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Exploring the Relationship between Financial Distress, Financial Flexibility, and Firm Performance: Empirical Evidence from Pakistan Stock Exchange

Yasin Mahmood¹, Muhammad Faisal Rizwan², Abdul Rashid³

¹PhD Scholar, Faculty of Management Sciences, International Islamic University, Islamabad

²Assistant Professor, Faculty of Management Sciences, International Islamic University, Islamabad

³Associate Professor, Faculty of Management Sciences, International Islamic University, Islamabad

ABSTRACT

Purpose– This main purpose of this paper is to empirically investigate the impact of corporate financial flexibility (FF) on financial distress and performance of firms listed on the Pakistan Stock Exchange (PSX). It enables to know how financial flexibility affects the firm financial strength, financial distress, and corporate performance.

Design/methodology/approach –This study focuses on a firm level data of 192 non-financial firms covering the period 1992 - 2014. The fixed effect model logistic regression is applied by using unbalanced panel data to examine the impact of financial flexibility on financial distress, and performance of sample firms.

Findings – The results reveal that financially flexible firms are less likely to face financial distress. As firms have more financial flexibility, the probability of financial distress decreases as well. It is also found that financially flexible firms are more likely to perform well than counterpart firms. By using the Altman z score as a measure of financial distress it is revealed that as the Altman z score increases, the chances of financial distress reduce as well. These findings also suggest the existence of pecking order in Pakistani firms; because firms rely on internal sources first, second go to external sources of financing.

Practical implications – the findings of this study enable the corporate managers to avoid financial distress by obtaining and maintaining financial flexibility by keeping the leverage level lower than industry level. By attaining and maintaining financial flexibility, corporate managers can also raise the performance of the firm as well. It can also enable to make appropriate capital structure decision to finance managers of corporate firms. The creditors may provide the loan to sound firms who have no or least chances of financial distress. The lenders may also get benefit from it by requiring the interest rate as per risk of financial distress of the firm. Investors may avoid investing in firms having very little or no financial flexibility.

JEL Classification– G33, L25

Keywords: Altman z score, financial flexibility, firm performance, return on asset, panel data, financial distress, modified z score.

1. INTRODUCTION

The research incorporates financial distress caught the attention of academia for many decades. In his seminal work of Beaver, (1966) reported financial ratios as an important tool to forecast the financial distress, while Altman (1968) proposed a financial ratio-based bankruptcy prediction model, which is still useful around the world. After

Address of Correspondence

Yasin Mahmood
yasin.phd@iiu.edu.pk

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that, many other models for financial distress prediction were proposed (e.g. Ohlson, 1980; Zmijewski, 1984; Zavgren, 1985; Lau, 1987; Johnsen, and Melicher, 1994). The interest in this area rose after the global financial crisis 2008-09. Financial distress (FD) is a situation in which firms face problems in fulfilling its contractual liabilities through its cash inflows. During the past many decades, financial distress prediction, numerous researchers contributed in different ways (Altman, 1968), in the context of Pakistan Rashid and Abbas, (2011) proposed a model to predict the bankruptcy of firms

In recent years, researchers have taken interest in the area of financial flexibility (FF) since the classical work of (Graham and Harvey 2001) who directed the survey of 392 chief finance officers (CFOs) of the US firms. The study of Gaham and Harvey, (2001) reported that while deciding the firms' capital structure, CFOs are concerned with acquisition, preservation and restoration of financial flexibility and the corporate credit rating. If a firm has sufficient FF, it can increase leverage easily at low cost, maintain its credit rating of bonds, and avoid financial distress, may obtain further capital for the justified purpose. According to the pecking order theory of capital structure internal sources of finance are utilized first, then debt, and at the stage when unused borrowing capacity is utilized firms go to equity as a last resort. If firms have enough internal funds then firms do not need external funds in the form of debt or equity, as such firms have sufficient financial flexibility. If additional funds are required after the depletion of internal sources, a firm must have to obtain debt as the external source of funding. In this scenario, firms must keep the leverage at a low level to remain financially flexible and safe from financial distress, as suggested by pecking order theory. Koh, Durand, Dai, and Chang, (2015) examined the different strategies to exit from financial distress and found that change in capital structure and dividend policies may enable firms to cope with financial distress, whereas, the life cycle stage of the firm has less impact on financial distress.

