

**CAPITAL STRUCTURE DETERMINANTS:  
EMPIRICAL RESEARCH ON  
CONSTRUCTION FIRMS IN MALAYSIA**

**BY**

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**MASTER OF SCIENCE (FINANCE)  
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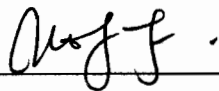
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**CAPITAL STRUCTURE DETERMINANTS:  
EMPIRICAL RESEARCH ON  
CONSTRUCTION FIRMS IN MALAYSIA**

A dissertation submitted to the Faculty of Finance And Banking in partial  
fulfillment of the requirement for the degree  
Master of Science (Finance);  
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## **ABSTRAK**

Kajian ini dilaksanakan untuk mengenalpasti akan penentu-penentu struktur modal firma-firma pembinaan di Malaysia. Kajian ini dilaksanakan untuk menentukan hubungan dan tahap signifikan factor-faktor tersebut di dalam menentukan penstrukturan modal, termasuklah saiz firma, keberuntungan, jenis asset (kebolehnampakkan asset), cukai terlindung tanpa hutang, kecairan, peluang pertumbuhan dan cukai kena bayar di mana ianya melibatkan penggunaan dua bentuk pengukuran iaitu leveraj pasaran dan leveraj nilai buku dan bagaimana hasil kajian ini dapat dihubungkan dengan teori penstrukturan modal yang boleh diterimapakai oleh industri pembinaan di Malaysia.

Hasil kajian ini telah menunjukkan bahawa tahap kecairan dan peluang pertumbuhan memberi kesan signifikan yang negatif di dalam menentukan penstrukturan modal di kalangan industri pembinaan di Malaysia selaras dengan teori Pecking Order.

## **ABSTRACT**

This research is undertaken to identify the capital structure determinants of the construction firms in Malaysia. The research is carried out to ascertain the inter-relationships and the degree of significance between these seven factors which determine the selection of capital structure, i.e. size, profitability, nature of assets (tangibility), non-debt tax shields, liquidity, growth opportunities and tax charge, which incorporates both leverage measures, constituting market leverage ratio level and the book leverage ratio level to relate on which capital structure theory is more applicable to the construction industry players in Malaysia. The outcome of the findings demonstrated that liquidity and growth opportunities are highly negatively significant in determining the capital structure choice of the construction firms in Malaysia, in consistent with the Pecking Order Theory.

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## DEDICATION

This dissertation is dedicated to my beloved mother, Hajjah Zainap Abdullah, my siblings, and my godfather, Jamal Bin Mohayat for their encouragements, concerns, moral support, love and care that makes me fully understood what life takes and able to achieve what seems impossible.

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## LIST OF ABBREVIATIONS AND SYMBOLS

ADB	Asian Development Bank
BLVG	Book Leverage
BNM	Bank Negara Malaysia
CFO	chief financial officer
CIDB	Construction Industry Development Board
CIMP	Construction Industry Malaysia Plan
DTOT	Dynamic Trade-Off Theory
EPS	Earnings Per Share
ECER	East Corridor Economic Region
EPU	Economic Planning Unit
etc.	Escetra
GDP	Gross Domestic Product
GROW	Growth Opportunities
IRD	Iskandar Regional Development
KLSE	Kuala Lumpur Stock Exchange
MARC	Malaysian Rating Corporation Berhad
MARKET CAP.	Market Capitalization
MBAM	Master Builders Association Malaysia
MLVG	Market Leverage
MP	Malaysia Plan
MOF	Ministry Of Finance
NCER	North Corridor Economic Region
NDTS	Non-Debt Tax Shields
NI	Net Income
NFPE	Non-Financial Public Enterprise
NPL	Non-Performing Loans
NPV	Net Present Value
OT	Optimization Theory
PBT	Profit Before Tax
POT	Pecking Order Theory
PPP	Public-private partnerships
PROF	Profitability
RAM	RAM Holdings Berhad
REHDA	Real Estate And Housing Development Association
ROE	Return On Equity
ROI	Return On Investment
RM	Ringgit Malaysia
SDC	Sabah Development Corridor
SCORE	Sarawak Corridor Of Renewable Energy
SPSS	Statistical Package For The Social Science
TANG	Tangibility
TAX	Tax Charge
TOT	Trade-Off Theory
UK	United Kingdom
UNDP	United Nation Development Programme
US	United States

