

**DETERMINANTS OF FIRM PERFORMANCE IN INDONESIA:
THE IMPACT OF GLOBAL FINANCIAL CRISIS**

DARMAWATI MUCHTAR

UNIVERSITI KEBANGSAAN MALAYSIA

DETERMINANTS OF FIRM PERFORMANCE IN INDONESIA:
THE IMPACT OF GLOBAL FINANCIAL CRISIS

DARMAWATI MUCHTAR

DISSERTATION SUBMITTED IN PARTIAL FULFILMENT
OF THE REQUIRMENTS FOR THE DEGREE OF
DOCTOR OF BUSINESS ADMINISTRATION

UKM-GRADUATE SCHOOL OF BUSINESS
UNIVERSITI KEBANGSAAN MALAYSIA
BANGI

2017

PENENTU PRESTASI FIRMA DI INDONESIA:
KESAN KRISIS KEWANGAN GLOBAL

DARMAWATI MUCHTAR

DISERTASI YANG DIKEMUKAKAN UNTUK MEMENUHI SEBAGIAN
DARIPADA SYARAT MEMPEROLEH IJAZAH
DOKTOR PENTADBIRAN PERNIAGAAN

UKM-GRADUATE SCHOOL OF BUSINESS
UNIVERSITI KEBANGSAAN MALAYSIA
BANGI

2017

PERAKUAN TESIS SARJANA / KEDOKTORAN
(CERTIFICATION OF MASTER'S / DOCTORAL THESIS)

Nama Penuh Pengarang
(Author's Full Name) : DARMAWATI MUKHTAR

No. Pendaftaran Pelajar
(Student's Registration No.) : ZP00988 Sesi Akademik
(Academic Session) : _____

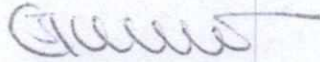
Tajuk Tesis
(Thesis Title) : DETERMINANTS OF FIRM PERFORMANCE: THE IMPACT
OF GLOBAL FINANCIAL CRISIS.

Merujuk kepada Klausula 4.2 Dasar Harta Intelek Pelajar UKM (Tambahan), tesis adalah hak milik pelajar.
Saya mengaku tesis ini sebagai:
(With regard to Clause 4.2 of the UKM Student Intellectual Property Policy (Supplementary), the thesis is the student's property. I hereby declare this thesis as:)

- RAHSIA
(CONFIDENTIAL)** Mengandungi maklumat rahsia di bawah AKTA RAHSIA RASMI 1972
(Consisting of classified information under the OFFICIAL SECRETS ACT 1972)
- TERHAD
(RESTRICTED)** Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan
(Consisting of RESTRICTED information which has been determined by the organisation/body where the research was conducted)
- AKSES TERBUKA/
TIDAK TERHAD
(OPEN ACCESS/
NON-RESTRICTED)** Saya membenarkan tesis ini diterbitkan secara akses terbuka, teks penuh atau dibuat salinan untuk tujuan pengajian, pembelajaran, penyelidikan sahaja.
(I allow this thesis to be published through open access, full text or copied for study, learning and research purposes only.)

Bagi kategori Akses Terbuka/Tidak Terhad, saya membenarkan tesis (Sarjana/Kedoktoran) ini di simpan di Perpustakaan Universiti Kebangsaan Malaysia (UKM)* dengan syarat-syarat kegunaan seperti berikut:
(For the Open Access/Non-Restricted category, I allow this (Master's/Doctoral) Thesis to be kept in the Universiti Kebangsaan Malaysia (UKM) Library with the following usage conditions:)

1. Perpustakaan UKM mempunyai hak untuk membuat salinan untuk tujuan pengajian, pembelajaran, penyelidikan sahaja.
(UKM Library has the right to reproduce the thesis for study, learning and research purposes only.)
2. Perpustakaan Universiti Kebangsaan Malaysia dibenarkan membuat satu (1) salinan tesis ini untuk tujuan pertukaran antara institusi pengajian tinggi dan mana-mana badan/ agensi kerajaan, tertakluk kepada terma dan syarat.
(UKM Library is allowed to make one (1) copy of this thesis for exchange purpose among higher education institutions and any government body/agency, subject to terms and conditions.)



