

**CAPITAL STRUCTURE DETERMINANTS OF MALAYSIAN
PUBLIC LISTED REAL ESTATE COMPANIES (2007-2009)**

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MASTER OF SCIENCE (FINANCE)

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PUBLIC LISTED REAL ESTATE COMPANIES (2007-2009)**

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ABSTRACT

Examining capital structure determinants of seventy two publicly-listed Malaysian real estate firms during 2007-2009, this study clarifies the impact of the sub-mortgage loan crisis on the capital structure of the sampled firms, and establishes which theory, Trade-off Theory (TOT), or Pecking Order Theory (POT), that explains financing behavior by the firms. The capital structure determinants tested are size, profitability, tangibility, non-debt tax shields (NDTS), growth, liquidity, business risk (BR) and effective tax rate (ETR). Three debt ratios, namely, short-term debt ratio (STDR), long-term debt ratio (LTDR) and total debt ratio (TDR), are proxies for capital structure. Findings indicate that size and profitability affect debt ratios positively, NDTS and liquidity affect the debt ratios negatively, tangibility affects STDR and TDR positively and LTDR negatively, growth affects STDR and TDR negatively and LTDR positively, while ETR affects LTDR and TDR positively and STDR negatively. Inconsistent with almost all previous studies, and unsupported by both the TOT and POT, business risk positively affects STDR and LTDR, and has a significant positive relationship with TDR. The results also show that the debt levels of these firms declined during the sub-mortgage loans crisis. Finally, the results suggest that both theories (TOT and POT) explain the financing behavior of the sampled firms, though, when taking into account the decline in the debt levels, POT seems to explain the financing behavior of the firms better than TOT.

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LIST OF ACRONYMS

BR	Business risk
DVs	Dependent variables
ETR	Effective tax rate
GROWTH	Growth opportunities
IVs	Independent variables
LIQ	Liquidity
LTDR	Long-term debt ratio
NDTS	None-debt tax shields
POR	Pecking Order Theory
PROF	Profitability
SIZE	Firm size
STDR	Short-term debt ratio
TANG	Tangibility
TDR	Total debt ratio
WACC	Weighted average cost of capital

CHAPTER ONE: BACKGROUND OF THE STUDY

1.1 Introduction and Background of the Study

Capital is the main engine, as it were, for the companies' processes; without capital there will be neither operations nor productivity. One can liken capital to the blood that runs in the veins to give life to the body. Capital gives the day-to-day life for companies and enables companies to seek sustainability. It is very axiomatic that without capital there will be no companies. Capital can be provided through two major sources: one is the equity and the other one is the debt. These two resources make up the liabilities side in the balance sheet. Unlike debt, equity comes through selling ownership rights whether common or preferred stocks, whilst debt is just a contractual agreement by which companies borrow a specific amount of money. Such contractual agreements specify clearly that the borrowed amounts represent obligations on companies and these amounts should be repaid with interests within a stipulated time frame. These two sources enable companies to generate the required funds for their production operations and investing activities. The combination between these two components forms the so-called the capital structure.

It is very important before going further in this topic to put forward some definitions to gain a better understanding about capital structure. Indeed, there are a lot of definitions that have been put forward to clarify the meaning of capital

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REFERENCES

- Abor, J. (2005), "The Effect of Capital Structure on Profitability: An Empirical Analysis of Listed Firms in Ghana", *The Journal of Risk Finance*, Vol. 6 No. 5, Pp. 438-445. Emerald Group Publishing Limited 1526-5943.
- Al-Ajmi, J., A-Hussain, H. And Al-Saleh, N. (2009), "Decisions on Capital Structure in a Zakat Environment with Prohibition of Riba: The Case of Saudi Arabia", *The Journal of Risk Finance*, Vol. 10 No. 5, Pp. 460-476, Emerald Group Publishing Limited, 1526-5943.
- Al-Najjar, B. And Taylor, P. (2008), "The Relationship between Capital Structure and Ownership Structure: New Evidence from Jordanian Panel Data", *Managerial Finance*, Vol. 34 No. 12, Pp. 919-933. Emerald Group Publishing Limited 0307-4358.
- Booth, L., Aivazian, V., Demirguc-Kunt, A. and Maksimovic, V. (2001), "Capital Structure in Developing Countries", *Journal of Finance*, Vol. 56 No. 1, Pp. 87-130.
- Brealey, R. A., and Myers, S. C. (1991). *Principles of Corporate Finance* (4th ed).
- Brealey, R. A., and Myers, S. C. (2003), "Principles of Corporate Finance", McGraw-Hill, New York, NY.
- Chakraborty, I. (2010), "Capital Structure in an Emerging Stock Market: The Case of India", *Research in International Business and Finance*. 24, pp. 295-314.
- Changa, C., Alice C. Lee, A. C. and Lee, C. F. (2009), "Determinants of Capital Structure Choice: A Structural Equation Modeling Approach", *The Quarterly Review of Economics and Finance* 49, pp. 197-213.
- Chen, J. J. (2003), "Determinants of Capital Structure of Chinese-Listed Companies", *Journal of Business Research* 57, pp. 1341-1351.
- Cotei, C. and Farhat, J. (2009), "The Trade-Off Theory and the Pecking Order Theory: Are they Mutually Exclusive?", *North American Journal of Finance and Banking Research* Vol. 3. No. 3. 2009.
- DeAngelo, H. and Masulis, R.W. (1980), "Optimal Capital Structure under Corporate and Personal Taxation", *Journal of Financial Economics*, Vol. 8 No. 1, pp. 3-29.
- Delcours, N. (2007), "The Determinants of Capital Structure in Transitional Economies", *International Review of Economics and Finance* 16, pp. 400-415.