## **CHAPTER 1: INTRODUCTION**

### **1.0 Chapter Overview**

This chapter represents the introduction and overview of the research which generally highlights the issue of capital structure globally and in general. The capital structure determinants are the important factors which motivate the individuals or parties involved in financing decision of a firm, on the composition of debt to equity. For the construction industry, the capital structure remains to be the fundamental financial decision making issue as the industry is regarded as a very sensitive industry which reacts adversely to the unfavorable changes in the business environment and other sectors of the economy.

This chapter is divided into seven sections. Section 1.1 explains on the background or overview of the topic, section 1.2 explains on the problem statements, section 1.3 explains on the research objectives, section 1.4 explains on the scope and limitations of the research. Section 1.5 explains on the research significance, section 1.6 explains on the organization of the research, whereas section 1.7 ends with the chapter summary.

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## REFERENCES

- Acharya, V.V., Sundaram, R.K. and John, K., 'On the Capital-structure implications of Bankruptcy Codes', *Research Paper*, pp. 1-37, London Business School and Stern School Of Business New York.
- Adnan, H. and Jusoff, K., (2009), 'Corporate Management Structure of Large Malaysian Construction Companies', *Journal of Management Research*, Vol. 1, No. 1, pp. 1-11, Macrothink Institute.
- Adnan, H. and Morledge, R., (2003), 'Joint Venture Projects In Malaysian Construction Industry Factors Critical To Success', *ARCOM Conference Paper*, Vol. 2, pp. 765-774, Association Of Research In Construction Management.
- Ahmad, H., Mohd Daud, S.N., Mazlan, A.R. and Marzuki, A., (2008), 'Macroeconomic Determinants of Corporate Failures in Malaysia', *International Journal of Business and Management*, pp. 33-10
- Ali Ahmed, H.J. and Hisham, N., (2009), 'Revisiting Capital Structure Theory: A Test of Pecking Order and Static Order Trade-Off Model from Malaysian Capital Market', *International Research Journal of Finance and Economics*, Vol. 30, pp. 58-65, EuroJournals Publishing Inc.
- Al-Khallaq, K. and Mohamed, S., (2006), 'Causes Of Contractors' Business Failure In Developing Countries: The Case Of Palestine', *Journal Of Construction In Developing Countries*, Vol. 11, No. 2, pp. 1-13, University Of Science Malaysia.
- Aggarwal, R. and Kyaw, N.N.A., (2006), 'International Variations in Transparency and Capital Structure: Evidence from European Firms', *Research Paper*, pp. 33-53, University of Thornton.
- Al-Najjar, B. and Taylor, P., (2008), 'The Relationship Between Capital Structure And Ownership Structure, New Evidence From Jordanian Panel Data', *Journal Of Managerial Finance*, Vol. 34, No. 12, 2008, pp 919-933, University Of The West Of England, Emerald Group Publishing Limited.
- Anderson, R.C., Byers, S.S. and Groth, J.C., (2000), 'The Cost Of Capital For Projects: Conceptual And Practical Issues', *Journal Of Management Decision*, Vol. 38, No. 6, pp. 384-393, American University, Washington DC, Idaho State University and Texas A&M University, USA, MCB University Press.
- Antoniou, A., Guney, Y. and Paudyal, K., (2008), 'The Determinants Of Corporate Debt Ownership Structure, Evidence From Market-Based and Bank-Based Economies', *Journal Of Managerial Finance*, Vol. 34, No. 12,

pp. 821-847, FRC Consulting, University Of Hull and University of Durham, Emerald Group Publishing Limited.

Baral, K.J., (2004), 'Determinants of Capital Structure: A Case Study of Listed Companies Of Nepal', *The Journal of Nepalese Business Studies*, Vol. 1, No. 1, pp. 1-13.

Barclay, M.J., Heitzman, S. and Smith, C.W., (2008), 'Debt and Taxes: Evidence from REITs', *Research Paper*, pp. 1-33, University of Rochester.

