

## Capital Structure and Financial Performance: Evidence from Pakistan (Kse 100 Index)

Raheel Mumtaz<sup>1</sup>, Shahnaz A. Rauf<sup>2</sup>, Bashir Ahmed<sup>3</sup>, Umara Noreen<sup>4</sup>

<sup>1</sup>Lecturer, College of Commerce, Government College University, Faisalabad,

<sup>2</sup>Professor, Department of Business Administration, Air University, Islamabad,

<sup>3</sup>Lecturer, Department of Management Sciences, Government College University, Faisalabad,

<sup>4</sup>Assistant Professor, Department of Management Sciences, Comsats Institute of Information Technology, Islamabad

---

### ABSTRACT

Literature on capital structure suggests that a firm's capital structure play an important role in determining its future growth, sustainability and financial performance. It is observed that investor's are highly interested in the performance of firms listed in the stock market. Empirical evidence gives little indication of identifying the casual relationship between capital structure of a firm and its financial performance, However it is generally believed that transactions and bankruptcy costs play a vital role in the choice of debt to equity financing. Debt/Equity ratio is commonly used as a measure of capital structure, while other ratios like (Earning per Share, Price/Earning Ratio, Operating profit Margin, Return on Asset, Return on equity) are used as proxies for firm performance. These ratios are used to study the relationship between capital structure and firm performance in the context of large private companies in Pakistan. A total of 83 companies are selected from KSE 100 index for our analysis.

Findings of our study suggest that financial performance of firms is significantly affected by their capital structure and their relationship is negative in nature. Moreover capital structure of a firm is negatively related to its market value and also increases its risk level as the share of debt increases in the capital mix.

**KEY WORDS:** Capital Structure, Financial Performance, Firm risk, Firm Value, KSE 100 index.

---

### INTRODUCTION

The theory of capital structure has remained an area of interest for researchers of corporate finance since long. In recent years the influence of financial crisis on stock markets around the globe has raised renewed concerns on excessive leverage of firms and its impact on their financial performance.

Theoretically most models discussing capital structure of firms identify tax savings, bankruptcy costs, transaction costs, adverse selection and agency cost etc as the dominant factors influencing a firm's choice of debt and also its impact on firm performance. In practice different firms may pursue different goals but the core objective of any firm is to minimize its cost. So far as the creditors and investors in the stock market are concerned, of the total cost they are specifically interested in the financing cost of capital. This may be so because debt to equity ratio enables the creditors in knowing the likelihood of default of the excessively leveraged firms. Similarly, to know the expected returns on their risk bearing activities, investors and traders in the stock market are interested to know the relative impact of debt on a firm's performance. Both investors and traders examine the daily performance of firms listed on stock exchanges and rank firms accordingly. It is on the basis of this ranking and historical prices of stocks that they decide to invest their funds in relatively high performing firms.

In this context the case of large private firms in Pakistan is of particular interest. Most of the large firms are excessively leveraged as bank credit is the main source of financing and the equity market has a negligible role in meeting financing needs of firms compared to the total amount of bank credit issued. Large manufacturing firms and domestic commerce together account for almost two thirds of the total domestic credit. Excessive leverage in the capital mix and heavy reliance of large firms on bank debt indicate that financing costs of such firms are also going to be high. This is reflected in their percentage share in GDP which has not only remained almost unchanged, their contribution in GDP growth is also reported to be negligible (BSR, 2009).

The main objective of this research is to empirically analyze whether the capital structure of firms with heavy reliance on bank debt influence their financial performance and the shareholder's wealth. In other words, the paper attempts to estimate whether a high proportion of debt in the capital structure adversely impacts a firm's financial performance and therefore the future growth of firms listed on Karachi Stock Exchange 100 index. Currently 640 companies are listed in Karachi stock exchange, while the performance level of individual firms varies significantly even though they are operating in a similar economic environment. This study attempts to answer the following questions:

1. Does capital structure and firm size affect firm performance?
2. Is change in capital structure related to change in firm's returns?
3. Does a change in the firm's capital structure cause a change in firm value?

This paper is organized as follows: section 2 of the paper gives a brief review of the existing literature, section 3 explains the theoretical framework, section 4 discusses the methodology and measurement of variables, section four report the main findings and section five concludes the paper.

