

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**THE INFLUENCE OF CORPORATE GOVERNANCE
MECHANISMS AND EMPLOYEE STOCK OPTIONS ON
ACCRETIVE SHARE BUYBACK IN MALAYSIA**



ABDULSALAM SAAD SALEH ALQUHAIF

UUM
Universiti Utara Malaysia

**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
October 2018**

**THE INFLUENCE OF CORPORATE GOVERNANCE MECHANISMS AND
EMPLOYEE STOCK OPTIONS ON ACCRETIVE SHARE BUYBACK IN
MALAYSIA**

By

ABDUSALAM SAAD SALEH ALQUHAIF



**Thesis Submitted to
Tunku Puteri Intan Safinaz School of Accountancy,
Universiti Utara Malaysia,
in Fulfillment of the Requirement for the Degree of Doctor of Philosophy**



**TUNKU PUTERI INTAN SAFINAZ
SCHOOL OF ACCOUNTANCY
COLLEGE OF BUSINESS
Universiti Utara Malaysia**

**PERAKUAN KERJA TESIS / DISERTASI
(Certification of thesis / dissertation)**

Kami, yang bertandatangan, memperakukan bahawa
(We, the undersigned, certify that)

ABDUL SALAM SAAD SALEH AL-QUHAIF

calon untuk Ijazah **DOCTOR OF PHILOSOPHY**
(candidate for the degree of)

telah mengemukakan tesis / disertasi yang bertajuk:
(has presented his/her thesis / dissertation of the following title):

**THE INFLUENCE OF CORPORATE GOVERNANCE MECHANISMS AND EMPLOYEE STOCK
OPTIONS AND ACCRETIVE SHARE BUYBACK IN MALAYSIA**

seperti yang tercatat di muka surat tajuk dan kulit tesis / disertasi.
(as it appears on the title page and front cover of the thesis / dissertation).

Bahawa tesis/disertasi tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan, sebagaimana yang ditunjukkan oleh calon dalam ujian lisan yang diadakan pada:

5 April 2018.

(That the said thesis/dissertation is acceptable in form and content and displays a satisfactory knowledge of the field of study as demonstrated by the candidate through an oral examination held on:

5 April 2018.

Pengerusi Viva : **Prof. Dr. Azhar Abdul Rahman**
(Chairman for Viva)

Tandatangan
(Signature)

Pemeriksa Luar : **Assoc. Prof. Dr. Hafiza Aishah Hashim (UMT)**
(External Examiner)

Tandatangan
(Signature)

Pemeriksa Dalam : **Dr. Kamarul Bahrain Abdul Manaf**
(External Examiner)

Tandatangan
(Signature)

Tarikh: **5 April 2018**
(Date)

Nama Pelajar
(Name of Student)

: **ABDUL SALAM SAAD SALEH AL-QUHAIF**

Tajuk Tesis / Disertasi
(Title of the Thesis / Dissertation)

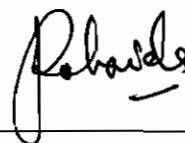
: **THE INFLUENCE OF CORPORATE GOVERNANCE MECHANISMS
AND EMPLOYEE STOCK OPTIONS AND ACCRETIVE SHARE
BUYBACK IN MALAYSIA**

Program Pengajian
(Programme of Study)

: **Doctor of Philosophy**

Nama Penyelia/Penyelia-penyelia
(Name of Supervisor/Supervisors)

: **Assoc. Prof. Dr. Rohaida Abdul Latif**



Tandatangan

Nama Penyelia/Penyelia-penyelia
(Name of Supervisor/Supervisors)

: **Dr. Sitraselvi a/p Chandren**



Tandatangan

PERMISSION TO USE

In presenting this thesis in fulfilment of the requirements for a Post Graduate degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this thesis in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor(s) or in their absence, by the Dean of Tunku Puteri Intan Safinaz School of Accountancy where I did my thesis. It is understood that any copying or publication or use of this thesis or parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the UUM in any scholarly use which may be made of any material in my thesis.

Request for permission to copy or to make other use of materials in this thesis in whole or in part should be addressed to:

Dean of Tunku Puteri Intan Safinaz School of Accountancy
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman



ABSTRACT

In recent decades, there has been a notable and growing practice of real earnings management practiced through accretive share buybacks. Corporate governance is recognised as a significance mechanism in confirming the credibility of financial reporting quality. Overall, this study examines accretive share buybacks as a mechanism for real earnings management. The objectives of this study are to investigate the influence of corporate governance mechanisms: board of directors (BOD) effectiveness (independence, size, meetings and financial expertise), audit committee (AC) effectiveness (independence, size, meetings and financial expertise), audit quality and ownership structure (family, managerial, foreign) on accretive share buybacks. Considering the stock options hypothesis, this study also investigates the impact of employee stock options (ESOS) on accretive share buybacks. The study utilised 235 firm-year observations of non-financial firms listed on the Bursa Malaysia that were involved in accretive share buybacks over the years 2010 to 2015. By using panel data, the findings of the main analysis indicate that AC effectiveness and family ownership was negatively related to accretive share buybacks, but the effectiveness of the BOD and audit quality was positively associated with accretive share buybacks. The findings also show that ESOS were positively related to the accretive share buybacks, and no relationship was revealed between managerial ownership and foreign ownership with accretive share buybacks. The unexpected result of BOD effectiveness revealed the negative role of concentrated ownership in the monitoring functions of the BOD. This study contributes to a better understanding of corporate governance practices and accretive share buyback activities by Malaysian listed firms. The results indicate that firms should improve the effectiveness of corporate governance mechanisms (BOD, AC, audit quality and ownership structure) to enhance financial reporting quality. Hopefully, this study will provide a reference point for relevant parties to improve the applicable regulations and corporate governance schemes.

Keywords: Accretive share buyback, corporate governance mechanisms, ownership structure, employee stock options, Malaysia

ABSTRAK

Dalam beberapa dekad kebelakangan ini, terdapat satu amalan yang ketara dan berkembang dalam pengurusan pendapatan sebenar yang diamalkan menerusi pembelian semula saham secara akresi. Tadbir urus korporat diiktiraf sebagai mekanisme penting dalam mengesahkan kredibiliti kualiti pelaporan kewangan. Secara keseluruhannya, kajian ini menyelidik pembelian semula saham sebagai mekanisme pengurusan pendapatan sebenar. Objektif kajian ini adalah untuk mengkaji pengaruh mekanisme tadbir urus korporat: keberkesanan lembaga pengarah (BOD) (kebebasan, saiz, mesyuarat, dan kepakaran kewangan), keberkesanan jawatankuasa audit (AC) (kebebasan, saiz, mesyuarat dan kepakaran kewangan) kualiti audit dan struktur pemilikan (keluarga, pengurusan, asing) ke atas pembelian semula saham akresi. Dengan mengambil kira hipotesis opsyen saham, kajian ini juga menyiasat kesan opsyen saham pekerja (ESOS) ke atas pembelian semula saham akresi. Kajian menggunakan 235 pemerhatian tahunan firma bagi firma bukan kewangan yang disenaraikan di Bursa Malaysia yang terlibat dalam pembelian semula saham akresi pada tahun 2010 hingga 2015. Dengan menggunakan data panel, penemuan model utama menunjukkan bahawa keberkesanan AC dan pemilikan keluarga mempunyai kaitan negatif terhadap pembelian semula saham akresi tetapi keberkesanan BOD dan kualiti audit adalah berkaitan secara positif dengan pembelian semula saham akresi. Penemuan ini juga menunjukkan bahawa ESOS mempunyai kaitan positif dengan pembelian semula saham akresi, dan tiada hubungan didedahkan antara pemilikan pengurus dan pemilikan asing dengan pembelian semula saham akresi. Hasil yang tidak dijangka dari keberkesanan BOD menunjukkan peranan negatif pemilikan tertumpu dalam fungsi kawalan BOD. Kajian ini menyumbang kepada pemahaman yang lebih baik mengenai amalan tadbir urus korporat dan aktiviti pembelian semula saham oleh syarikat Malaysia yang disenaraikan. Hasilnya menunjukkan bahawa firma perlu meningkatkan keberkesanan mekanisme tadbir urus korporat (BOD, AC, kualiti audit dan struktur pemilikan) untuk meningkatkan kualiti pelaporan kewangan. Akhir sekali, kajian ini berharap hasilnya memberikan titik rujukan bagi pihak-pihak yang berkaitan untuk memperbaiki peraturan dan skim tadbir urus korporat yang berkenaan.

Kata kunci: Pembelian semula saham akresi, mekanisme tadbir urus korporat, struktur pemilikan, opsyen saham pekerja, Malaysia

ACKNOWLEDGEMENTS

All praise and thanks be to Allah, the Lord of all beings, for giving me the strength, patience, and courage to complete this work.

First and foremost, I would like to express my sincere gratitude to my wonderful supervisors, Assoc. Prof. Dr. Rohaida Abdul Latif and Dr. Sitraselvi A/P Chandren, for their patience, professional guidance and excellent supervision throughout the PhD journey. I have been extremely lucky to have supervisors who cared so much about my work, and who responded to my questions and queries promptly. Many thanks also go to Prof. Dr. Zuaini Ishak and Dr. Kamarul Bahrain Abdul Manaf, for their valuable comments and suggestions during my proposal defense.