Barclay, M.J., Smith, C.W., (2005), 'The Capital Structure Puzzle: The Evidence Revisited', *Journal Of Applied Corporate Finance*, Vol. 17, No. 1, Morgan Stanley Publication.

Baum, C.F., Stephan, A. and Talvera, O., (2007), 'The effects of uncertainty on leverage of non-financial firms', *Research Paper*, pp. 1-26, Boston College & DIW Berlin.

Becker, B. and Stromberg, P., (2009), 'Equity-Debtholder Conflicts and Capital Structure', *Research Paper*, pp. 1-26, Stockholm Institute Of Financial Research.

Berk, J. and DeMarzo, P., (2007), 'Corporate Finance', *Book*, pp. 427-623, Prentice Hall.

Bevan, A.A. and Danbolt, J., (2002), 'Capital Structure and its determinants in the United Kingdom – a decompositional analysis', *Journal of Applied Financial Economics*, Vol. 12, No. 3. pp. 159-170, Glasgow eprints.

Boateng, A., (2004). 'Determinants Of Capital Structure, Evidence From International Joint Ventures In Ghana', *International Journal Of Social Economics*, Vol. 31, No. 1 / 2, 2004, pp. 56-66, Leeds Metropolitan University UK, Emerald Group Publishing Limited.

Bokpin, A.G. and Arco, A.C., (2009), 'Ownership Structure, Corporate Governance and Capital Structure Decisions of Firms, Empirical Evidence From Ghana', *International Journal Of Social Economics*, Vol. 26, No. 4, pp. 246-256, University of Ghana, Emerald Group Publishing Limited.

Brave, O., (2007), 'Access To Capital, Capital Structure, and the Funding of the Firm', *PhD Dissertation*, Wharton Business School, pp. 1-68, online publication.

Brigham, E.F. and Ehrharda, M.C., (2005), 'Financial Management: Theory and Practice', *Book*, 11<sup>th</sup> Edition, pp. 546-604, South Western Cengage Learning.



- Brounen, D. and Eichholtz, P.M.A., (2001), 'Capital Structure Theory Evidence from European Property Companies' Capital Offerings, *Journal Of Real Estate Economics*, Vol. 21, No. 4, pp. 615-632, University of Amsterdam.
- Budiwibowo, A., Trigunaryah, B., Abidin, I.S. and Soeparto, H.G., (2009), 'Competitiveness of the Indonesian Construction Industry', *Journal Of Construction In Developing Countries*, Vol. 14, No. 1, Science University Of Malaysia Publication.
- Buferna, F., Bangassa, K., Hodgkinson, L., (2005), 'Determinants of Capital Structure: Evidence From Libya, *Research Paper Series*, pp. 1-31, University Of Leeds, Liverpool, UK.
- Chen, L.H. and Jiang, G.J., (2001), 'The Determinants of Dutch Capital Structure Choice', *Research Paper*, pp. 1-25, University Of Groningen and University Of Arizona.
- Chen, J.J., (2003), 'Determinants of capital structure of Chinese -listed companies', *Journal of Business Research*, Vol. 57, pp. 1341-1351, Science Direct.
- Chin, A.F., (1997), 'Relationship Between Capital Structure And Profitability: A Time-Series Cross-Sectional Study On Malaysia Firms', *Master Thesis*, pp. 1-79, University Utara Malaysia.
- CIDB, (2008), 'Malaysia Report', *Country Report & Theme Paper For Asia Construct Conference*, pp. 1-26, CIDB.
- CIDB, (2008), 'Construction Industry Master Plan Malaysia 2006-2015', *Book*, 1<sup>st</sup> Edition, pp.1-80, CIDB.
- CIDB, (2010), 'A Macro-Economic Assessment Of The Construction Industry In Malaysia', *Book*, pp. 1-54, Perpustakaan Negara Malaysia.
- Coleman, A.K., (2007), 'The Impact Of Capital Structure On The Performance of Microfinance Institutions', *The Journal OF Risk Finance*, Vol. 8, No. 1, pp. 56-71 University of Ghana, Emerald Group Publishing Limited.
- Dalbor, M.C. and Ibor A.U., (2001), 'An Examination Of Capital Structure In The Restaurant Industry, *International Journal Of Contemporary Hospitality Management*, Vol. 13, No. 2, pp. 54-59, University Of Pennsylvania and University Of Nevada, MCB University Press.
- Dammon, R. and Senbet, L. (1988), 'The Effect of Taxes and Depreciation on Corporate Investment and Financial Leverage', *Journal of Finance*, Vol. 43, pp. 3-29.