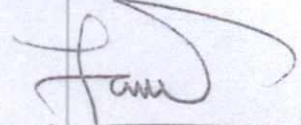
TANDATANGAN PELAJAR
(STUDENT'S SIGNATURE)

A4505190

KAD PENGENALAN / NO.PASPORT
(IDENTITY CARD/PASSPORT NO.)

Date: 14/9/2017

DISAHKAN OLEH:
(VERIFIED BY:)



TANDATANGAN PENYELIA
(SUPERVISOR'S SIGNATURE)
Professor Dr. Fauzias Mat Nor

Faculty of Economics and Muamalat
Universiti Sains Islam Malaysia
71800 Nilai, Negeri Sembilan Darul Khusus, Malaysia.
Tel: (+606) 797 8660 Mobile: (+6) 013 350 0796

NAMA PENYELIA
(SUPERVISOR'S NAME)

Date:

DECLARATION

I hereby declare that the work in this thesis is my own except for the quotations and summaries which have been duly acknowledged.



11 September 2017

DARMAWATI MUCHTAR
ZP00488

ACKNOWLEDGEMENTS

Thank you and all praise to Allah S.W.T with His power and mercy for granting me with good health, patience, time and opportunity in completing this DBA program. First and foremost, my sincere gratitude and indebtedness to my main Supervisor, Professor Dr. Fauzias Mat Nor for her guidance, advice and support along my journey in completing my dissertation. My sincere appreciation goes to my Co. Supervisor, Professor Dr. Izani Ibrahim for his support, contribution and helpful comments in completion of this dissertation. I would also like to thank Professor Dr. I Gusti Ngurah Agung of Universitas Indonesia (UI) and the Advisor board of The Ary Suta Center (ASC) Jakarta for his assistance and valuable knowledge particularly on Panel Data Analysis.

My greatest gratitude to my family especially my parents Muchtar Puteh and my beloved mother Murniati Yusuf, who constantly pray for my success and motivate me to be a successful person. To my beloved husband, Tgk.H. Hamdani Daud and my lovely children's Zaky Mauludi, Nury Ahyana and Awis Qarnaini, thank you for your *doa*, patience, understanding and support through the dissertation process. Sincere thanks are also addressed to my mother in-law, my sister Marlina, my brothers Syukri, Bustami, Asnawi, Fazlon Hadie and Munawir Fajrie also to my sisters and brothers in-law who have generously assist me in many ways, I am grateful to be blessed with such a loving and caring family.

My appreciation and gratitude also go to my sponsors, Malikussaleh University (UNIMAL), Lhokseumawe, Aceh, Lembaga Peningkatan Sumber Daya Manusia (LPSDM) Aceh Indonesia for providing sufficient financial support for me to pursue my study. I would also like to thank to Dean of Fakultas Ekonomi and Bisnis Wahyuddin Albra, SE, MSi, Ak, CA and Head Program of PPIM-UNIMAL for your assistance and support. I am also greatly thankful to Dr. I Putu Gede Ary Suta Chairman and founder of The Ary Suta Center Jakarta, Dr. Azman Mohammad Hassan, Dr. Khairul Akmaliah, Dr. Ruzita Abdul Rahim that had provided me all the supports that I needed. A big thank you to all my lovely friends Dr. Rafidah Othman, Zarina Zaky, Siew Lian Chan, Dr. Khawar, Dr. Sa'adah and Nurulhuda Tajuddin for their time and support in many ways. I also wish to thank for those who names do not appear here but have contributed toward successful completion of this dissertation. May Allah reward all who have supported me. Finally, I pray to Allah, I am grateful to be able to complete the Doctor in Business Administration (DBA) program and share the knowledge to others.