Firms in developed markets can enjoy the availability of debt capital from well-established bond markets, which is not the case in most of the emerging economies generally and especially in Pakistan. Therefore, CFOs in emerging economies may want to avoid financial distress. In most of the emerging economies, banks play an important

role to fulfill the financing needs of the firm. It may lead them to attain the FF not only to attain the growth objectives in the future but also avoiding corporate financial distress and enhancing firm performance. An important reason for FD is poor management rather than economic distress; hence this situation can be improved through corrective actions. Numerous studies predict the existence of a unique capital structure in a world where the cost of bankruptcy is greater than zero (Scot, 1976; Kim, 1978). Wald, (1999) examined the financial distress and capital structure in forty different countries and found more sensitivity in the capital structure of US firms than Japanese firms and reported the high financial distress cost for US firms than Japanese firms. The cost of corporate financial distress and bankruptcy consists of the losses' firms face in a situation where a corporation lost its ability to pay to its creditors or when it is about to lose its repaying the ability to its' lenders. In a perfect world with no cost bankruptcy, changes in earning are irrelevant to the capital structure (Scott, 1976; Castanias, 1983). Instead of being reactive, management may choose a proactive approach to avoid the FD.

Better corporate governance may enable the firm to obtain more external finance at low cost (Claessens, and Yurtoglu, 2013). An important management tool to avoid the FD is the attainment and maintenance of FF (Graham and Harvey, 2001). Firms who attain and maintain FF may avoid the FD by keeping leverage at a low level; it enhances the spare borrowing ability (Marchica, and Mura, 2010). Financial flexibility in the form of cash holding (Arslan-Ayaydin, Florackis, and Ozkan, 2014), the spare borrowing capacity (Marchica, and Mura, 2010) may be able to avoid the financial distress. Chadha and Sharma, (2015) study the relationship between leverage and performance of listed firms of Bombay Stock Exchange and found no association between leverage and organizational performance. Dawar, (2014) studied the impact of capital structure on firm performance and reported find a negative relationship between them. By avoiding FD firms may be able to enhance the performance. If the industry of the firm is in distress, the firm may recover from FD as industry financial health improves. But, if the firms who have a long history of financial distress may not get the benefit from this industry level recovery. Firms are keen to grow by investing in value enhancing investment opportunities, improve corporate performance and avoid financial distress. It is,

therefore, an area of interest for academia to enhance the understanding regarding these corporate intentions. Hence, it leads to knowing the answers of following questions. 1) What is the relationship between FF and corporate financial distress? 2) What is the relationship of FF with firm performance? 3) what is the relationship of FD with firm performance?

The remaining part of this article is structured as below. Section 2 provides a review of related literature. In section 3 data, sample and methodology of the study are discussed. Section 4 deals with the results and discussion. Section 5 presents the conclusion of the study.

2. LITERATURE REVIEW

2.1. Financial Flexibility

Financial flexibility plays a vital role in corporate firms. Gryko, (2018) reviewed the literature of financial flexibility and found that it is the most important for corporate firms; it depends upon two main factors including the intentions and ability to attain and maintain FF. The term financial flexibility can be defined as “the ability of a firm to obtain the needful external capital at low cost when required for justified purpose”. It enables the firm to invest in value-enhancing projects and to avoid financial distress. A firm having sufficient financial flexibility have the ability to avoid financial distress (Bancel and Mittoo, 2011). Interest in this area was started with the seminal work of Graham and Harvey, (2001) carried out a survey of 392 CFOs of firms listed in the USA, in which they find that finance managers consider financial flexibility as a first order significant determinant of capital structure. Later, another survey was conducted by Bancel and Mittoo, (2011) in a European context who also reported the same results. Till now there is no single well-accepted measure of financial flexibility. Marchica and Maura, (2010) suggested low leverage as an appropriate source and measure of financial flexibility. Singh and Hodder, (2000) studied the multinational capital structure decisions and reported that an important determinant of capital structure are financial flexibility; and it is the substitute for financial leverage. The notion of FF is multifaceted and an area of interest in academia and practitioners as well. Yung, Li, and Jian, (2015) examined