## LITERATURE REVIEW

The pioneering work of Modigliani and Miller (1958) proposed the irrelevance of capital structure to firm performance and argued that in a perfect market situation there is no link between firm value and its financing mix. The restrictive and unrealistic assumptions of this theory led to subsequent research work suggesting that the firm performance is actually affected by the amount of debt in the capital mix choices available to the firms. Jensen and Meckling (1976) Not surprisingly this debate led to contesting views on financial performance and capital structure, and the two main capital structure theories often referred to in the literature are the trade off theory and the pecking order theory of leverage. However, empirical evidence reported is mixed which indicates that theory is not quite simple and straight forward in this regard.

The trade off theory suggests that firms can determine their optimal capital structure by striking a balance between the benefits and costs related with debt financing. According to Myers (1984) firms set a target debt to value ratio and steadily adjust towards the target ratio to balance the trade off between tax savings and bankruptcy cost.

Quite a few studies have identified both advantages and costs of debt financing. Among the advantages of debt financing, tax savings is considered as a main benefit for firms while opting for debt financing. This idea is based on the assumption that interest expense incurred on debt is deducted from the pre tax income of firms. Modigliani and Miller (1963) whereas, among the costs of debt financing bankruptcy cost is often considered as important. Since debt financing not only involves regular interest payments it also include payment of the principal amount borrowed. So, firms exceeding the appropriate level of capital mix are liable to increase the cost of debt and also the chance of default, bankruptcy and eventually liquidation of a firm. Myers (2001) though most studies assume that bankruptcy costs of firms exist, yet it is commonly believed that such costs are negligible and the benefits of tax saving outweigh the bankruptcy costs. Miller (1977) Therefore, the trade off theory suggests that more profitable firms need to shelter their earnings and save taxes by opting for higher leverage in their capital structure. This implies that firm's performance and high debt level are positively associated, a hypothesis that is supported by a number of studies including Gosh *et al.* (2000), Hadlock and James (2002) Abor (2005) and Bonaccorsi di patti (2006).

However, the static trade off theory is applicable only to one time period trade off between tax saving against the deadweight cost of bankruptcy. In practice firms operate for a long period of time, therefore dynamic trade off theories are more relevant to the real world in explaining the relationship between firm's performance and leverage. The focal point of these theories is that firms pursue an optimal debt ratio and any deviations resulting from random shocks are adjusted without any time lag and transaction costs. This proposition supports the view that firms would maintain high levels of debt to avail the tax saving benefit Kane *et al.* (1984), Brennan & Schwartz (1984), Goldstein *et al.* (2001) and Strebulaev (2007). However, the assumption that firms rebalance debt ratios swiftly without any transactions cost is being questioned. It is argued that since readjustment of debt ratios involve transaction costs, firms may take time to rebalance. Rather they may let their capital structure to deviate from the optimal capital structure and will rebalance only at the upper and lower limits Fischer *et al.* (1989).

Empirically, studies reporting a negative relation between firm's performance and capital structure seem to be consistent with the predictions of pecking order theory in contrast to the trade off theory. However, this seems to be too simple a view of the relationship between firm's performance and its capital structure. In practice it is observed that profitable firms tend to retire their debt and maintain leverage close to the lower end, whereas loss making firms are found to have higher debt level and are close to the higher limit of debt ratio. This indicates that profitability may also reflect the growth aspect of firms. Thus in contrast to the static trade off theory the dynamic trade off theories suggests that firm performance and leverage may be negatively related, implying that trade off theory is ambiguous on profit and debt to equity relation (Frank & Goyal, 2007).

In comparison to the trade off theory the pecking order theory argues that pecking order behavior is adopted when firms prefer to avoid costs related to adverse selection and agency cost issues. In other words firms in the first place prefer to opt for internal source of retained earnings; if at all it has to opt for external funds it prefers debt to equity. Myers (1984) and (Myers & Majluf, 1984) Also the issuance of equity imply involving external investors in the ownership structure, therefore when a firm issues new shares investors may believe the firm is overvalued and the managers may take advantage of this asymmetric information as he knows better about the firm's risk level than the investors. Myers (1984)

Thus, according to the pecking order theory the primary concern of a firm is to raise capital through retained earnings while trade off between firm's bankruptcy cost and tax shield of debt is a secondary issue. Accordingly, profitable firms are likely to use retained earnings and make less use of debt relative to less profitable firms. It implies firm's performance and debt are expected to be negatively associated. This

hypothesis is also supported by a number of studies, to them the benefits of debt financing are less than its negative aspects, so firms will always prefer to fund investments by internal sources Jensen and Meckling (1976) Kester (1986), Rajan and Zingales (1995) (Eriotis, et. al. 1997).and Fama and French (2002) Similarly, Harirs and Raviv (1991) Krishnan and Moyer (1977) and Gleason, Mathur and Mathur (2000) all found a significant and negative impact of capital structure on performance.