ABSTRACT

The objectives of this study are two-prong: First, to investigate the extent of global financial crisis impact on firm performance and its determinants, and second, to investigate the determinants of firm performance. Extant literature of the financial crisis impact on firm performance and its determinants had offered competing explanations. Hence, this study is motivated by the issue of the inconsistencies and inconclusiveness of these findings. Moreover, the dynamic aspect of firm performance is relatively new in corporate finance literature. In particular, existing studies do not take into consideration three time-period analysis by sector in explaining the determinant factors of firm performance. Using a balanced panel data of 212 companies listed on Indonesia Stock Exchange from year 2003 to 2013, this study utilized two sets of linear regression analysis i.e. two-way cell means (ANOVA) and the dynamic panel Generalized Method of Moments (GMM) models. The findings of cell-mean parameters show that financial crisis had significant impact on accounting and market performance for both the manufacturing and service sectors. The findings also show that investment is lower during crisis period compared to before and after crisis period, while leverage is lower during crisis compared to before crisis period for both sectors. Interestingly, the results show that financial crisis had no impact on dividend per share, while free cash flow and corporate governance are less impacted by the financial crisis. Results of dynamic panel-GMM estimations show that previous year performance is significant; indicating that firm performance is dynamic in nature. Regardless of time-periods, only leverage, dividend per share and free cash flow are significant in influencing ROA for three time-periods. Similar results are found in the service sector; only dividend per share and free cash flow are influencing the ROA in the same manner, while leverage is significant during crisis period only. In comparing to market performance, financial decision factors are found to have mixed impact on TOBINS_Q for both sectors, whereas corporate governance has significant effect on market performance only. In sum, financial decision factors for both accounting and market performance seems to have similar impact in all the three periods, even though the amount of investment and leverage is lower during crisis period. In term of theoretical explanation, the impact of financial decision variables of financial firm performance for all the period is consistent with the theory. However, based on the coefficient of financial decision variables, the impact is more on the market performance and less on the accounting performance during financial crisis except for the free cash flow for both sectors. This is due to the decline in performance condition of the market during financial crisis, which makes financial decision making more sensitive. This study extends the current understanding of financial decision behavior, free cash flow and corporate governance by providing new empirical evidence of the impact of financial crisis on financial firm performance by sector.

