	MDN	MAX	MEAN	STD	OBS
Lev	0.03	1.08	56.35	2.43	4.54	330
IR	0.00	0.00	1.00	0.38	0.48	330
Slk	0.00	0.03	0.61	0.08	0.11	330
Tan	0.06	0.53	0.96	0.51	0.19	330
Q-Ratio	0.05	0.89	127	2.42	8.91	330
Size	19.48	22.87	25.89	22.94	1.30	330
Prof	0.07	0.16	0.65	0.18	0.09	330

Table 2 exhibits values for all the dependent variables of 3rd model. Q-ratio and firm size has abnormally large values in case of standard deviation and mean value. Other variables have normal values of descriptive statistics as shown in the table. The q-ratio has mean value is 2.42 but data divergence is quite high with a value of 8.91. Highest divergence is due to that different companies have disparate level of stock valuations. The firm size has highest mean value 22.94 and deviation is quite small (1.30) comparatively

The table reports the Pearson's correlation coefficients between independent variables. The Pearson's correlation coefficients are below the diagonal. IR is information rating. Slack is the ratio of cash to total assets. Tangibility is the ratio of fixed to total assets. Q-ratio is Tobin's q ratio to measure growth opportunity, the ratio of market to book equity. Size is the natural log of firm sales. Profitability is the ratio of total EBITDA to total assets.

Table 3: Correlation matrix

	IR	Slk	Tan	QRatio	Size	Prof
IR	1					
Slk	0.25	1				
Tan	0.03	-0.38	1			
Q-Ratio	0.18	0.01	-0.04	1		
Size	0.32	0.14	-0.01	0.07	1	
Prof	0.21	0.25	-0.18	0.46	0.10	1

Table 3 exhibits the Pearson's correlation coefficient values for the variables of interests. Correlation instructs the alliance between two variables. The magnitude of relationship can be anywhere between +1 and -1. The study reviews correlation coefficient values of all independent variables from third model. Amid independent variables the highest correlation value is 46% and lowest is 1%. It is moderate to an extent and therefore no need to remove any one of the independent variable. The reason behind high correlation is that profits are primarily affected by the available growth opportunities for a firm.

The table reports the panel regression results of net debt issuance on financing deficit in the presence of information asymmetry in the capital market. DEF is the financial deficit, addition of dividend, capital expenditure, and change in working capital minuscash flow.

Table 4: Fixed Effect Model and Redundant Fixed Effects Tests

Variable	**Coefficients**	**Std. Error**	**t-State**	**P-value**
DEF	0.39	0.15	2.51	0.012
C	9.93	3.51	2.82	0.00
R-squared	**Adj R-squared**	**F-state**	**Prob(F-stat)**	
0.75	0.68	11.79	0.00	
Test Summary		**Statistic**	**d.f.**	**Prob**
Cross section F		4.64	(65,257)	0.00
Cross section Chi-square		251	65	0.00

To test the pecking order theory, we initiate by regressing the net change in long term debt issuance on financial deficit. Fixed affect model (Table 4) is appropriate to analyze the results. One unit increase in financial deficit enhances the issuance of debt by 39 percent. The coefficient β is less than 1 and positive which means that the firms are following modified version of pecking order theory (Myers, 1984 and Myers & Majluf, 1984). Nonetheless, they are trading-off between the costs of debt and equity which suits them more to save firms from disadvantage. The reason behind these results is that these firms have already issued enough debt therefore they issue equity to preserve liquid assets as well as debt capacity for future interestsin the presence of high information rating.

Summary of pecking order model test with high/low information rating

The table reports the panel regression results of net debt issuance on financing deficit and information rating. DEF is the financial deficit, addition of dividend, capital expenditure, and change in working capital minus cash flow. IR is the information rating. DEFIRis the interaction term of deficit and information rating.