Although literature on capital structure theories and empirical evidence on the determinants of capital structure is abundant in case of developed countries, however except a few studies the question whether capital structure of large firms influence their performance remains largely unexplored in developing countries.

One such study testing the hypothesis that capital structure is one of the main determinants of firm performance explains that the tax benefit of debt financing lead firms to borrow excessively. In doing so firms very often ignore the bankruptcy costs stemming from declining returns to excessive debt. Therefore, profit maximizing firms when diverge from an appropriate capital structure their bankruptcy or financing costs outweigh the tax benefits related with the trade off between debt and equity. Zeitun and Tian (2007) finds that capital structure has a significant and negative impact on firm’s performance and underestimation of bankruptcy costs may lead firms to borrow excessively and carry high debt in their capital structure. However, others find mixed results regarding the impact of capital structure on firm’s performance (Ebaid, 2007).

## **THEORETICAL FRAMEWORK AND METHODOLOGY**

Main objective of this study is to identify the influence of debt to equity ratio on firm performance while controlling for firm size. The problem is approached in two ways. First the traditional static approach is adopted that explains the level of capital structure and financial performance. In the second approach which relates to two dynamic aspects of capital structure, the study explores the impact of change in capital structure on change in performance represented by change in firm’s market value and also relates the risk of firms represented by change in returns of firms associated with change in capital structure.

The models of this study are given in equation 1-4 along with the hypothesized relationship of the dependent and independent variables of interest.

Data for this research is taken from annual financial statements of firms. Ratios of firms are collected from State Bank of Pakistan’s annual reports and Karachi stock exchange annual firm analysis reports.

This research is conducted on firms listed on Karachi Stock Exchange (KSE), currently 639 firms are listed in KSE belonging to 34 different sectors. KSE 100 index firms are selected for our analysis by using purposive sampling in which top companies of all sectors are selected on the basis of their performance in the capital market. The time period selected for our analysis is 2006-2009 while the companies that are listed after 2006 but currently in KSE 100 index are not included in our analysis. After screening the data 83 companies from different sectors are selected for our analysis.

1.  $ROE_{i,t} = \alpha + \beta (D / E \text{ Ratio})_{i,t} + \theta (\text{Ln Total Asset})_{i,t} + e_{i,t}$
2.  $ROA_{i,t} = \alpha + \beta (D / E \text{ Ratio})_{i,t} + \theta (\text{Ln Total Asset})_{i,t} + e_{i,t}$
3.  $\text{Net Profit Margin}_{i,t} = \alpha + \beta (D / E \text{ Ratio})_{i,t} + \theta (\text{Ln Total Asset})_{i,t} + e_{i,t}$
4.  $\text{Earning per Share}_{i,t} = \alpha + \beta (D / E \text{ Ratio})_{i,t} + \theta (\text{Ln Total Asset})_{i,t} + e_{i,t}$
5.  $\text{Ln(P/E Ratio)}_{i,t} - \text{Ln(P/E Ratio)}_{i,t-1} = \alpha + \beta (\text{Ln(D/E Ratio)}_{i,t} - \text{Ln(D/E Ratio)}_{i,t-1}) + e_{i,t}$
6.  $\text{Ln(ROE)}_{i,t} - \text{Ln(ROE)}_{i,t-1} = \alpha + \beta (\text{Ln(D/E Ratio)}_{i,t} - \text{Ln(D/E Ratio)}_{i,t-1}) + e_{i,t}$

Where

D / E Ratio = Debt to Equity Ratio

ROE = Return on Equity

ROA = Return on Asset

P/E Ratio = Price Earning Ratio

Ln Total Asset = Size of firm

$e_{i,t}$  = The error term

➤ **Hypothesis: 1**

H<sub>1</sub>: D/E Ratio and firm size has significant effect on firm’s financial performance.

➤ **Hypothesis: 2**

H<sub>2</sub>: Change in D/E Ratio has significant effect on change in market value of firm.

➤ **Hypothesis: 3**

H<sub>3</sub>: Change in D/E Ratio has significant effect on volatility of returns.