financial flexibility in 33 emerging economies and found that FF is valuable for firms in these emerging countries by enhancing investment ability, cash holdings, decrease in equity payouts, not only during normal economic periods and specially in the crisis period. They also reported that during the financial crisis, firms having sufficient financial flexibility were reduced investment and equity payouts less than firm having low or no financial flexibility. Denis and McKeon, (2016) found that spare debt capacity is an important source of FF which not only preserve the FF and also enhances the investment ability of the firm and it is an important missing link of capital structure theory. Ferrando, Marchica, and Mura, (2017) examined the relationship between financial flexibility and investment ability for small, medium and growth firms in Europe and found that financial flexibility affects the corporate investment ability not only during normal periods but in the period of financial crisis. This effect was also strong for the firms who are small, medium size, in the growth phase and the firm's countries where investors' rights are not well protected.

2.2. Firm Performance

Firm performance and sustainability is analysis is an area of interest for various stakeholders, including corporate managers, shareholders, lenders and government authorities (Chabowski, Mena, and Gonzalez-Padron, 2011). In this area, numerous researchers conducted research and found mixed results. Initially increase' in leverage improves the firm performance, but after a certain level, an increase in leverage negatively affects the firm performance and cause a reduction in it (Berger, and Patti, 2006).Salim and Yadav, (2012) examined the association between leverage and organization performance. They found a negative relationship between them, which show that as the level of leverage increases, the firm performance decreases as well. Ebaid, (2009) examined the relationship between capital structure and performance of firms listed on the Egyptian stock market. The results revealed a negative relationship between capital structure and firm performance. They also examined the relationship between different leverage measures for instance, "long term debt to total asset ratio, short term debt to total asset ratio, total debt to total asset ratio" and firm performance measured as return on equity and found no impact of capital structure on firm performance. It shows

that as the firm becomes more levered, the performance of the firm decreases significantly. Chadha and Sharma, (2015) studied the relationship between corporate capital structure and different measures of performance of Indian firms during the period of 2003 – 13. They found that leverage is not related to financial measures Tobin Q and return on assets (ROA), whereas, return on equity (ROE) is significantly negatively related to capital structure and firm performance. Le and Phan, (2017) studied the relationship between capital structure and firm performance in emerging countries during 2007-11 and found that capital structure in contrary to developed economies is negatively related to firm performance in emerging economies. Besides this, few emerging economies also show a significant positive relationship between leverage and performance of listed companies.

H₁ : Financial flexibility may affect the firm performance

2.3. Financial Distress

Interest in the area of prediction of corporate financial distress has been studied for long from the work of (Ramser and Foster, 1931; Fitzpatrick, 1932; Winakor and Smith, 1935; and Merwin, 1942; Altman, 1968). The main reasons for financial distress arose from managerial decisions instead of economic reasons, therefore, financial distress can be corrected by remedial managerial measures (Whitaker 1999). Better management enhances the resilience of firms and enables them to perform better than industry norms. Besides the importance of firm-specific factors, external factors may also cause financial distress for firms, for instance, the global financial crisis of 2007-08, Asian financial crisis 1997, and the Russian financial crisis 1998 etc. Bancel and Mittoo, (2011) conducted a survey of European CFOs and provided that financial flexibility is an important determinant of capital structure and it enables the firms to bear the negative impact of external negative shocks to cash flows, hence, such firms are less affected by financial crisis. It also found that firms having sufficient internal financing ability have low debt ratios and hence more financial flexibility, which leads to a reduction in financial distress. Deesomsak, Paudyal, and Pescetto, (2004) reported that corporate financing decisions are an outcome of internal firm-specific and external, country related factors as well. A situation in which firms are affected by internal and external factors as

well, management must be cautious regarding financial health and performance of the firm. Opler and Titman, (1994) conducted a study and examined the relationship between financial distress and firm performance and found that firms who have a high level of leverage face reduction in market share than firms who have a low level of leverage during the financial downturn. Financial distress is also positively related to leverage, as the leverage increases, the threat of financial distress also increases as well (Wruck, 1990). In a study Muritala, (2018) investigated the relationship between capital structure and firm performance and found that leverage is negatively related with firm performance, which shows that as the level of financial leverage increases the firm performance reduces as well. Increased leverage enhances the financial distress which may lead to a reduction in firm performance.