I would like also to express my great appreciation to my father Saad Alquhaif and my lovely mother Faizah Ali, who bless me all the time and work for my best since I was born. I also must admit and thank for the continuous support that I received from my lovely wife Nora Mohammed, son Ebrahim, daughter Zainab, brothers, sisters, and my entire family.

I greatly appreciate the contribution of Ibb University for sponsoring my studies. I wish also to convey my great thanks to my friends, especially Dr. Ahmed Al-rassas, Dr. Redhwan Ahmed, Dr. Adel Alqadsi, Dr. Hamdan Aljaifi, and Dr. Jamal Alekam, for their unending advice and help in the entire process.

Last but not least, my sincere appreciation goes out to all those involved in making this thesis a reality and those who have contributed towards this profound learning experience.

TABLE OF CONTENTS

TITLE PAGE	i
CERTIFICATION OF THESIS WORK	iii
PERMISSION TO USE	v
ABSTRACT	vi
ABSTRAK	vii
ACKNOWLEDGEMENTS	viii
TABLE OF CONTENTS	ix
LIST OF TABLES	xiii
LIST OF FIGURES	xiv
LIST OF ABBREVIATIONS	xv
CHAPTER ONE INTRODUCTION	1
1.0 Overview of the Chapter	1
1.1 Background of the Study	1
1.1.1 Corporate Governance Mechanisms and Accretive Share Buybacks	7
1.2 Problem Statement	12
1.3 Research Questions	20
1.4 Research Objectives	20
1.5 Motivations for the Study	21
1.6 Significance of the Study	24
1.6.1 Theoretical Significance	24
1.6.2 Practical Significance	27
1.7 Scope of the Study	28
1.8 Organization of the Thesis	29
CHAPTER TWO LITERATURE REVIEW (SHARE BUYBACK PROGRAMS)	31
2.0 Overview of the Chapter	31
2.1 Share Buyback Programs	31
2.2 Trends of Share Buyback Programs Worldwide	33
2.3 Share Buyback Programs in Malaysia	35
2.4 Motivations for Share Buyback Programs	38
2.4.1 Undervaluation Signalling Hypothesis	38
2.4.2 Free Cash Flow Hypothesis	39
2.4.3 Tax Saving Hypothesis	40
2.4.4 Dividend Substitution Hypothesis	42
2.4.5 Optimal Capital Structure Hypothesis	43
2.4.6 Liquidity Changes Hypothesis	44
2.4.7 Stock Options Hypothesis	45
2.4.8 Takeover Deterrence Hypothesis	45
2.5 Economic Effect of Share Buyback Programs	46
2.6 Share Buyback as a Real Earnings Management Device	47
2.7 Summary	50
CHAPTER THREE: UNDERPINNING THEORIES, CORPORATE GOVERNANCE MECHANISMS, OWNERSHIP STRUCTURE, AND ESOS	52
3.0 Overview of the Chapter	52

3.1	Underpinning Theories	52
3.1.1	Agency Theory	52
3.1.2	Resource Dependence Theory	56
3.1.3	Stock Option Hypothesis	58
3.2	Corporate Governance in Malaysia	59
3.2.1	The Malaysian Code on Corporate Governance (MCCG 2012)	61
3.2.2	The Malaysian Code on Corporate Governance 2017 (MCCG 2017)	63
3.3	Corporate Governance and Shares Buyback Programs	65
3.4	Board of Directors' (BOD) Effectiveness	69
3.4.1	Board of Directors' (BOD) Independence	73
3.4.1.1	Board of Directors' (BOD) Independence and Earnings Management	74
3.4.2	Board of Directors (BOD) Size	78
3.4.2.1	Board of Directors' (BOD) Size and Earnings Management	79
3.4.3	Board of Directors' (BOD) Meetings	81
3.4.3.1	Board of Directors (BOD) Meetings and Earnings Management	82
3.4.4	Board of Directors' (BOD) Financial Expertise	84
3.4.4.1	Board of Directors' Financial Expertise and Earnings Management	85
3.5	Audit Committee (AC) Effectiveness	87
3.5.1	Audit Committee (AC) Independence	89
3.5.1.1	Audit Committee (AC) Independence and Earnings Management ..	90
3.5.2	Audit Committee (AC) Size	93
3.5.2.1	Audit Committee (AC) Size and Earnings Management	93
3.5.3	Audit Committee (AC) Meetings	95
3.5.3.1	Audit Committee (AC) Meetings and Earnings Management	96
3.5.4	Audit Committee (AC)'s Financial Expertise	97
3.5.4.1	Audit Committee (AC) Financial Expertise and Earnings Management ..	98
3.6	Audit Quality	101
3.6.1	Audit Quality and Earnings Management Activities	103
3.7	Ownership Structure	107
3.7.1	Family Ownership	109
3.7.1.1	Family Ownership and Earnings Management Activities	110
3.7.2	Managerial Ownership	115
3.7.2.1	Managerial Ownership and Shares Buyback Activities	116
3.7.2.2	Managerial Ownership and Earnings Management Activities	119
3.7.3	Foreign Ownership	122
3.7.3.1	Foreign Ownership and Shares Buyback Activities	123
3.7.3.2	Foreign Ownership and Earnings Management Activities	124
3.8	Employee Stock Options (ESOS)	126
3.8.1	Employee Stock Options and Shares Buyback Activities	127
3.8.2	Employee Stock Options and Earnings Management Activities	129
3.9	Summary	131
CHAPTER FOUR RESEARCH METHODOLOGY		132
4.0	Overview of the Chapter	132
4.1	Research Framework	132
4.2	Hypotheses Development	137
4.2.1	Board of Directors' (BOD) Effectiveness and Accretive Share Buyback	137
4.2.2	Audit Committee (AC) Effectiveness and Accretive Share Buybacks	142
4.2.3	Audit Quality and Accretive Share Buyback	147