- DeAngelo, H and Masulis, R. (1980), 'Optimal Capital Structure under Corporate and Personal Taxation', *Journal of Financial Economics*, Vol. 8, pp. 3-29.
- De Medeiros, O.R. and Daher, C.E., (2004), 'Testing Static Tradeoff against Pecking Order Models of Capital Structure in Brazilian Firms', pp. 1-15, University Of Brazil.
- Deesomsak, R., Paudyal, K. and Pescetto, G. (2004), 'The Determinants of Capital Structure: Evidence From The Asia Pacific Region', *Journal Of Multinational Financial Management*, Vol. 14, pp. 387-405.
- Desai, M.A. and Dharmapala, D., (2007), 'Corporate Tax Avoidance and Firm Value', *Research Paper*, pp. 1-27, Harvard University, University of Connecticut and University of Michigan.
- Dzolkarnaini, M.N., (2005), 'Capital Control Regime And Capital Structure Determinants: A Malaysian Case', *Malaysian Accounting review*, pp. 1-46, University Of Stirling, Scotland, UK.
- El-Sayed Ebaid, I., (2009), 'The Impact Of Capital-Structure Choice On Firm Performance: Empirical Evidence From Egypt', *The Journal of Risk Finance*, Vol. 10, No. 5, pp. 477-487, Tanta University, Tanta, Egypt, Emerald Group Publishing Limited.
- Economic Planning Unit, Bank Negara Malaysia and Ministry Of Finance websites.
- Eriotis, N.P., Vasiliou, D. and Neokosmidi, Z.V., (2007), 'How Firm Characteristics Affect Capital Structure: An Empirical Study', *Journal Of Managerial Finance*, Vol. 33, No. 5, 2007, pp 321-331, University Of Athens and Athens University Of Economics And Business, Emerald Group Publishing Limited.
- Eriotis, N.P., Frangouli, Z. and Neokosmides, Z.V., (2002), 'Profit Margin And Capital Structure: An Empirical Relationship', *The Journal Of Applied Business Research*, Vol. 18, No. 2, pp. 85-88.
- Faria, A. and Mauro, P., (2004), 'Institutions and the External Capital Structure of Countries', *IMF Working Paper*, WP/04/236, pp. 1-29.
- Frank, M.Z. and Goyal, V.K., (2009), 'Capital Structure Decisions: Which Factors are Reliably Important?' *Journal Of The Financial Management Association International*, Vol. 38, No. 1, pp. 1-38, Wiley-Blackwell Publishing.
- Fraser, D.R., Zhang, H., Derashid, C., (2005), 'Capital structure and political patronage: The case of Malaysia', *Journal Of Banking & Finance*, Vol. 30, pp. 1291-1308, Science Direct.