Geng, Bose, and Chen (2017) examined the financial distress in Chinese firms and reported that different financial indicators, for example, return on total assets, a net profit margin of total assets cash flow per share and earning per share are better predictors of financial distress.

H₂ : Financial flexibility may reduce the financial distress

H₃ : Financial distress may affect the firm performance

3. RESEARCH METHODOLOGY

This section provides the sample data and methodology used for analysis.

3.1. Data

The sample of this study consists of firm-level unbalanced panel data of 193 non-financial listed firms of Pakistan Stock Exchange for a period from 1991 to 2014. The data were collected from annual financial reports. Each firm in the sample has minimum five-year data. The data was winsorized at first and 99th percentile to eradicate the outliers to obtain unbiased results. The financial distress was measured by using the well-known Altman (1968) and Abbas and Rashid (2011) models. This study aims to study the relationship between financial distress, financial flexibility, and firm performance.

The measurement of variables is as follows, market to book ratio was calculated as the book value of debt plus the market value of equity to total assets. Size of the firm is defined as a natural log of total assets. The tangibility of firm assets is measured as net

property, plant, and equipment to total asset ratio. Profitability is the ratio of earnings before interest, taxes, and depreciation to total assets. The cash holding is the ratio of cash and short-term investment to total assets. Age of the firm is a log of years since the firm was incorporated. The dividend is the dummy variable equal to one if the firm has paid the dividend in a certain year, otherwise zero. Inflation is the percentage change in the consumer price index (CPI). FF is the dummy variable equal to one if the value of leverage is less than median industry ratio, continuous 3 years, otherwise zero, ROA is a return on assets measured as net income to total assets ratio.

3.2. Methodology

To examine the relationship between financial distress and FF we augmented the model used by (Marchica and Mura 2010) by incorporating financial distress and financial flexibility. The model takes a form as below in

$$FD_{it} = \beta_1 X_{it} + \beta_2 FF_{it} + \beta_3 INF_t + \varepsilon_{it} \dots \text{Equation 1}$$

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Here

$$FD_{it} = \beta_1 X_{it} + \beta_2 FF_{it} + \beta_3 INF_t + \varepsilon_{it} \dots \text{Equation}$$

1FD is financial distress which is dependent variable whereas, X is set of firm-specific control variables and FF is firm-specific independent variable to measure the financial flexibility and INF is inflation rate as an independent variable.

$$FD_{it} = \beta_1 MBV_{it} + \beta_2 SIZE_{it} + \beta_3 TANG_{it} + \beta_4 PROFIT_{it} + \beta_5 CASH_{it} + \beta_6 AGE_{it} + \beta_7 DIV_{it} + \beta_8 LL3_{it} + \beta_9 INF_t + \varepsilon_{it}$$

.....Equation 2

$$FD_{it} = \beta_1 X_{it} + \beta_2 FF_{it} + \beta_3 INF_t + \varepsilon_{it} \dots \text{Eq}$$

uation 12 is the empirical model which explains the relationship between financial distress (FD) and its independent and control variables including market to book value of firm, size of the firm, tangibility, profitability, cash holdings, the age of the firm, dividend and paid by the firm, financial flexibility, and inflation.

$$ROA_{it} = \beta_1 MBV_{it} + \beta_2 SIZE_{it} + \beta_3 TANG_{it} + \beta_4 PROFIT_{it} + \beta_5 CASH_{it} + \beta_6 AGE_{it} + \beta_7 DIV_{it} + \beta_8 LL3_{it} + \beta_9 FD_{it} + \beta_9 INF_t + \varepsilon_{it}$$

.....Equation 3

$$FD_{it} = \beta_1 X_{it} + \beta_2 FF_{it} + \beta_3 INF_t + \varepsilon_{it} \dots \text{Eq}$$

uation 13 is the empirical model which tests the impact of control and independent variables on firm performance. Here return on assets (ROA) is the measure of firm performance; FD is financial distress proxy by Altman z score by Altman (1968) and modified Altman z score by Abbas and Rashid (2011) respectively. The control variables

include market to book value, size of the firm, asset tangibility, profitability cash holdings, the age of firm, dividend dummy, independent variable FF measured as low leverage (LL3) and inflation rate.