ABSTRAK

Objektif kajian ini adalah serampang dua mata: Pertama, untuk mengkaji sejauh mana krisis kewangan global memberi impak ke atas prestasi firma serta faktor penentunya, dan kedua, untuk mengenalpasti faktor penentu prestasi firma. Kajian terdahulu dalam topik impak krisis kewangan global ke atas prestasi firma dan faktor penentunya menunjukkan dapatan yang tidak konsisten. Justeru, kajian ini didorong oleh dapatan kajian lalu yang tidak konklusif berkaitan hal ini. Tambahan pula, aspek dinamik dalam prestasi firma adalah suatu topik yang baharu dalam bidang kajian kewangan korporat. Khususnya, kajian-kajian sedia ada tidak mengambil kira faktor tiga tempoh masa yang mengikut sektor dalam menjelaskan faktor penentu prestasi firma. Kajian ini menggunakan data panel seimbang 212 buah syarikat yang tersenarai dalam Bursa Saham Indonesia (Indonesia Stock Exchange) bermula dari tahun 2003 hingga 2013. Kajian ini menggunakan dua set analisis regresi linear menggunakan ANOVA dan panel dinamik model Generalized Method of Moments (GMM). Dapatan kajian ini menunjukkan bahawa parameter purata sel (cell-mean parameter) krisis kewangan mempunyai impak yang signifikan kepada prestasi perakaunan dan pasaran untuk kedua-dua sektor pembuatan dan perkhidmatan. Kajian ini juga mendapati bahawa pelaburan adalah lebih rendah semasa tempoh krisis berbanding dengan sebelum dan selepas tempoh krisis, manakala leveraj adalah lebih rendah semasa tempoh krisis berbanding sebelum tempoh krisis untuk kedua-dua sektor-sektor tersebut. Menariknya, dapatan kajian juga menunjukkan bahawa krisis kewangan tidak mempunyai kesan ke atas dividen per syer, manakala aliran tunai bebas dan tadbir urus korporat kurang dipengaruhi oleh krisis kewangan. Anggaran dinamik panel-GMM menunjukkan bahawa prestasi tahun sebelumnya adalah signifikan; ini memberi petanda bahawa prestasi firma adalah bersifat dinamik. Tanpa mengambil kira tempoh masa, hanya leveraj, dividen per syer dan aliran tunai bebas adalah signifikan dalam mempengaruhi ROA untuk tiga tempoh masa tersebut. Dapatan yang sama ditemui dalam sektor perkhidmatan; hanya dividen per syer dan aliran tunai bebas mempengaruhi ROA dalam cara yang sama, manakala leveraj adalah signifikan semasa tempoh krisis sahaja. Dalam perbandingan prestasi pasaran, faktor keputusan kewangan didapati memberi kesan yang bercampur kepada TOBINS_Q untuk kedua-dua sektor, manakala tadbir urus korporat memberi kesan signifikan kepada prestasi pasaran sahaja. Kesimpulannya, faktor keputusan kewangan untuk prestasi perakaunan dan pasaran dilihat mempunyai kesan yang sama dalam semua tiga tempoh masa, walaupun jumlah pelaburan dan leveraj adalah lebih rendah semasa tempoh krisis. Daripada perspektif teoretikal, kesan variabel keputusan kewangan ke atas prestasi firma untuk semua tempoh adalah konsisten dengan teori. Bagaimanapun, berdasarkan koefisien variabel keputusan kewangan, impaknya adalah lebih terhadap prestasi pasaran dan kurang terhadap prestasi perakaunan semasa krisis kewangan, kecuali bagi aliran tunai bebas untuk kedua-dua sektor. Ini adalah disebabkan penurunan prestasi pasaran semasa krisis kewangan, yang manamengakibatkan pembuatan keputusan kewangan lebih sensitif. Kajian ini memperkayakan pemahaman masa kini tentang gelagat keputusan kewangan, aliran tunai bebas dan tadbir urus korporat dengan menunjukkan bukti empirikal kesan krisis kewangan ke atas prestasi firma kewangan mengikut sektor.

CONTENTS

		Page
DECLARATION		iii
ACKNOWLEDGEMENTS		iv
ABSTRACT		v
ABSTRAK		vi
CONTENTS		vii
LIST OF TABLES		xi
LIST OF FIGURES		xiii
LIST OF ABBREVIATIONS		xiv
CHAPTER I	INTRODUCTION	
1.1	Background	1
1.2	Motivation of the Study	4
1.3	Determinant of Firm Performance	8
	1.3.1 Investment Decision	10
	1.3.2 Capital Structure	11
	1.3.3 Dividend Policy	13
	1.3.4 Free Cash Flow	14
	1.3.5 Corporate Governance	15
1.4	Problem Statement of this Research	18
1.5	Research Questions	23
1.6	Objectives of the Study	23
1.7	Contribution of the Study	24
1.8	Scope of the Study	26
1.9	Structure of Dissertation	26
CHAPTER II	LITERATURE REVIEW	
2.0	Introduction	27
2.1	The Q Theory of Investment	27
2.2	Reviews Studies of Investment	31
	2.2.1 Internal Finance and Investment	31
	2.2.2 Free Cash Flow and Overinvestment	33