Table 5: Fixed Effect Model and Redundant Fixed Effects Tests

Variable	**Coefficients**	**Std. Error**	**t-State**	**P-value**
DEF	0.37	0.15	2.37	0.01
DEFIR	-0.03	0.01	-2.59	0.01
C	10.79	3.49	3.08	0.00
R-squared	**Adj R-squared**	**F-state**	**Prob(F-stat)**	
0.75	0.69	11	0.00	
Test Summary		**Statistic**	**d.f.**	**Prob**
Cross-section F		4.81	(65,256)	0.00
Cross-section Chi-square		258	65	0.00

In the second model of the study we incorporate an interaction term of financial deficit and information rating to assess that if information rating drives the financial behaviors of the firms. Fixed effect model (Table 5) is appropriate to evaluate the relationship of variables of interest. Table 5 shows that in presence of high information rating, the relationship becomes negative between debt and deficit up to 3%. The negative relationship indicatesthat the firms do not prefer to issue more debt due to less uncertainty regarding the issuance of equity (overvalued or undervalued).Consequently, firms comfortably issue equity to get finance.
The table reports the panel regression results of firm leverage on information rating and firm characteristics. IR is information rating. SLK is the slack; the ratio of cash to total assets. Tan is the tangibility; ratio of fixed to total assets. Q-ratio is tobin's q ratio to measure growth opportunity, the ratio of market to book equity. Size is the natural log of firm sales. PROF is the profitability; ratio of total EBITDA to total assets.

Table 6: Random Effect Model: Summary of pecking order model test with information rating and firm characteristics

Variable	**Coefficients**	**Std. Er**	**t-State**	**P-value**
IR	0.11	0.05	2.20	0.03
SLK	-0.58	0.23	-2.53	0.01
TAN	-0.52	0.14	-3.71	0.00
QRATIO	-0.99	0.05	-16.65	0.00
SIZE	10.08	2.21	4.54	0.00
PROF	-0.39	0.07	-5.35	0.00
C	0.14	0.08	1.63	0.10

R-squared	Adj R-squared	F-state	Prob(F-stat)
0.60	0.59	64	0.00

Table 7: Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	d.f	Prob
Cross-section random	9.132	6	0.166

To access the effects of information asymmetry we examine firm's leverage as a function of its information asymmetry along with its firm characteristics in the third model. Table 6 reports that the change of one standard deviation in information rating causes a variation of 11 percent standard deviation in the leverage in positive direction at 5 % level of significant. That means high information rating positively affects the use of leverage in the firms. High information rating (information symmetry) let the firms to be confident counting more on liabilities because these firms are able to downsize their external financing cost by providing transparent information to the outsiders. Hence, in return these investors require a less return on debt due to the certainty of return through the multiple overlapping projects. These firms are more inclined to use leverage because it is less sensitive to the private information in the market than the equity does. The equity is risky source of financing due to its sensitivity towards the market information. Mean while, the discount rates were also low from State Bank of Pakistan which enhanced the incorporation of leverage in the capital structure of the firms. Therefore, these manufacturing firms in Pakistan apt the cheap and secure resource to finance their projects according to the instable economic conditions of the country.

Slack is a firm characteristic which is important factor to decide the limit of leverage in the firm. Table 6 reports that one unit increase in slack causes leverage to decrease by 0.58 points. Slack and leverage has a negative relationship significant at 5%level of significance. The negative relation of slack and leverage shows that these firms with enough cash preferably use it instead using external funds (Afza & Hussain, 2011; Tong & Green, 2005).Table 6 reports tangibility and leverage have a negative relationship. One unit standard deviation in tangibility causes a variation of 52 points standard deviation in leverage. In the developing economies like Pakistan tangible assets are unsatisfactory source of collateral. Firm here are not interested to put the stake on their assets in case of bankruptcy, high cost of capital or conflicting interest rates(Afza & Hussain, 2011).

One unit increase in firm's performance (Q-ratio) causes a decrease in firm's leverage up to 99 points. The firms which have high growth opportunity suffer high financial distress costs so they avoid taking leverage. A high growth firm has opportunity to invest in multiple projects therefore it is more prone to risk rather than a static firm. Creditors require high risk premium in compensation while financing the risky firms. To avoid extra cost of debt, firms issue equity preferably. Secondly when the market to book value is high then firms are more inclined to issue stocks to get finance. Thirdly, when firms are involved in multiple new projects then managers avoid adding financial risk within high operational risk. The finding of this study affirms the study of Shah & Khan (2007); Tong & Green (2005) and Afza & Hussain (2011).