4. RESULTS AND DISCUSSION

This section presents the empirical results and discussion of the study. The analysis was done by using unbalanced panel data for assessing the relationship between financial flexibility and financial distress. After that, it was studied how financial performance is related to FF and FD.

4.1. Descriptive Statistics

Table 1 provides the descriptive statistics of all variables. For each variable 2693 firm-year observations are studied. The mean value of Altman z score 2.6657 which is below the minimum level 3, hence it is in a gray area which shows that this firm is under threat of financial distress, if not managed this condition well, it may go bankrupt. If the score is at least three or above the firm is secure from financial distress. A higher score of Altman z score shows more financial strength and soundness of the firm. The mean value of the Modified z score is 1.8320, which is greater than the minimum soundness level 0. If the firm has scored greater than zero, it is secure from financial distress; it shows that on average most firms are secure.

Table 1 Descriptive Statistics					
Variable	Obs	Mean	Std. Dev.	Min	Max
ALTMANZ	2693	2.6657	2.9566	-1.4274	63.0408
MBV	2693	1.0859	2.2313	0	45.2583
SIZE	2693	8.2095	1.6168	3.0934	13.1148
TANG	2693	0.4694	0.2266	0	0.9845
PROFIT	2693	0.1378	0.7002	0	33.4878
CASHHOLD	2693	0.0863	0.1202	0	0.8629
AGE	2693	3.3240	0.6612	0	5.0370
DIVDUM	2693	0.5447	0.4981	0	1
INF	2693	0.0860	0.0539	0	0.2029
MODZ	2693	1.8320	2.999	-89.1461	35.9

4.2. Correlation Analysis

Error! Reference source not found. Provides the correlation analysis of variable. It shows that the correlations between all variables are imperfect and there is no

problem of multicollinearity among them.

	ALTMZ	MBV	SIZE	TANG	PROF	CASH	AGE	DIVDU	INF	MODZ
ALTMZ	1.0000									
MBV	0.5533	1.0000								
ALTMZ	1.0000									
	0.0000									
SIZE	-0.0541	-0.0614	1.0000							
	0.0050	0.0014								
TANG	-0.2897	-0.0044	-0.0256	1.0000						
	0.0000	0.8175	0.1842							
PROF	0.3015	0.2797	-0.0045	-0.0296	1.0000					
	0.0000	0.0000	0.8170	0.1252						
CASH	0.2490	-0.0005	0.1639	-0.4102	0.0163	1.0000				
	0.0000	0.9811	0.0000	0.0000	0.3969					
AGE	0.1326	-0.0034	0.0578	-0.2658	0.0385	0.0274	1.0000			
	0.0000	0.8612	0.0027	0.0000	0.0456	0.1555				
INF	-0.0630	-0.0273	-0.0268	0.0384	0.0058	-0.0495	-0.0557	-0.0840	1.000	
	0.0011	0.1568	0.1644	0.0461	0.7644	0.0103	0.0038	0.0000		
MODZ	0.4246	0.3235	-0.0078	-0.1643	0.1633	0.0674	0.0508	0.1584	-0.0131	1.000
	0.0000	0.0000	0.6855	0.0000	0.0000	0.0005	0.0083	0.0000	0.4969	
	0.0000	0.0000	0.6855	0.0000	0.0000	0.0005	0.0083	0.0000	0.4969	

4.3. Regression Analysis Financial Flexibility and Financial Distress

Error! Reference source not found. shows the results of the main model of the impact of FF on corporate financial distress. The results show that FF measured as low leverage is significantly positively related to the Altman z score. It shows that as FF increases, Altman z score also increases, and the probability of financial distress reduces. Higher the Altman z score shows more financial strength, hence, lower the financial distress. Our findings are in line with Wruck, (1990) who concludes that financial distress may be avoided by reducing the financial leverage, despite the tax benefits should the opportunity cost. Among the control variables, firm size and tangibility are significantly negative, which show that as the size and tangibility of the firm increases, the probability of financial distress increases due to the reduction in Altman z score. As the firm became larger in size and have more tangible assets, the ability to increase leverage become

higher, hence more the threat of potential financial distress.

