

**THE DETERMINANTS OF CAPITAL STRUCTURE: A STUDY OF
JORDANIAN INDUSTRIAL CORPORATIONS**

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**UNIVERSITI UTARA MALAYSIA
2008**

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**THE DETERMINANTS OF CAPITAL STRUCTURE: A STUDY OF
JORDANIAN INDUSTRIAL CORPORATIONS**

A thesis submitted to the College of Business in partial
fulfillment of the requirements for the
Degree Master of Science (Banking)
Universiti Utara Malaysia

By

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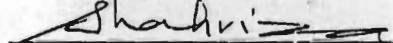
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ABSTRACT

The research in the area of capital structure in the emerging markets like Jordan and Malaysia has only recently appeared. Tradition factors such as profitability, tangible assets share, the company size, taxes and growth opportunities were shown to influence the capital structure of firms. Apart from traditional factors, the researchers also revealed the influence of specific factors such as an analysis of the Hungarian companies has shown that companies whose main shareholder is the state or those in the industrial sector of the economy, have a bidder share of debt.

Thus, this study provides the determinants of Jordanian Industrial firms' capital structure since Jordanian capital market is undergoing a comprehensive capital market reforming policy since 1978. Market capitalization of subscribed share is currently around JD 37.5 billion, to around JD 286 million in 1978. Listed companies rose from 66 in 1978 to 260 in 2008. The findings of this study suggest that the firm size, liquidity, profitability and growth of the Jordanian companies exert significant effect on the capital structure choice. Firm size has been found to be a factor in determining capital structure (Scott and Martin, 1976; Ferri and Jones, 1979; Booth et al., 2001). In a study of factors influencing capital structure of the company, Rajan and Zingales (1995) reported that an increased debt ratio is associated with firm size. The large firm hold more diversified portfolio and have better access to credit markets, thus able to support more debt than small firms.

Key Words: Capital structure, Jordanian industrial companies, determinants.

ACKNOWLEDGEMENT

In the Name of Allah, the Most Gracious, the Most Merciful, I would like to convey my utmost gratitude to the Universiti Utara Malaysia (UUM) for giving me an opportunity to further my studies in my desired area. Special appreciation and deepest gratitude to my supervisor, Madam Hajah Shahriza Binti Osman, for being an ideal thesis supervisor, for her guidance and suggestions which kept my study in the right direction, and for her insightful criticisms and encouragement which gives a great explanation on how to write and prepared a good report, without Madam Shahriza, I am surely cannot finished this project on time. To all individuals that has been made this thesis possible. May Allah S.W.T bless all of you.

This thesis is dedicated to my father's soul, who inspired me and taught me all good morals and values. May his soul rest in peace. It is also dedicated to my mother, who offered me unconditional love and support throughout all the challenges encountered. I would also like to convey my heartfelt gratitude to my beloved family, for their love, patience, and for supporting me through all the challenges encountered.

I am also very grateful to my friend Ayman Ahmad Abo Haija, who backed me up to overcome all obstacles I faced and for being supportive.

Last but not least, I am grateful to Allah S. W.T for giving me the faith, will and strength to complete this study.

To each of the above, I express my deepest appreciation.

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LIST OF ABREVIATIONS

M&M	Modigliani and Miller's Theory
ASE	Amman Stock Exchange
SDC	Securities Depository Center
JSC	Jordan Securities Commission
vs	versus
e.g	example
H_0	Null hypothesis
H_1	Alternative hypothesis
LEV/Y	Leverage
S	Size
PROFIT/PG	Profitability
GROWTH/GR	Growth Rate
LG	Liquidity
R^2	R-square
S.D/Std.Dev	Standard Deviation
Prob	Probability
Var.	Variable
et al.	With friends
F	One-way ANOVA

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

There were voluminous researches on the analysis of the companies' choice in the determinants of the debt to equity ratios have been carried out on emerging markets by capital structure researchers. These studies created lot of interest today because of the lasting substantial capital market institutions differences, and the factors on investment risk that differ from those of countries with develop market economies. So, the questions of evaluating the degrees of influence similar determinants have on the long term financial development of companies operating in different structures of the capital market is being posted. Beside there different structures in capital market, the traditional and specific factors were affect capital structure decision were highlighted. The traditional factors include profitability, taxes, tangible assets, growth opportunities and the specific factors include ownership of companies which have bigger share of debt. There are substantive issues when assessing the role of capital structure and its potential contribution in maximizing company value on the emerging markets. Thus, this study would provide evidence on the determinants capital structure, that is the choice of debt to equity of Jordanian industrial firms.