2.2.3	The Impact of Investment on Firm Performance	34
2.2.4	The Financial Crisis-Investment and Firm Performance	37
2.3	The Theories of Capital Structure	38
2.3.1	Trade-off Theory	38
2.3.2	Pecking Order Theory	40
2.3.3	Agency Theory	41
2.4	Review of Studies on Capital Structure	44
2.4.1	The Impact of Capital Structure on Firm Performance	45
2.4.2	The Financial Crisis-Capital Structure and Firm Performance	48
2.5	The Theories of Dividend Policy	49
2.5.1	The Bird in-Hand Theory	50
2.5.2	The Signaling Theory	51
2.5.3	The Agency Theory	52
2.6	Review of Studies on Dividend Policy	53
2.6.1	The Impact of Dividend Policy on Firm Performance	54
2.6.2	The Financial Crisis-Dividend Policy and Firm Performance	57
2.7	Review of Studies on Free Cash Flow	58
2.7.1	The Impact of Free Cash Flow and Firm Performance	59
2.8	Review of Studies on Corporate Governance	61
2.8.1	The Impact of Corporate Governance on Firm Performance	63
2.8.2	The Financial Crisis-Corporate Governance and Firm Performance	65
2.9	Chapter Summary	67
CHAPTER III	THEORITICAL MODEL AND HYPOTHESES DEVELOPMENT	
3.0	Introduction	69
3.1	Background for Development of the Research Model	69
3.2	Theoretical Research Model	70
3.3	Research Model and Hypotheses	73
3.3.1	Research Hypothesis (H1 and H2)	74
3.3.2	Research Hypotheses (H3 and H4)	80

3.4	Chapter Summary	89
CHAPTER IV DATA AND METHODOLOGY		
4.0	Introduction	90
4.1	The Data of This Study	90
	4.1.1 Collecting the Panel Data	90
	4.1.2 Industry Classification on the Sample	91
4.2	Research Variable	92
	4.2.1 Dependent Variables	93
	4.2.2 Independent Variables	95
	4.2.3 Measuring Control Variables	100
	4.2.4 Ordinal Time-Period of the Global Financial Crisis	101
4.3	Panel Data Analysis	102
	4.3.1 Static Panel Data Models	103
	4.3.2 Dynamic Panel Data Models	111
4.4	Empirical Panel Data Analysis	117
	4.4.1 Two-Way Cell-Mean (ANOVA) Models	118
	4.4.2 Dynamic Panel Data Models	122
4.5	Chapter Summary	126
CHAPTER V FINDING AND DISCUSSION OF THE MODELS		
5.1	Introduction	127
5.2	Preliminary Results	128
	5.2.1 Statistical Properties of Dependent Variable	129
	5.2.2 Statistical Properties of the Main Independent Variable	133
	5.2.3 Correlation Analysis	138
5.3	The Estimation Results of Two-Way ANOVA Models	142
	5.3.1 The Two-Way Cell Mean (ANOVA) Estimations	142
	5.3.2 Discussion of Financial Crisis Impact on Firm Performance and its Determinants and the Testing Hypothesis Based on ANOVA Models	146
5.4	The Estimation Results of Dynamic Models	156
	5.4.1 The Dynamic Estimation Results for the Overall Model of the Equations (4.15a) and (4.15b)	157
	5.4.2 Heterogeneous Dynamic Estimations for Equation (4.16a) and (4.16b)	160

5.4.3	Discussion on the Estimation Results of Accounting Firm Performance	164
5.4.4	The impact differences of each determinant on ROA	185
5.4.5	Discussion of the Estimation Results of Determinants of Market Firm Performance (TOBINS_Q)	187
5.4.6	The Impact Differences of Each Determinant on TOBINS_Q	210
5.5	Chapter Summary	212
CHAPTER VI	CONCLUSSION AND IMPLICATION	
6.1	Introduction	214
6.2	Summary and Conclusion of Research Findings	214
6.2.1	Financial Crisis Impact on Firm Performance and its Determinants	215
6.2.2	Determinants of Firm Performance as Overall, by Sectors and Time-Period	217
6.3	Implication of This Study	222
6.3.1	Implication for the Firm	223
6.3.2	Implication for Policy Makers	224
6.3.3	Implication for Investors	226
6.3.4	Implication for Knowledge and Existing Theories	228
6.4	Limitation of This Study	230
6.5	Recommendation for Future Research	231
REFERENCES		232
APPENDICES		
Appendix A	Correlation between the Variable as Overall, by Sectors and Time Period	253
Appendix B	Regression Results of ANOVA Models	257
Appendix C	Regression Results for Overall Models of ROA	259
Appendix D	Regression Results for Overall Models of TOBINS_Q	260
Appendix E	Regression Results for Heterogeneous Models of ROA	261
Appendix F	Regression Results for Heterogeneous Models of TOBINS_Q	263
Appendix G	List of Firms in the Sample	266