The results of profitability are significantly positive which show that as the profitability of the firm increases, the firm became more financially sound and may rely on own cash flows for further future justified capital requirements. Therefore, no need for external financing and hence lest the chances of financial distress. Our study is in line with the findings of Cash holdings is significantly positive, which show that as the level of cash holdings increases, firms became more secure and have fewer chances of financial distress. The age of the firm is also significantly positive, which show that as the age of the firm increases, firms become more mature and may have more cash flows. Therefore, the threat of financial distress reduces as well.

The dividend is also significantly positive, it shows that the firms who pay more dividend are more mature and less the threat of financial distress. In the early growth period firm have more capital required and less cash inflows to fulfill the further capital required, whereas, in maturity period firms have sufficient cash inflows, less the required cash outflows, therefore, firms require least or no external financing. These findings are in line with (La Rocca, La Rocca, and Cariola, 2011; Frielinghaus, Mostert, and Firer, 2005), who found that in introductory and growth stages, firms rely more on the debt due to insufficient cash flows. They also reported that in the maturity stage firms have sufficient cash flows, less growth opportunities and hence more reliance on internal sources for financing instead of external sources. Therefore, firms in the maturity stage have the least threat of financial threat and more financial strength. These findings are also supporting the pecking order theory which suggests that firms initially rely on internal sources of financing, when internally earned capital is insufficient, firms go for external capital in the form of debt, when borrowing capacity exhausted, a firm can go for equity as last resort., therefore, firms may avoid financial distress (Frielinghaus, Mostert, and Firer, 2005).

The last variable inflation is significantly negative, which show that as the level of inflation increases the Altman z score decreases, hence the threat of financial distress increases as well. It may be due to the reason that during the inflationary period firms may go for more debt financing due to the lower real interest rate. Hence, firms have

more leverage and increased potential financial distress. The findings of this study are supporting Sett, and Sarkhel, (2010) who found the positive relationship between inflation and leverage, and hence this positive relation leads to an increase in financial distress.

Table 2 Regression Analysis Altman z score		
	altmanz	altmanz
MBV	0.803***	0.804***
	(0.000)	(0.000)
SIZE	-0.190**	-0.221***
	(0.002)	(0.001)
TANG	-1.549***	-1.365***
	(0.000)	(0.000)
PROFIT	0.495***	0.495***
	(0.000)	(0.000)
CASH	2.264***	2.252***
	(0.000)	(0.000)
AGE	0.730***	0.656***
	(0.000)	(0.000)
DIVDUM	0.310**	0.305**
	(0.002)	(0.002)
INF	-1.791**	-1.702**
	(0.006)	(0.009)
FFLL3		0.270**
		(0.005)
_cons	1.375*	1.644**
	(0.012)	(0.003)
N	2693	2693
p-values in parentheses		
* p<0.05, ** p<0.01, *** p<0.001		

4.4. Financial Flexibility, Financial Distress, and Firm performance

Error! Reference source not found. Presents the results of the impact of financial flexibility and financial distress on firm performance measured as return on assets. Results show that FF is significantly positively attached to firm performance. It shows that as the level of FF increases, the firm performance increases as well. The financial distress is negative, but insignificant which show that financial distress reduces

the firm performance, but the results are statistically insignificant. MBV is significantly positively related to the firm performance which shows that as the market to book value - which is widely used as a proxy of growth opportunity increases, the firm performance also rises as well. Cash holding is significantly positively related to firm ROA. It shows that as cash holding increases, the firm performance increases along with. Age is significantly positive, which shows that as firms become more mature in its cash flows become more stable and sufficient therefore firm performance improves as well. The dividend is significantly positive which show that firms who pay dividend perform better than non-dividend paying firms.