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REFERENCES

Abubakr Saeed. (2007). The determinants of capital structure in energy sector: A study of Pakistani listed firms. Thesis in business administration.
<http://www.bth.se/fou/cuppsats.pdf>

Aktham Maghyereh. (2005). Dynamic Capital Structure: Evidence from the small developing country of Jordan. *Journal of Economic and Management*, 13(1): 13-30

Altman, E. (1984). A further empirical investigation of the bankruptcy cost questions. *The Journal of Finance*, 39: 1067-1089.

Altman, E. (2002). *Bankruptcy, credit risk and high yield junk bonds*. Blackwell Oxford.

Ang, J. C. & McConnell, J. (1982). The administrative costs of corporate bankruptcy: A note. *Journal of Finance*, 43: 1-21.

Baral, K. J. (1996). *Capital structure and cost of capital in public sector enterprises in Nepal*. Ph.D Thesis: Delhi University.

Baral, K. J. (2004). Determinants of capital structure: A case study of listed companies of Nepal. *The journal of Nepalese Business Studies*, 1(1): 1-13.

Barker, A. N. & Stein, G. P. (2000). Corporate financial structure and managerial incentives. *The economics of information and uncertainty*, University of Chicago Press: Chicago.

Baxter, N. (1967). Leverage, risk and ruin and the cost of capital. *The Journal of Finance*, 22: 395-403

Bevan, A. & Dunbott, J. (2002). Capital structure and its determinants in the UK: A decompositional analysis. *Applied Financial Economics*, 12: 159-170.

Boateng, A. (1998). Deeterminants of capital structure: Evidence from international joint ventures in Ghana. *International Journal of Social economics*, 31(1/2): 56-66.

Booth, L., Airazian, V., Demivguia-kunt, A. & Maksimovic, V. (2001). Capital structures in developing countries. *The Journal of Finance*, 87-130.

Bos, T. & Fetherston, T. A. (1993). Capital structure practices on the pacific rim. *Research in International Business and Finance*, 10: 53-66.

Bradley, M., Jarrell, G. A. & Kim, E. H. (1984). On the existence of an optimal capital structure: Theory and evidence. *Journal of Finance*, 39: 857-877.

Brigham, E. F. (2003). *Corporate finance: A focused approach*. South Weston Printes: Ohio USA.

Buferna, F., Bangassa, K. & Hodgkinson, L. (2005). *Determinants of capital structure: Evidence from Libya*. Research Paper Series, University of Liverpool.

Chaplinsky, S. & Niehaus, G. (1990). *The determinants of inside ownership and leverage*. Working paper, University of Michigan.

Chiarella, C., Pham, T., Sim, A. B. & Tan, M. (1991). Determinants of corporate capital structure: Australian evidence. Working paper. <http://www.business.uts.edu>.

Chung, K. H. (1993). Asset characteristics and corporate debt policy: An empirical test. *Journal of Business Finance and Accounting*, 20: 83-98.

Drobetz, W. & Fix, R. (2003). What are the determinants of the capital structure? Some evidence for Switzerland. Working Paper, Department of Finance.

Faizah Ismail. (2000). Relationship between role and debt and capital structure decision: A study on corporate borrowing of Malaysian firms. Ph.D proposal, Universiti Utara Malaysia.

Fama, C. P. & French, O. (2002). Corporate financial structure and managerial incentives. *The economics of information and uncertainty*, University of Chicago Press: Chicago.

Freider, L. & Martell, R. (2006). Capital structure and equity liquidity: A bi-directional relationship. <http://www.mgmt.purdue.edu>

Friend, I. & Hosbrouck, J. (1988). Determinants of capital structure. *Research in Finance*, 7: 1-19.

Friend, I. & Lang, H. P. (1988). An empirical test of the impact of managerial self-interest on corporate capital structure. *Journal of Finance*, 43: 271-281.

Frank, M. Z. & Goyal, V. K. (2004). Capital structure decision: Which factors are reliably important? <http://mba.tuck.dartmouth.edu>

Kursher, A. & Strebulaev, I. A. (2005). Firm size and capital structure. <http://www.vgsf.ac.at/activities/strebulaer.pdf>.