- Friend, I. and Lang, L., (1988), 'An Empirical Test of the Impact of Managerial Self-interest investment and Financial Leverage', *Journal of Finance*, Vol. 43, pp. 271-281.
- Ghosh, A. and Cai, F., (2004), 'Optimal Capital Structure Vs. Pecking Order Theory: A Further Test', *Journal Of Business & Economics Research*, Vol. 2, No. 8, pp. 61-68.
- Gonenc, H., (2005), 'Comparison of Debt Financing Between International And Domestic Firms, Evidence from Turkey, Germany And UK', *International Journal of Managerial Finance*, Vol. 1, No. 1, pp 49-68, University, Ankara, Turkey.
- Graham, J.R. (2000), 'How Big Are Tax Benefits of Debt?', *The Journal of Finance*, Vol. 55, No. 5, pp. 1901-1941, American Finance Association.
- Groth, J.C. and Anderson, R.C., (1997), 'Capital Structure: Perspectives For Managers', *Journal Of Management Decision*, Vol. 35. No. 7, pp. 552-561, Washington And Lee Univerity, Lexington, USA, MCB University Press.
- Harford, J., Klasa, S., Walcott, N., (2006), 'Do firms have leverage targets? Evidence from acquisitions', *Research Paper*, pp. 1-49, University of Washington and University of Arizona.
- Hasan, Z., (2002), 'The 1997-98 Financial Crisis In Malaysia: Causes, Response, And Results', *Islamic Economic Studies Research Paper*, Vol. 9, No. 2, pp. 1-16.
- Hellwig, M., (2007), 'A Reconsideration of The Jensen-Meckling Model of Outside Finance', *Research On Collective Goods*, pp. 1-58, Institute For Research On Collective Goods, Germany.
- Hijazi, S.T. and Shah, A., (2004), 'The Determinants of Capital Structure in Stock Exchange Listed Non Financial Firms in Pakistan', pp. 1-12, Mohammad Ali Jinnah University Of Islamabad.
- Hol, S., Westgaard, S. and Van der Wijst, N., (2002), 'Capital Structure and the prediction of bankruptcy', *Research Paper*, pp.1-20, Norwegian University Of Sciene and Technology.
- Huizinga, H., Laeven, L. and Ncodeme, G., (2006), 'Capital Structure and International Debt Shifting', *Economic Papers*, pp. 1-40, European Commission.
- Hung, C.Y., Albert, C. and Eddie, H.C.M., (2002), 'Capital Structure and profitability of the property and construction sectors in Hong Kong', *Journal of Property Investment & Finance*, Vol. 20, No. 6, pp. 434-453, MCB UP Limited.

- Ibrahim, M.V. and Barros, C.P., (2008), 'Relevance or Irrelevance of Capital Structure', *Working Paper*, pp. 1-26, Lisbon, School Of Economics And Management.
- IMF, (2009), 'IMF Country Report', *IMF Report*, No. 09/253, pp. 1-60, International Monetary Fund Malaysia.
- Ismail, A.G, Sanusi, N.A. and Bahari, Z., (2003), 'Capital Structure-Based Macroeconomics: Evidence at Firm Level', *Working Paper in Islamic Economics and Finance No. 0403*, pp. 1-11, Universiti Kebangsaan Malaysia.
- Ismail, F., (2006), 'A study of alternative capital structure theories in the Malaysian context', *PhD Thesis*, University of Nottingham.
- Ju, N., Parrino, R., Poteshman, A.M., and Weisbach, M.S., 'Horses and Rabbits? Trade-Off Theory and Optimal Capital Structure', *Journal Of Financial And Quantitative Analysis*, Vo. 40, No.2, pp, 259-281, University Of Washington.
- Lachmann, L.M., (1978), 'Capital and its structure', *Book*, Universal Press Syndicate, pp. 1-129.
- Lau, A.S.L., (2008), 'Securing Financial Resources For Small And Medium Contracting Firms In Malaysia', *Master Thesis*, pp. 1-18, University Of Science Malaysia.
- Lin, J.Y., Sun, X and Jiang, Ye, (2009), 'Toward a Theory of Optimal Financial Structure', *The World Bank Policy Research Working Paper*, WPS 5038, pp. 1-27. The World Bank.
- Lipson, M.L. and Mortal, S., (2008), 'Liquidity and Capital Structure', *Seminar Paper*, pp. 1-43, University of Virginia.
- Liu, L.X., (2005), 'Do firms have target leverage ratios? Evidence from historical market-to-book and past returns', *Research Paper*, pp. 1-68, University Of Rochester.
- Madan, K., (2007), 'An Analysis Of The Debt-Equity Structure of Leading Hotel Chains In India', *International Journal Of Contemporary Hospitality Management*, Vol. 19, No. 5, pp. 397-414, International Management & Technology, Haryana, India, Emerald Group Publishing Limited.
- Maghyereh, A., (2005), 'Dynamic Capital Structure: Evidence From The Small Developing Country of Jordan', *IIUM Journal of Economics and Management*, Vol. 13, No. 1, pp. 1-31, The International Islamic University Malaysia.