Table 3 Regression Analysis Firm performance		
	ROA	ROA
MBV	0.00436***	0.00450***
	(0.000)	(0.000)
SIZE	-0.00155	-0.00342
	(0.511)	(0.153)
TANG	-0.0217	-0.0108
	(0.107)	(0.430)
PROFIT	0.00279	0.00278
	(0.187)	(0.193)
CASH	0.161***	0.160***
	(0.000)	(0.000)
AGE	0.0214***	0.0170**
	(0.000)	(0.005)
DIVDUM	0.0307***	0.0304***
	(0.000)	(0.000)
INF	0.00534	0.0101
	(0.827)	(0.679)
FFLL3		0.0162***
		(0.000)
altmanz		-0.0000676
		(0.928)
_cons	0.00736	0.0237
	(0.719)	(0.254)
N	2673	2673
p-values in parentheses		
* p<0.05, ** p<0.01, *** p<0.001		

5. CONCLUSION

This study was aimed to examine the association between the FF and corporate financial distress and firm performance.

This study explored the relationship between financial flexibility and financial distress measured as Altman z score. Significant positive results between financial flexibility and Altman z score suggest that as the financial flexibility increases, the firm's financial strength increases and hence the risk of financial distress decreases. To avoid the consequences of financial distress firms must acquire and maintain financial flexibility. Second, we examined the relationship between financial flexibility and firm performance. It was also found that financially flexible firms perform well as they have a positive relationship between financial flexibility and firms' performance. As the firms have more FF, higher the level of performance accordingly. The study suggests that firms follow pecking order theory; as they have low leverage level, faceless financial distress and show better performance

This study has implications for corporate managers, if they want to reduce the chances of financial distress and enhance the firm performance, then they obtain and maintain financial flexibility by keeping the leverage at a low level. This attainment of financial flexibility will not only benefit them by keeping the firms from financial distress, but it will increase the firm performance as well. Investors may also benefit from this study by selecting the firms who are financially flexible, hence perform well. Therefore, they may get benefit from the firms who have higher returns than other ones. Lenders may also decide to provide the credit to the firms at the right cost.

REFERENCES

- Altman, E. I. (1968). *Financial ratios, discriminant analysis and the prediction of corporate bankruptcy*. *The journal of finance*, 23(4), 589-609.
- Arslan-Ayaydin, Ö., Florackis, C., & Ozkan, A. (2014). *Financial flexibility, corporate investment, and performance: evidence from financial crises*. *Review of Quantitative Finance and Accounting*, 42(2), 211-250.
- Beaver, W. H. (1966). *Financial ratios as predictors of failure*. *Journal of accounting research*, 71-111.
- Berger, A. N., & Di Patti, E. B. (2006). *Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry*. *Journal of Banking & Finance*, 30(4), 1065-1102.