Glen, J. & Pinto, B. (1994). *Debt or equity? How firms in developing countries choose*. IFC Discussion Paper, 22: 1-16.

Graham, R. J. & Harvey, C. R. (2001). The theory and practice of corporate finance: Evidence from the field. *Journal of Financial Economics*, 60: 187-243.

Gujarati, D. N. (1992). *Essentials of Econometrics*. New York: Mc Graw-Hill, Inc.

Hamada, R. S. (1969). The effect of the firm's capital structure on the systematic risk of common stock. *Journal of Finance*, 27: 435-452.

Harris, M. & Raviv, A. (1990). Capital structure and the informational role of debt. *Journal of Finance*, 37: 219-226.

Harris, M. & Raviv, A. (1991). The theory of capital structure. *Journal of Finance*, 46: 297-356.

Jensen, M. C. & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3: 305-360.

Kester, W.C. (1986). Capital and ownership structure: A comparison of United States and Japanese manufacturing corporations. *Financial Management*, 15: 5-16.

Kim, W. & Sorensen, E. (1986). Evidence on the impact of the agency costs of debt on corporate debt policy. *Journal of Financial and Quantitative Analysis*, 21: 131-144.

Lee, C. K. & Kwok, C. C. Y. (1998). Multinational corporations vs domestic corporations: International environmental factors and determinants of capital structure. *Journal of International Business Studies*, 195-217.

Lipson, J. J. & Mortal, H. S. (2006). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, 27: 595-612.

Martin, J. D. et al. (1988). *The theory of finance: Evidence and application*. Chicago, The Dryden Press.

Modigliani, M. & Miller, M. (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review*, 48: 261-297.

Modigliani, M. & Miller, M. (1963). Corporate income taxes and the cost of capital: A correction. *American Economic Review*, 53: 443-453.

Myers, S. C. (1984). The capital structure puzzle. *Journal of Finance*, 39: 575-592.

Myers, J. L. & Well, A. D. (1991). *Research design and statistical analysis*. New York: Harper Collins Publishers.

Nurwati Ashikkin Ahmad Zaluki., Nur Adiana Hiau Abdullah., Shamharir Abidin., Hassan Ali. & Shamsul Bahrain Mohd Arshad. (2002). *The determinants of capital structure for Malaysian Main Board listed companies during period 1995-2000*. School of Finance, Universiti Utara Malaysia.

Ooi, J. (1999). The determinants of capital structure: Evidence in UK property companies. *Journal of Property Investment and Finance*, 17(5): 464-480.

Rajan, R. G. & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *Journal of Finance*, 50: 1421-1460.

Remmers, L., Toy, N., Stonehill, A., Wright, R. & Beckhuisen, T. (1974). Industry and size as a debt ratio determinants in manufacturing internationally. *Financial Management*, 3: 435-452.

Rhee, G., Chang, R. & Koreas, R. (1985). The currency of denomination decision for debt financing. *Journal of International Business Studies*, 16: 145-150.

Shapiro, A. (1984). An intergrated approach to corporate risk management. *Mindland Corporate Finance Journal*, 3: 41-56.

Sharpe, L. & Pooley, G. (1990). *Asymmetric information, adjustment costs and capital structure of Australian finance companies*. Working paper, School of Banking and Finance, University of New South Wales.

Stiglitz, J. (1974). On irrelevance of corporate financial policy. *American Economic Review*, 851-866.

Tabachnick, B. and L. S. Fidell (2007). Using multivariate statistics. New Yourk, HarperCollines.

Titman, S. & Wessels, R. (1988). The determinants of capital structure choice. *Journal of Finance*, 43: 321-226.

Pallant, J. (2001). SPSS Survival Manual. Austaralia, Allen&Unwin.

Vasiliou, D., Eriotis, N. & Daskalakis, N. (2000). The determinants of capital structure: Evidence from the Greek market. <http://www.aislab.aeub.gr/hfaa/ar/Vasiliou.doc>

Warner, J. (1977). Bankruptcy costs: Some evidence. *Journal of Finance*, 32: 337-347.

Weston et al., (2005). Perquisites, risk and capital structure. *Journal of Finance*, 42: 29-49.

Wiwattanakantang, Y. (1999). An empirical study on the determinants of the capital structure of Thai firms. *Pacific-Basin Finance Journal*, 7: 371-403.