Whilst size and leverage have a positive relationship inferred from pecking order behavior. As reported in the result that size positively affecting the leverage having $\beta = 10.08$ with high significance value at 1% level of significance.. A trust element exists between large firms and capitalists. Capitalists are more comfortable to provide capital to large sized firms on the grounds of stability and low bankruptcy costs. Therefore, it is easy to access more leverage from the investors at low costs for them. Large firms are good in dealing with investors to get finance so they bear low issuing costs for debt and equity. Moreover, there is a link between symmetry of information and firms' size because large firms are more transparent (Guney & Fairchild, 2011; Fama & French, 2002). Profitability and leverage has also negative significant relationship. The β-value is -0.39 at 1% level of significance. Surplus profit directs these firms to issue less debt for the capital structure of the firms. When information asymmetry is less these firms issue equity rather than using debt and stay busy in paying off the already borrowed money plus its costs. Therefore, the manufacturing firms in Pakistan are following pecking order tactics..Other studies have similar evidence of negative relationship between issuance of debt and financial deficit (Tong & Green, 2005; Gill et al., 2009 and Shah & Khan, 2007).

In the regression results, the value of the coefficients of determination is 0.60. That means model explains 60% (R-square) behavior of variables of interests. The p- value of F-statistics is highly significant and demonstrates that model is a good fit for the predictor to predict the dependent variable. Overall the model is significant. The explanatory variables included firm's characteristics and information rating and they are significantly affecting the leverage of the firms. Though some are positively or others are negatively affecting the independent variable. Therefore, the hypothesis is valid that firm specific characteristics and information rating significantly affect the leverage. The results are in favor of modified version of pecking order theory in manufacturing firms of Pakistan. Therefore, pecking order behavior is dominating but a

slight deviation is found between the relation of information rating and leverage due to instable and sensitive circumstances of capital markets in Pakistan.

CONCLUSION

In our study all the evidences from econometric models are clearly demonstrating that manufacturing firms are following modified pecking order theory and information asymmetry is an important factor in the capital structure decisions. An exception of positive relation between leverage and information rating exist in the results of augmented pecking order model in our study. At times independent variables anticipate signs and these signs occasionally differ across the countries. The difference in result is may be due to the use of economic models which are suitable for the data in developed and less developing countries in different institutional and financial settings. Hence, these results are not surprising with the discreet regulatory structures and financial environment. Our study has a good empirical validity in Pakistan. Moreover, shareholders can anticipate the financing choices of a firm. On the flip side, managers can anticipate that how the incorporation of leverage will impact the value of firm for investors. Shareholders can invest in the manufacturing firm having more leverage in their capital structure to insure high gains. Policy makers can use it to reshape policies to regulate the leverage level of the firms and force them to follow the regulations set by CGC of Pakistan.

Our study evolves a direction to figure out the behaviors regarding financing activities and the significant factors which have an impact on capital structure decisions in different sectors of Pakistan. It also provides an opportunity for further research incorporating capital regulations and to include other factors like earning management in their research. Cross country comparison in relation to different institutional environment of the countries is paved a way towards further research in the same field. This will definitely enhance the sample data but it may enlarge control problem which is itself gives a new direction to work further. Data years can be upgraded in the upcoming studies of similar kind, with the same scale to measure information asymmetry or the better one, in comparison with the other sectors of Pakistan. Our study also gives an insight of the relationship between corporate governance measures and capital structure. The study is so rich in itself that more effort in this area will provide drift to work on it.

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APPENDIX-A

Information Disclosure and Transparency Measures and Their Corresponding Weights

This appendix shows the corresponding information rating weights for each measure.

1	Frequency of report publishing in a year, quarterly (12%), semiannually (8%) and annually (4%)	0.24
2	Disclosure of Corporate Social spending	0.19
3	Sustainability Reporting Annually 15%	0.15
4	Holding of AGM within 3 months of year-end.	0.20
5	Announcement of half-yearly result within one month.	0.22
Total		1.00