### **3.3 Variable Measurement**

#### **3.3.1 Firm Performance**

A number of variables measuring firm performance are commonly accounting based measures of performance calculated from financial statements as ROE, ROA, EPS and Net Profit Margin (Abor, 2005), while stock market return and volatility in returns are also used as performance measures of firms.(Welch, 2004). Tobin’s Q measurement of performance is also used by some studies which are a mix of market performance and accounting measurement (Zeitun, & Tian, 2007). This study adopts the four accounting based

measure of performance including ROE: computed as percentage of net income in terms of total equity, ROA: percentage of net income in terms of total assets, EPS: earnings of a firm per share during an accounting cycle, Net Profit Margin: computed as net income in terms of sales during the accounting cycle.

### 3.3.2 Capital Structure

Capital structure of a firm is measured by different accounting based methods like short term liability to total assets, long term liability to total assets and total debt to total assets (Abor, 2005; Abor, 2007). This study takes total debt to total assets as a proxy for capital structure of a firm.

### 3.3.3 Control Variable

Literature suggests that firm size also affects firm performance. According to (Ramaswamy, 2001; Jermias, 2008; Frank and Goyal, 2004) big firms enjoy a number of benefits accruing from the economies of scale and they also have better resources than smaller firms. Although, our sample include large sized firms the relative size of firms may vary according to the sector to which they belong. Therefore to remove the effect of firm size belonging to different sectors, we take the log of total assets as a control variable in the model.

## RESULTS AND DISCUSSION

Table 1 gives the detail of descriptive statistics of the variables used in our analysis. First row of the table shows the mean of the variables including return on equity, return on assets, P/E ratio, net profit margin, earnings per share and D/E Ratio. The respective mean values are .2502, .078, 21.0978, .1175, 27.6268 and 2.7398. The D/E Ratio of 2.7398 shows that an average firm uses 73 percent debt in its capital mix in Pakistan. Similarly average firms in KSE 100 index has earning per share of Rs 27.62 during the period 2006-09. Average net profit margin of firms is 11.75 percent of their sales during the same period and price earning ratio of firms indicating the value of firms is 21.09. Average return on asset is 7.8 percent and return on equity is 25.02 percent.

**Table 1.** Descriptive Statistics

	ROE	ROA	PE RATIO	NET PROFIT	EPS	DE
Mean	0.2502	0.078	21.0978	.1175	27.6268	2.7398
Median	0.2018	0.0733	6.2941	0.067	11.92	1.4841
Maximum	16.196	0.6915	4916.6666	26.4982	419.81	35.7662
Minimum	-2.322	-2.4759	-850.68	-9.9961	-157.18	-136.644
Std. Dev.	0.9547	0.2015	276.1854	1.6344	53.0745	9.1904
Jarque-Bera	766474	119624	1235234	1479171	4735	354117
Probability	0	0	0	0	0	0

The second row of the table explains the median of the given variables defined as the middle value of data when arranged in ascending or descending order. Third and fourth rows give details of firm's ratios in terms of maximum and minimum values respectively. The fifth row explains the variability of variables from their mean value and the sixth row shows the result of Jarque-Bera test that explains whether the sample data follows the normal distribution or not? In our analysis all the variables are normally distributed.

**Table 2.** Capital Structure and Performance Measured by ROA, ROE, EPS, Net Profit Margin

Variables	Financial Performance							
	ROA		ROE		Net Profit		EPS	
Constant	0.192	(0.000)	1.202	(0.000)	-418.45	(0.000)	14.271	(0.000)
D/E Ratio	-0.001	(0.011)	-0.115	(0.000)	-0.211	(0.227)	-0.185	(0.086)
Log Size	0.011	(0.000)	0.065	(0.000)	13.41	(0.155)	1.401	(0.000)
R <sup>2</sup>	0.989		0.955		0.323		0.977	
F value	264.27		61.73		4.4		123.23	
Sig	0		0		0.025		0	

### Capital Structure and Firm Performance

Statistical analysis based on Estimated Generalized Least Square Regression identifies the relationship between capital mix and firm performance while controlling the effect of firm size so that the independent impact of capital structure is identified between the two variables of interest. Theoretically debt-equity ratio has a negative and significant relation with Return on Assets i-e as a firm's debt level increases its return on assets is expected to decline. Whereas, firm size has a significant positive relation with return on assets.