- Malmendier, U., Tate, G. and Yan, J., (2009), 'Managerial Beliefs and Corporate Financial Policies', *USC FBE Finance Seminar*, pp. 1-54, University Of Berkeley, University Of California and University of Stanford.
- Manos, R., (2001), 'Capital Structure And Dividend Policy: Evidence From Emerging Markets', *PhD Dissertation*, pp. 1-488 , University Of Birmingham.
- MARC., 'Rating Approach To Construction Companies', *Policy Reference*, pp. 1-11, Malaysian Rating Corporation Berhad.
- Margaritis, D. and Psillaki, M., (2009), 'Capital Structure, equity ownership and firm performance', *Journal Of Economic And Law*, pp. 1-32, University Of Piraeus, New Zealand.
- Mjos, A., (2007), 'Corporate Finance: Capital Structure and Hybrid Capital', *PhD Dissertation*, pp. 1-222, Norwegian School Of Economics.
- Mohamad, M.H. (1995), 'Capital Structure in Malaysian Companies', *Management International Review*, Vol. 35, No. 2, pp. 119-130.
- Mohd Saad, N., (2010), 'Corporate Governance Compliance and the Effects to Capital Structure', *International Journal of Economics and Finance*, Vol. 2, No. 1, pp. 105-114.
- Morri, G. and Cristanziani, F., (2009). 'What Determines The Capital Structure Of Real Estate Companies? An Analysis Of The EPRA/NAREIT Europe Index'. *Journal Of Property Investment And Finance*, Vol. 27, No. 4, pp. 318-372, University Of Milan, Emerald Group Publishing Limited.
- Myers, S.C. and Majluf, N., (1984), 'Corporate Financing and Investment Decisions When Firms Have Information Investors Do Not Have', *Journal of Financial Economics*, Vol. 13, pp. 187-221.
- Nambiar, S., (2003), 'Malaysia's Response To The Financial Crisis: Reconsidering The Viability Of Unorthodox Policy', *Asia Pacific Development Journal*, Vol. 10, No. 1, pp. 1-21.
- Nambiar, S., (2009), 'Malaysia and the Global Crisis: Impact, Response and Rebalancing Strategies', *ADB Working Paper Series*, No. 148, pp. 1-23, Asian Development Bank Institute.
- Naseem Ameer Ali, S.N.A.,(2007), 'One step at a time', *Construction Journal*, pp. 18-21.
- Nagano, M., (2003), 'Determinants of Corporate Capital Structure in East Asia – Are there differences from the Industrialized Countries?', *Working Paper Series*, pp. 1-29, Waseda University Institute of Finance.

- Ooi, J.T.L., (1999). 'The Determinants Of Capital Structure, Evidence On UK Property Companies'. *Journal Of Property Investment And Finance*, Vol. 17, No. 5, pp. 464-480, National University Of Singapore, Singapore, MCB University Press.
- Ooi, J.T.L., (2000), 'Managerial Opportunism And The Capital Structure Decisions Of Property Companies', *Journal of Property Investment & Finance*, Vol. 18, No. 3, 2000, pp. 316-331, University of Singapore, Singapore, MCB University Press.
- Ovtchinnikov, A.V. and McConnell, J.J., (2005) 'Capital Market Imperfections And The Sensitivity Of Investment To Stock Prices', *Research Paper*, pp. 1-49.
- Owusu, M.D. and Badu, E., (2009), 'Determinants of Contractors' capital investment finance strategy in Ghana', *Journal of Financial Management of Property and Construction*, Kwame Nkrumah University of Science Technology, Ghana, Vol. 14, No. 1, pp. 21-33, Emerald Group Publishing Limited.
- Ozkan, A. (2001), 'Determinants of Capital Structure and Adjustment to Long Run Target', *Journal of Business Finance Account*, Vol. 28, pp. 175-198.
- Pandey, M., (2004), 'Capital Structure, Profitability And Market Structure: Evidence From Malaysia', *Asia Pacific Journal Of Economics & Business*, Vol. 8, No. 2, pp. 78-91.
- Pascual, J.L. and Palmeiro, J.M.C., (2009), 'Correcting for Asymmetry of Information and Debt Capacity on Capital Structure Empirical Tests: Evidence from Europe', *Journal of Applied Sciences*, Vo. 9, No. 24, pp. 4183-4194, Asian Network for Scientific Information.
- Panteghini, P.M., (2006), 'The Capital Structure of Multinational Companies Under Tax Competition', *CESIFO Conference Working Paper No. 1721*, pp. 1-41, University Of Brescia, Italy.
- Rajan, R.G. and Zingales, L., (1995), 'What Do We Know about Capital Structure? Some Evidence from International Data,' *The Journal Of Finance*, Vol. L, No. 5, pp. 1421-1460.
- Ross, S.A., Westerfield, R.W., Jaffe, J.F., Jordan, B.D., Abd Samad, R., Abdul Wahab, R. and Christabel, S., (2009), 'Corporate Finance', *Book*, pp. 111-291, McGraw Hill (Malaysia) Sdn Bhd.
- Roy, M. and Adnan, H., (2003), 'Joint Venture Projects In Malaysian Construction Industry Factors Critical To Success', *ARCOM Research Paper*, Vol. 2, pp. 765-774, Association of Researchers in Construction Management.

