


International Conference on
Intellectual Capital Management
ICIM2009




INSTITUTE FOR ADVANCED
STUDIES IN BASIC SCIENCES
I.A.S. Institute, 2009
Islamabad, Pakistan

Determinants of Optimal Capital Structure,


A Case of Pakistani Companies Listed In KSE.

By:
Syed Adnan Shah
SZABIST ISLAMABAD
PAKISTAN

Syed.shahnibpk@gmail.com




International Conference on
Intellectual Capital Management
ICIM2009




INSTITUTE FOR ADVANCED
STUDIES IN BASIC SCIENCES
I.A.S. Institute, 2009
Islamabad, Pakistan

PRESENTATION OUTLINE

- Introduction
 - Statement of the problem
- Purpose of Study
- Literature Review
 - Conceptual Framework
- Research Methodology
 - Main Variables
 - Sample Size & Sampling Method
 - Data Collection
- Results
 - Tables and Interpretation
- Conclusion
- References




International Conference on
Intellectual Capital Management
ICIM2009




INSTITUTE FOR ADVANCED
STUDIES IN BASIC SCIENCES
I.A.S. Institute, 2009
Islamabad, Pakistan

Introduction

- The relationship between capital structure and firm value has been discussed frequently in the literature by different researcher.
- Capital structure refers to the mix of debt and equity used by a firm in financing its assets.
- A firm can choose a mix of three modes of financing i.e. issuing shares, borrowing from the market and use of retained earnings. The ratio of this mix of funds purely depends on the firm and known as optimal capital structure of the firm




International Conference on Intellectual Capital Management
ICM2009




INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 8000
DUBLIN, IRELAND

Purpose of Study

- Numerous studies has been conducted to assess the impact of capital structure on firm value, this study adds to the research done on capital structure of Pakistani firms.
- The objective of this study is to check whether the changes in capital structure has impact on the overall value of the firms, and specifically in leverage ratio of firms listed in Karachi Stock Exchange (KSE).




International Conference on Intellectual Capital Management
ICM2009




INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 8000
DUBLIN, IRELAND

Literature Review

Authors	Objective of The Study	Conclusions
Modigliani and Miller (1958)	To determine the firm's market value and to show that it is determined by its earning power and the risk of its underlying assets.	The theory proves that the value of the firm is dependent on its capital structure.
Jensen, M. & Meckling, W, 1976	To determine the firms market value and shows that it is determined by its earning power and the risk of its underlying assets whether it makes choices to maximize total firm value versus equity value, influence the extent to which firms make financing choices that move them towards their target debt ratios.	Research confirm the prediction of pecking order theory. That firm follow the hierarchy for fund raising, i.e. to use retained earning, debt and then to share issuance




International Conference on Intellectual Capital Management
ICM2009




INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 8000
DUBLIN, IRELAND

Literature Review

Authors	Objective of The Study	Conclusions
Stephen A. Ross 1977	In competitive equilibrium the inferences drawn from the signals will be validated. To empirical prove that in a cross section, the values of firms will rise with leverage, since Increasing leverage increases the market's perception of value.	Analyzed the determinants of capital structure of listed non financial firms in Pakistan.
Hatfield, Cheng, Davidson, 1994	To analyze and determine the average debt to equity ratio in relation to firms size, growth, profitability and non tax debt shields.	Gave the idea of high debt and low debt capital firms
Rajan, R. and Zingales, L. 1995	Writer investigate financing decisions of public firms in the major industrialized countries. At an aggregate level, firm leverage is fairly similar across the G-7 countries.	Concluded that leverage depends on the size of firm.



International Conference on Intellectual Capital Management
IICM2009



INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 8000
Dhaka, Bangladesh

Literature Review

Authors	Objective of The Study	Conclusions
Shah & Hijazi, 2004	To determine the capital structure and planned to test few other factors that are used by previous researchers	Analyzed that size of firm do not effect the leverage ratio of a firms listed in KSE.
Saeed 2007	This mater the sis is concerns to test that if financial patterns of listed firms in energy sector of Pakistan follow any fore most capital structure theories. The analysis was imple mente d on a sample of 22 listed firms during the period 2001 to 2005. The results of pooled regression model show that both Static trade-off theory and Pecking order theory are pertinent corporate capital structure theories to the firms in Pakistani energy sector.	Financing pater n of firms partially supports the Static trade-off theory and Pecking order theory.