- Castanias, R. (1983). *Bankruptcy risk and optimal capital structure*. *The Journal of Finance*, 38(5), 1617-1635.
- Chabowski, B. R., Mena, J. A., & Gonzalez-Padron, T. L. (2011). *The structure of sustainability research in marketing, 1958–2008: a basis for future research opportunities*. *Journal of the Academy of Marketing Science*, 39(1), 55-70.
- Chadha, S., & Sharma, A. K. (2015). *Capital structure and firm performance: Empirical evidence from India*. *Vision*, 19(4), 295-302.
- Claessens, S., & Yurtoglu, B. B. (2013). *Corporate governance in emerging markets: A survey*. *Emerging markets review*, 15, 1-33.
- Dawar, V. (2014). *Agency theory, capital structure and firm performance: some Indian evidence*. *Managerial Finance*, 40(12), 1190-1206.
- Denis, D. J., & McKeon, S. B. (2016). *Proactive Leverage Increases and The Value of Financial Flexibility*. *Journal of Applied Corporate Finance*, 28(4), 17-28.
- El-Sayed Ebaid, I. (2009). *The impact of capital-structure choice on firm performance: empirical evidence from Egypt*. *The Journal of Risk Finance*, 10(5), 477-487.
- Ferrando, A., Marchica, M. T., & Mura, R. (2017). *Financial flexibility and investment ability across the Euro area and the UK*. *European Financial Management*, 23(1), 87-126.
- FitzPatrick, P. J. (1932). *A comparison of the ratios of successful industrial enterprises with those of failed companies*.
- Frielinghaus, A., Mostert, B., & Firer, C. (2005). *Capital structure and the firm's life stage*. *South African Journal of Business Management*, 36(4), 9-18.
- Geng, R., Bose, I., & Chen, X. (2015). *Prediction of financial distress: An empirical study of listed Chinese companies using data mining*. *European Journal of Operational Research*, 241(1), 236-247.
- Graham, J. and C. Harvey (2001). *"The theory and practice of corporate finance: Evidence from the field."* *Journal of financial economics*60(2): 187-243.
- Gryko, J. (2018). *Managing of Financial Flexibility*. In *Contemporary Trends in Accounting, Finance and Financial Institutions* (pp. 43-55). Springer, Cham.
- Johnsen, T., & Melicher, R. W. (1994). *Predicting corporate bankruptcy and financial distress: Information value added by multinomial logit models*. *Journal of Economics and Business*, 46(4), 269-286.
- Kim, E. H. (1978). *A mean-variance theory of optimal capital structure and corporate debt capacity*. *The Journal of Finance*, 33(1), 45-63.
- La Rocca, M., La Rocca, T., & Cariola, A. (2011). *Capital structure decisions during a firm's life cycle*. *Small Business Economics*, 37(1), 107-130.
- Lau, A. H. L. (1987). *A five-state financial distress prediction model*. *Journal of accounting research*, 127-138.
- Le, T. P. V., & Phan, T. B. N. (2017). *Capital structure and firm performance: Empirical evidence from a small transition country*. *Research in International Business and Finance*, 42, 710-726.
- Marchica, M. T. and R. Mura (2010). *"Financial flexibility, investment ability, and firm value: evidence from firms with spare debt capacity."* *Financial management*39(4): 1339-1365.
- Modigliani, F. and M. H. Miller (1958). *"The cost of capital, corporation finance and the theory of investment."* *The American economic review*48(3): 261-297.
- Muritala, T. A. (2018). *An empirical analysis of capital structure on firms' performance in Nigeria*. *IJAME*.
- Ohlson, J. A. (1980). *Financial ratios and the probabilistic prediction of*

- bankruptcy. Journal of accounting research*, 109-131.
- Ramser, J., & Foster, L. (1931). *A demonstration of ratio analysis*. Bureau of Business Research, University of Illinois, Urbana. IL, Bulletin, 40.
- Rashid, A., & Abbas, Q. (2011). *Predicting Bankruptcy in Pakistan*. *Theoretical & Applied Economics*, 18(9).
- Salim, M., & Yadav, R. (2012). *Capital structure and firm performance: Evidence from Malaysian listed companies*. *Procedia-Social and Behavioral Sciences*, 65, 156-166.
- Scott Jr, J. H. (1976). *A theory of optimal capital structure*. *The Bell Journal of Economics*, 33-54.
- Sett, K., & Sarkhel, J. (2010). *Macroeconomic variables, financial sector development and capital structure of the Indian private corporate sector during the period 1981-2007*. *IUP Journal of Applied Finance*, 16(1), 40.
- Singh, K., & Hodder, J. E. (2000). *Multinational capital structure and financial flexibility*. *Journal of International Money and Finance*, 19(6), 853-884.
- Wald, J. K. (1999). *How firm characteristics affect capital structure: an international comparison*. *Journal of Financial research*, 22(2), 161-187.
- Whitaker, R. B. (1999). "The early stages of financial distress." *Journal of Economics and Finance* 23(2): 123-132.
- Winakor, A., & Smith, R. (1935). *Changes in the financial structure of unsuccessful industrial corporations*. Bulletin, 51.
- Wruck, K. H. (1990). *Financial distress, reorganization, and organizational efficiency*. *Journal of financial economics*, 27(2), 419-444.
- Zavgren, C. V. (1985). *Assessing the vulnerability to failure of American industrial firms: a logistic analysis*. *Journal of Business Finance & Accounting*, 12(1), 19-45.
- Zmijewski, M. E. (1984). *Methodological issues related to the estimation of financial distress prediction models*. *Journal of Accounting research*, 59-82.