- Scott, J.H., (1976), 'A Theory of Optimal Capital Structure', *The Bell Journal of Economics*, Vol. 7, No. 1. Pp. 33-54, RAND Corporation.
- Teker, D., Battal, O. and Tukel, A., (2008), 'Macroeconomic Determinants Of Capital Structure For Turkish Firms: A Panel Data Analysis, *Conference Paper*, pp. 1-12, Okan University.
- Thee, Y.H., (2008), 'Managed Float Regime and Capital Structure Determinants: Evidence From Malaysia, *Master Thesis*, pp. 1-90, University Of Malaya.
- Theis, J. and Casey, M., (1999), 'An Empirical Investigation Of Agency Relationships and Capital Structure Of Property Management Firms in The UK', *Journal Of Property Investment & Finance*, Vol. 17, No. 1, pp 27-34, Henderson State University, Archadelphia, Arizona, USA, MCB University Press.
- Titman, S. and Wessels, R., (1988), 'The Determinants of Capital Structure Choice', *The Journal of Finance*, Vol. 43, No. 1, pp. 1-19, American Finance Associations.
- Tsuruta, D. and Xu, P., (2005), 'Capital Structure and Survival of Financially Distressed SMEs in Japan', *Workshop Working Paper*, pp. 1-18.
- Viviani, J.L. and Rue Vendemiaire., (2008), '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, University Of Montpellier, France, Emerald Group Publishing Limited.
- Wan Ismail, W.M., (2005), 'Capital Structure Of Malaysian Listed Companies', *Master Thesis*, pp. 1-79, Universiti Utara Malaysia.
- Wan Mahmood, W.M., Zakaria, R., (2008), 'Profitability and Capital Structure Of The Property And Construction Sectors In Malaysia, *Pacific Rim Property Research Journal*, Vol. 13, No. 1, pp. 92.
- Wei, G. and Geng, M., (2008), 'Ownership Structure And Corporate Governance In China: Some Current Issues', *Journal of Managerial Finance*, Vol. 34, No. 12, 2008, pp 934-952 , Henan University, Kaifen, People's Republic Of China, Emerald Group Publishing Limited.
- Wrede, M., (2009), 'Multinational Capital Structure and Tax Competition', *Joint Discussion Paper Serier in Economics-Aachen, BielBen, Gottingen, Kassel, Marburg, Siegen*, Vol. 34, pp. 1-34, University of Malburg, Germany.

Zainal Abidin, N., (2009), 'Sustainable Construction in Malaysia-Developers' Awareness', *World Academy Of Science, Engineering and Technology 53 Research Paper*, pp. 807-814, Science University Of Malaysia.

Zainal Abidin, M. and Rasiah, R., (2009), 'The Global Financial Crisis and the Malaysian Economy: Impact and Responses', *United Nation Development Plan Research Paper*, pp. 1-80, UNDP.

Zurigat, Z., (2009), 'Pecking Order Theory, Trade-Off Theory and Determinants of Capital Structure: Empirical Evidence From Jordan', *PhD Dissertation*, pp. 1-139, Heriot-Watt University.