Regression results reported in table 2, suggest that except for net profit as a measure of firm's performance the remaining three measures of performance show similar results. While capital structure of firms depict a statistically significant negative association with return on assets, return on equity and earnings per share, firm size is also significantly and positively linked to these performance measures and the R square values for the same three models explain about 98 percent of the variation in the dependent variable. Although, debt to equity ratio is negatively and significantly associated with return on assets its coefficient is small. This may be so due to a number of reasons including, accounting practices of firms, the small sample size and also the choice of sample period (2006-2009) that was marked with severe economic downturn. However, the size coefficient of return on equity is found to be large.

Net profit margin shows a weak negative relation with the capital structure and firm size has no significant impact on firm performance. Similarly the R square value has declined and explains only 32.34 percent of the variation in capital structure of firms.

Finally the fourth performance variable measured as earnings per share of a firm is also negatively related to debt to equity ratio at 10 percent significance level. It means increase in debt to equity ratio will reduce a firm's earnings per share. Moreover, firm's earnings per share is positively associated with the control variable firm size and R square value explains about 97 percent of the variation in firm performance.

**4.1 firm market value**

Theoretically a firm's market value is negatively related with its capital structure however, earlier studies of capital structure report its positive impact on firm value i.e increase in debt level in the capital mix increase firm's market value (Ward and Price, 2006; Sharma, 2006). These studies are conducted for established markets of America and Europe where markets are working under the efficient market hypothesis. This basic assumption of (Modigliani & Miller, 1958) is appropriate for markets operating in a mature market environment. Whereas firms operating in imperfect market settings like Pakistan may not fulfill the assumptions of efficient market hypothesis. In that case it is possible that capital mix negatively impacts the firm value, given the debt level in capital structure of KSE 100 indexed firms.

Additionally, capital structure varies across industries and its impact may also vary from industry to industry. In some industries a firm's value is positively related with its capital mix while in other industries it may have a negative impact on firm value or it is quite possible that a few industries may show no link between capital structure and firm value.

**Table 3.** Regression Analysis of Firm Market Value

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.28425297	0.11	2.58404595	0.010631
CH_DE	-0.35393462	0.03341	-10.593342	2.48E-20
R-squared	0.474118915	Mean dependent variable		0.1646195
Adjusted R-squared	0.209584794	S.D. dependent variable		4.1523253
S.E. of regression	3.691637172	Sum squared residual		2248.6505
F-statistic	1.792278866	Durbin-Watson statistics		2.3712088
Prob(F-statistic)	0.00078721			

*Dependent Variable: Change in Price Earning Ratio*

Table 3 reports the regression results to establish the hypothesis that firm's market value is significantly and negatively associated with the debt to equity choice i.e whether debt to equity ratio reinforce firm performance in terms of a decline in its market value. In other words increase in firm's debt-equity ratio is expected to decrease its value in the financial market. To authenticate the relationship we take the first difference of debt to equity ratio and the price earning ratio. The null hypothesis is rejected at 5 percent significance level and the overall regression results indicated by the R square value of 0.47 seem to be satisfactory. It may be noted that the coefficient size of debt to equity is quite large; suggesting that change in debt to equity has an important link with change in firm value and can be considered as an important variable in determining firm value. Our results also support the findings of Rajan and Zingles (1995). In fact firms using more debt in their capital mix may not be able to pay the fixed costs in case of declining profits and even investors may also avoid investing in such firms. Ultimately a firm's share price is reflected in the declining price earnings ratio which is an indicator of firm value.

**4.2 firm risk**

Risk being the probability of deviation in return on equity from the actual return, refers to the loss of total capital invested or part of it. According to Damodaran (2003) the effect of risk on capital may take the form of appreciation or depreciation of capital. Although there are different ways to calculate risk it can be calculated by simply measuring the deviation of return on equity from its mean value.

**Table 4.** Regression Analysis of Firm Risk

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.532193866	0.01841	-28.902336	1.82E-66
CH_DE	0.55187404	0.03201	17.2394323	9.57E-39
R-squared	0.86286258	Mean dependent variable		-0.0771414
Adjusted R-squared	0.793878302	S.D. dependent variable		25.212384
S.E. of regression	11.44658054	Sum squared residual		21618.994
F-statistic	12.50810482	Durbin-Watson statistic		2.81936
Prob(F-statistic)	9.72E-42			

*Dependent Variable: Change in Return on Equity*

Results mentioned in Table 4 show that change in debt to equity ratio have a negative and significant relation with change in return on equity. If a firm's debt level changes it is expected to cause deviations in firm's

return on equity, ultimately increasing a firm's risk level. R square value indicates that change in debt to equity ratio explains as high as 86 percent of the volatility in returns of firms.