LIST OF TABLES

Table No.		Page
Table 1.1	Economic growth outlook by sectors	4
Table 2.1	Economic Growth Outlook by Sector	5
Table 4.1	Industry classification of the selected companies	92
Table 4.2	Research variables and their operational definitions	101
Table 4.1	The mean parameters of Y by SECTORS and TP	121
Table 5.1(a)	Descriptive statistics of the numerical research variables for overall	130
Table 5.1(b)	Descriptive statistic of the numerical research variables by sector and time-period (TP)	131
Table 5.3(a)	Correlation signs of independent variables with ROA for overall, by Sector and time-period	139
Table 5.3(b)	Correlation Signs of Independent Variables with TOBINS_Q for Overall, by Sector and Time-Period	141
Table 5.4	Parameters of the two-way ANOVA models of each research variable by time-period (TP) and sector	143
Table 5.6	Summary of the testing hypotheses on the cell-means parameters of firm performance, based on two-way ANOVA models for the equation (4.13c) and (4.13d)	145
Table 5.7	Summary of the testing hypotheses on the cell-means parameters of determinants of firm performance based on two-ways ANOVA models, for equations (4.14a to 4.14f)	145
Table 5.8 (a)	Estimation result of the overall model for equation (4.15a)	158
Table 5.8(b)	Estimation results of the overall model for the equation (4.15b)	159
Table 5.9(a)	Estimation results of the model (4.16a) for ROA by sector and time-period, using the GMM-difference estimation method	161
Table 5.9(b)	Estimation results of the model (4.16b) for TOBINS_Q by sector and time-period, using the GMM-difference estimation method	163
Table 5.10	Summary of the Equation 4.15b representing the dynamic estimations of the impact of each determinant on ROA	183
Table 5.11	Summary of the conclusions of two groups of testing hypotheses of the impact of each determinant on ROA and impact difference between TP1, TP2 and TP3	184

Table 5.12	Summary of the Wald(t-test) of the hypotheses on the impact differences of each determinant of ROA between pairs of the three time-periods, conditional for each sector	186
Table 5.13	Summary of the Equation 4.15b representing the dynamic estimations of the impact of each determinant on TOBINS_Q	208
Table 5.14	Results summary of the impact of each determinant on market performance (TOBINS_Q) for heterogeneous models by sector and time-period for Equation 4.16 (b)	209
Table 5.15	Results of the Wald-(t-test) of the hypotheses on the impact differences of each determinant of TOBINS_Q between pairs of the three time-periods, conditional for each sector	211

LIST OF FIGURES

Figure No.		Page
Figure 1.1	Indonesia stock market capitalization, percent of GDP	3
Figure 1.1	Two-tier board systems	17
Figure 3.1	Theoretical Framework	72
Figure 3.2	Research Model	73

LIST OF ABBREVIATIONS

IDX	Indonesia Stock Exchange
GDP	Gross domestic product
ICB	Industry classification benchmark
e.g	“for example”
i.e.	“clarification”
et.al	“and others”
Etc.	“and so on”
NCCG	National committee on corporate governance
BOD	Board of director
BOC	Board of independent commissioners
GSM	General meeting of shareholder
ROE	Return on equity
NPV	Net present value
Q	Tobin’s q model
Q_a , q_m	Average q (market valuation to replacement cost value of capital) marginal q (the ratios of shadow value to price)
MV	total market value
K_t	Capital stock
PV_t	is the present value of the cash flow
IOS	investment opportunities sets
CFO	chief financial officers
RDT	resource dependency theory
CEO	Chief executive officer
NED’s	Non-Executive Directors
SDTA	Short term debt to total asset
LDTA	Long term debt to total asset
DER	debt to equity ratio
OLS	Ordinary least square
GMM	Generalized method of moment
DID	Different-in-different
ANOVA	Analysis of variance