International Conference on Intellectual Capital Management
IICM2009




INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 8000
Dhaka, Bangladesh

Research Methodology

- Main Variables
- Sample Size & Sampling Method
- Data Collection



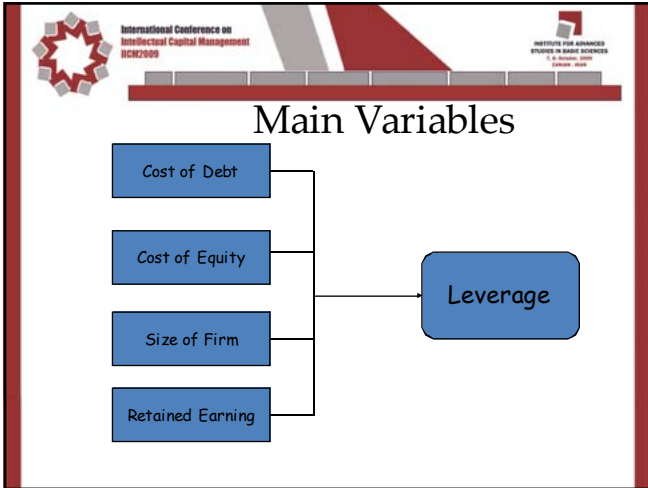
International Conference on Intellectual Capital Management
IICM2009



INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 8000
Dhaka, Bangladesh

Main Variables

- Dependent Variable
 - Leverage
- Independent Variables
 - Cost of Debt
 - Cost of Equity
 - Size of Firm
 - Retained Earnings



International Conference on Intellectual Capital Management IICM2009

INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P. O. Box No. 3409
DUBLIN, IRELAND

Sample Size & Sampling Method

- KSE 100 index is the population while sample is selected on convenient random sampling.
- Total of 150 firms are selected.

International Conference on Intellectual Capital Management IICM2009

INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P. O. Box No. 3409
DUBLIN, IRELAND

DATA COLLECTION

- To conduct the research, secondary data is used.
- The required financial data of companies is obtained from :
 - Companies Annual Reports.
 - Publications of State Bank of Pakistan.

International Conference on Intellectual Capital Management ICM2009

INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 2809
Dhahran, Saudi

ANALYSIS OF THE DATA

The econometric equation for **regression** is as follows:

$$\text{Leverage} = \beta + \beta_1(\text{Size of firm}) + \beta_2(\text{Cost of Equity}) + \beta_3(\text{Cost of Debt}) + \beta_4(\text{Retained Earnings}) + \mu$$

***Regression has been applied to the data and results are as follows.

* Source Shah & Hijazi 2001

International Conference on Intellectual Capital Management ICM2009

INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 2809
Dhahran, Saudi

Hypothesis

- H0: Retained earning does not affect leverage.
- H1: A firm with higher percentage of retained earnings will have higher debt ratio
- H0: Size have no effect on leverage
- H2: There is negative relationship between size and leverage of the firm.
- H0: Equity has no effect on leverage.
- H3: Firms with higher equity will have leverage.
- H0: Cost of Debt has no effect on leverage.
- H4: Cost of debt does has effect on leverage.

International Conference on Intellectual Capital Management ICM2009

INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 2809
Dhahran, Saudi

•Results

International Conference on Intellectual Capital Management ICM2009

INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 1045
DUBLIN, IRELAND

Conclusion

- Two out of four variables are significantly related to leverage ratio whereas the remaining two variables are not statistically significant in having relationship with the leverage.
- Size, measured by gross sale, has a negative coefficient but is insignificant. It means that firms in the sample do not consider their sizes as an active variable in deciding the leverage level.
- Cost of equity variable is significant at 100% level and is positively related to leverage.
- Results indicate that retained earning variable is highly significant and is negatively related to leverage.
- Our results prove that creditors do not look too much towards the retained earnings of the firm rather they prefer the security of the fixed assets.

International Conference on Intellectual Capital Management ICM2009

INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 1045
DUBLIN, IRELAND

References

Some of the articles referred are as follows:

- Booth, L., V. Aivazian, A. Demirguc-Kunt, and V. Maksimovic, 2001, "Capital structures in developing countries," *Journal of Finance* Vol. 56, 87-130
- Chang, C., 1993, "Payout Policy, Capital Structure, and Compensation Contracts when Managers Value Control," *Review of Financial Studies*, 6, 911-933
- Jensen, M. & Meckling, W., (1976) *Theory of the firm: Managerial behavior, agency costs and capital structure*. *Journal of Financial Economics*, 3, 305-360
- Modigliani, F. and Miller, M.H. 1958, "The cost of capital, corporation finance and the theory of investment," *American Economic Review*, Vol.48, pp. 261
- Rajan, R. and Zingales, L. 1995, "What do we know about capital structure? Some evidence from international data". *Journal of Finance*, Vol. 50, pp. 1421- 1460
- Shah, A. and T. Hijazi, 2004, "The determinants of capital structure of stock exchange-listed non-financial firms in Pakistan," *Pakistan Development Review*, Vol. 43, pp 605-618

International Conference on Intellectual Capital Management ICM2009

INSTITUTE FOR ADVANCED STUDIES IN BASIC SCIENCES
P.O. Box 1045
DUBLIN, IRELAND

• THANK YOU