These findings support the explanations of Damodaran (2003) and Fischer (1989) suggesting that increase in firm's debt level increase its risk level. Since debt provides a tax shield firms increase the debt level in their financial structure and high level of debt in the capital mix increase the risk level of firms.

In sum our results support Fischer's (1989) dynamic trade off theory predicting a negative relation between, capital structure and firm performance, change in debt to equity ratio and firm value and also the risk level of firms.

### Conclusion and recommendation

This study investigates the impact of capital structure on firm's financial performance in Pakistan's stock market, particularly on KSE 100 indexed firms. Our results suggest that firm's capital structure is negatively and significantly associated with three of our measures of performance. A high level of debt negatively impacts a firm's return on equity, return on assets and earnings per share. However, when performance is measured as net profit margin of firms its relationship with firm capital structure is not significant.

It is also shown that change in firm leverage ratio effect firm performance, i.e change in debt to equity ratio is negatively related to the value of a firm. Price earning ratio is used as a proxy for firm value and is shown to be negatively affected by change in capital structure. It means if the change in capital structure is positive it will reduce firm value or a reduction in debt will lead to appreciation of firm value.

Deviation in return on equity is used as a measure of firm's risk level which is significantly affected by firm's debt level. Our results indicate that increased use of debt in capital mix will cause firm's risk level to increase due to the fixed cost of debt that a firm has to pay even if its earnings are not much. That's why firm's debt level is positively related with firm risk level.

There are three main limitations of this study; it studies the data of only one market of developing economy so it cannot represent all the markets of transition economies. However markets of developing economies have some shared features and few characteristics are unique like, regulation of the markets etc. Secondly this study includes only four years data. To find consistent results long time series data is required. Thirdly we can find the impact of capital structure on firm's financial performance by sector and then compare the results to know the real picture of the relationship.

Capital structure is a puzzling concept especially so in emerging markets like Pakistan. Further study can be conducted by adding sales growth and business risk as independent variables. To clarify the results of our study more variables for performance measurement may be helpful. Data of long time series may also be used for reliability of results. Future research can be conducted by comparing the capital structure and firm performance of small and large firms.

### REFERENCES

- 1) Abor, J. (2005). The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana, *Journal of Risk Finance*, 6, 438-47.
- 2) Abor, J. (2007). Debt policy and performance of SMEs: evidence from Ghanaian and South Africa firms, *Journal of Risk Finance*, 8, 364-79.
- 3) Bain, J. S. (1956). Barriers to New Competition, Cambridge, M.A: Harvard University Press.
- 4) Bradly, M., Jarrel, G. A., & Kim, E. H. (1984). On the existence of an optimal capital structure: Theory and Evidence. How firm characteristics affect capital structure: An empirical analysis. *Journal of Finance*, 39, 857-878.
- 5) Collins, N., & Preston L. (1969). Price-Cost Margin and Industry Structure. *Review of Economics and Statistics*, 51, 271-286.
- 6) Damodaran, A. (2003). Investment Philosophies: Successful Investment Philosophies and the Greatest Investors Who Made Them Work. *Wiley*. 1-15.
- 7) Ebaid, I. E (2009). The impact of capital-structure choice on firm performance: empirical evidence from Egypt. *The Journal of Risk Finance*, 10(5), 477-487.
- 8) Eriotis, N. P., Frangouli, Z., & Neokosmides, Z. V. (1997). Profit Margin and Capital Structure: An Empirical Relationship. *The Journal of Applied Business Research*, 18(2), 85-88.
- 9) Fama, E. F., & French, K. R. (1998). Taxes, Financing Decisions, and Firm Value. *Journal of Finance*. 53, 819-843.
- 10) Fama, E. F., & French, K. R. (2002). Testing trade-off and pecking order prediction, about dividends and debt. *The Review of Financial Studies*, 15(1), 1-33.
- 11) Fama, E. F., & Miller, M. H. (1972). *The theory of finance*. Holt, Rinehart and Winston: Newyork.
- 12) Firer, C., Ross S. A., Westerfield, R. W., & Jordan, B. D. (2004). Fundamentals of Corporate Finance. 3rd ed. Berkshire: McGraw Hill.