- Eriotis, N. (2007), "How Firm Characteristics Affect Capital Structure: An Empirical Study", *Managerial Finance*, Vol. 33 No. 5, pp. 321-33. Emerald Group Publishing Limited 0307-4358.
- Fattouh, B., Scaramozzino, P. and Harris, L. (2003), "Capital Structure in South Korea: A Quantile Regression Approach", *Journal of Development Economics*. 76, pp. 231–250.
- Fraser, D. R., Zhang, H. Derashid, C. (2006), "Capital Structure and Political Patronage: The Case of Malaysia", *Journal of Banking & Finance* 30, pp. 1291–1308.
- Haugen, R.A and Senbet, L.W. (1988). "Corporate Finance and Taxes: A Review", *Financial Management*. 15. 5-22.
- Hirota, S. (1999), "Are Corporate Financing Decisions Different in Japan? An Empirical Study on Capital Structure", *Journal of the Japanese and International Economies* 13, pp. 201–229.
- Huang, G. and Song, F. M. (2005), "The Determinants of Capital Structure: Evidence from China", *China Economic Review* 17, pp. 14– 36.
- Huat, T. Y. (2008), "Managed Float Regime and Capital Structure Determinants: Evidence from Malaysia", Faculty of Business and Accountancy University of Malaya.
- Jensen, M.C. and Meckling, H.W. (1976), "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure", *Journal of Financial Management*, Vol. 3 No. 4, pp. 305-60.
- Jensen, M.C. (1986), "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers", *The American Economic Review*, Vol. 76, No. 2, pp. 323-329.
- Jiang, H. (2005), "The Determinants of Financial Structure: Evidence from Chinese Listed Hospitality Companies", *University of Nevada, Las Vegas*, May 2008.
- Jong, A. D., Kabir, R, and Nguyen, T. T. (2008), "Capital Structure around the World: The Roles of Firm- and Country-Specific Determinants", *Journal of Banking & Finance* 32, pp. 1954–1969.
- Karadeniz, E., Kandir, S.Y., Balcilar, M. and Onal, Y.B. (2008), "Determinants of Capital Structure: Evidence from Turkish Lodging Companies", *International Journal of Contemporary Hospitality Management*, Vol. 21 No. 5, pp. 594-609. Emerald Group Publishing Limited 0959-6119.
- Kjellman, A., Hansen, S. (1995), "Determinants of Capital Structure: Theory vs. Practice", *Scandinavian Journal of Management*, Vol. 11, No. 2, pp. 91-102.

- Korajczyk, R. A. and Levy, A. (2003), "Capital Structure Choice: Macro Economic Conditions and Financial Constraints", *Journal of Financial Economics* 68, pp. 75–109.
- Miller, M.H. (1977), "Debt and Taxes", *Journal of Finance* 32, 261-276.
- Modigliani, F. and Miller, M.H. (1958), "The Cost of Capital, Corporation Finance and the Theory of Investment", *The American Economic Review*, Vol. 48 No. 3, pp. 261-97.
- Modigliani, F. and Miller, M. (1963), "Corporate Income Taxes and the Cost of Capital – A Correction", *American Economic Review*, Vol. 53 No. 3, pp. 433-43.
- Myers, S.C. (1977), "Determinants of Corporate Borrowing", *Journal of Financial Economics*, Vol. 5 No. 2, pp. 147-75.
- Myers, S.C. (1984), "The Capital Structure Puzzle", *Journal of Finance* 39, 575-592.
- Myers, S.C. and Majluf, N.S. (1984), "Corporate Financing and Investment Decisions when Firms Have Information That Investors Do Not Have", *Journal of Financial Economics*, Vol. 13 No. 2, pp. 187-221.
- Myers, S.C. (2001), "Capital Structure", *Journal of Economic Perspectives*, Vol. 15 No. 2, pp. 81-102.
- Qian, Y. Tian, Y. and Wirjanto, T. S. (2009), "Do Chinese Publicly Listed Companies Adjust their Capital Structure toward a Target Level?", *China Economic Review* 20, pp. 662–676.
- Rajan, R.G. and Zingales, L., (1995), "What Do we Know about Capital Structure?: Some Evidence from International Data," *Journal of Finance*, Vol. 50, 1421-1460.
- Schlosser, M. (1989), "Corporate Finance - a Model-Building Approach", 1st ed.
- Teck, H. T. (2008), "Determinants of Homeownership in Malaysia", *Habitat International* 32, pp. 318–335.
- Upneja, A. and Dalbor, M. (1999), "An Examination of Leasing Policy, Tax Rates and Financial Stability in the Restaurant Industry", *Journal of Hospitality & Tourism Research*, Vol. 23 No. 1, pp. 85-99.
- Viviani, J. L. (2005), "Capital Structure Determinants: An Empirical Study of French Companies in the Wine Industry", *International Journal of Wine Business Research*. Vol. 20 No. 2, pp. 171-194. Emerald Group Publishing Limited 1751-1062.

Wiwattanakantang, Y. (1999), "An Empirical Study on the Determinants of the Capital Structure of Thai Firms", *Pacific-Basin Finance Journal* 7, pp. 371–403.

Yanga, C-C., Leeb, C-F., Guc, Y-X. and Lee, Y-W. (2009), "Co-Determination of Capital Structure and Stock Returns—A LISREL Approach: An Empirical Test of Taiwan Stock Markets", *The Quarterly Review of Economics and Finance* 50, pp. 222–233.

<http://en.wikipedia.org/wiki/Multicollinearity>

http://www.klse.com.my/website/bm/listed_companies/list_of_companies/main_market.html