- 13) Fluck, Z. (1999), the dynamics of the management-stockholder conflict, *Review of Economic Studies*, forthcoming.
- 14) Frank, M., & Goyal, V. (2004). Testing the pecking order theory of capital structure. *Journal of Financial Economics*, 67, 217-48.
- 15) Gale, B. (1972). Market Share and the Rate of Return. *Review of Economics and Statistics*, 54, 412-423.
- 16) Glickman, M. (1998). A Post Keynesian Refutation of Modigliani-Miller on Capital Structure. *Journal of Post Keynesian Economics*, 20(2), 251-274.
- 17) Hall, M., & Weiss, L. W. (1967) Firm Size and Profitability. *Review of Economics and Statistics*, 49, 319-331.
- 18) Harris, M., & Raviv, A. (1990). Capital structure and the information role of debt. *The Journal of Finance*, 45, 321-349.
- 19) Hurdle, G. L. (1974). Leverage Risk, Market Structure and Profitability. *Review of Economics and Statistics*, 56, 478-485.
- 20) Jensen, M. C., & Meckling, W. H. (1976). Theory of firm: Managerial behavior, Agency costs and capital. *Journal of Financial Econometrics*, 3, 306-65.
- 21) Jermias, J. (2008). The relative influence of competitive intensity and business strategy on the relationship between financial leverage and performance. *British Accounting Review*, 40, 71-86.
- 22) Kochar, R. (1997). Explaining firm capital structure: The role of agency theory vs. transaction cost economics. *Strategic Management Journal*, 17, 713-728.
- 23) Majumdar, S., & Chhibber, P. (1999). Capital structure and performance: evidence from a transition economy on an aspect of corporate governance. *Public Choice*, 98, 287-305.
- 24) Miller, M. (1988). The Modigliani and Miller Propositions after Thirty Years. *Journal of Economic Perspectives*, 2(4), 99-121.
- 25) Modigliani, F., & Miller, M. (1958). Corporate Income Taxes and the Cost of Capital: A Correction. *The American Economic Review*, 53(3), 433-444.
- 26) Modigliani, F., & Miller, M. (1963). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review*, 48(3), 261-297.
- 27) Myers, S. C. (1984). The Capital Structure Puzzle. *Journal of Economic Perspectives*, 39(3), 575-592.
- 28) Myers, S. C. (2001). Capital Structure. *Journal of Economic Perspectives*, 15(2), 81-102.
- 29) Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *The Journal of Finance*, 13, 187-221.
- 30) Opler, T. C., Saron, M., & Titman, S. (1997). Designing Capital Structure to Create Shareholder Value. *Journal of Applied Corporate Finance*, 10(1), 21-32.
- 31) Oustapassidis, K. (1998). Performance of Strategic Groups in the Greek Dairy Industry. *European Journal of Marketing*, 32, 962-973.
- 32) Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *Journal of finance*, 50, 1421-60.
- 33) Ramaswamy, K. (2001). Organizational ownership, competitive intensity, and firm performance: an empirical study of the Indian manufacturing sectors. *Strategic Management Journal*, 22, 989-998.
- 34) Schwartz, E., & Aronson, J. R. (1967). Some Surrogate Evidence in Support of the Concept of Optimal Financial Structure. *Journal of Finance*, 34(1), 150-153.
- 35) Shah, A., & Khan, S. (2007). Determinants of capital structure: Evidence from Pakistani panel data. *International Review of business research papers*, 3(7), 265-282.
- 36) Sharma, A. K. (2006). Financial Leverage and Firm Value; A study of Capital structure of selected manufacturing sector firms in India. *The Business Review, Cambridge*, 6(2), 70-76.
- 37) Shepherd, W. G. (1994). *The Economics of Industrial Organization*, Prentice-Hall International.
- 38) Simerly, R. L., & Li, M. (2000). Environmental dynamism, capital structure and performance: a theoretical integration and an empirical test. *Strategic Management Journal*, 21, 31-50.
- 39) Ward, M., & Price, A. (2006). *Turning Vision into Value*. Pretoria: Van Schaik Publishers.
- 40) Welch, I. (2004). Capital Structure and Stock Returns. *Journal of Political Economy*, 112(1), 106-131.
- 41) Zeitun, R., & Tian, G. (2007), Capital structure and corporate performance: evidence from Jordan. *Australasian Accounting Business and Finance Journal*, 1, 40-53.