4.2.4	Family Ownership and Accretive Share Buybacks	150
4.2.5	Managerial Ownership and Accretive Share Buyback	152
4.2.6	Foreign Ownership and Accretive Share Buyback	155
4.2.7	Employee Stock Option (ESOS) and Accretive Share Buyback	157
4.3	Research Design	159
4.4	Definition and Measurement of Dependent Variables: Accretive Shares Buybacks	160
4.5	Definitions and Measurements of Independent Variables	163
4.5.1	Board of Directors' (BOD) Effectiveness	163
4.5.1.1	Board of Directors' (BOD) Independence	164
4.5.1.2	Board of Directors' (BOD) Size	164
4.5.1.3	Board of Directors' (BOD) Meetings	165
4.5.1.4	Board of Directors' (BOD) Financial Expertise	165
4.5.1.5	Board of Directors' (BOD) Effectiveness as Score	166
4.5.2	Audit Committee (AC) Effectiveness	168
4.5.2.1	Audit Committee (AC) Independence	168
4.5.2.2	Audit Committee (AC) Size	168
4.5.2.3	Audit Committee (AC) Meetings	169
4.5.2.4	Audit Committee (AC) Financial Expertise	169
4.5.2.5	Audit Committee (AC) Effectiveness as Score	169
4.5.3	Audit Quality Measurement	171
4.5.4	Family Ownership Measurement	172
4.5.5	Managerial Ownership Measurement	172
4.5.6	Foreign Ownership Measurement	173
4.5.7	Employee Stock Options Measurement	173
4.5.8	Measurements and Definitions of Control Variables	173
4.5.8.1	Firm Size	174
4.5.8.2	Leverage	175
4.5.8.3	Growth	175
4.5.8.4	Cash Level	176
4.6	Data Collection: Procedures and Sampling	179
4.6.1	Data Collection Procedures	179
4.6.2	Population and Sampling	179
4.7	Data Analysis Techniques	181
4.7.1	Panel Data Analysis	182
4.7.2	Advantages of Panel Data	184
4.7.3	Multiple Regression Analysis	185
4.7.3.1	Research Model	186
4.8	Summary	187
CHAPTER FIVE RESULTS AND DISCUSSION		188
5.0	Overview of the Chapter	188
5.1	Descriptive Analysis of Dependent Variable	188
5.2	Descriptive Analysis of Independent Variables	193
5.3	Diagnostic Test	199
5.3.1	Outliers Test	200
5.3.2	Normality	201
5.3.3	Multicollinearity and Correlation	202
5.3.4	Heteroscedasticity Test	205
5.3.5	Autocorrelation	206

5.4	Multivariate Analysis	207
5.4.1	Board of Directors' (BOD) Effectiveness	209
5.4.2	Audit Committee (AC) Effectiveness	211
5.4.3	Audit Quality	213
5.4.4	Family Ownership	215
5.4.5	Managerial Ownership	216
5.4.6	Foreign Ownership	218
5.4.7	Employee Stock Options	219
5.4.8	Control Variables	220
5.5	Additional Analysis	222
5.5.1	Tobit Model's Regression Analysis	223
5.5.2	Logistic Regression Analysis: Dichotomous Measurement of ABB	230
5.5.3	Excluding Managerial Ownership (MOWN)	232
5.5.4	Individual Attributes of Corporate Governance Mechanisms	234
5.6	Summary	238
CHAPTER SIX SUMMARY AND CONCLUSION		240
6.0	Overview of the Chapter	240
6.1	Summary of the Study	240
6.2	Implications of the Study	248
6.2.1	Theoretical Implications	248
6.2.2	Practical and Policy Implications	252
6.2.3	Academic Implications	254
6.3	Limitations of the Study	256
6.4	Future Research	257
6.5	Summary	258
REFERENCE		260
APPENDIX		296

LIST OF TABLES

Table 2.1	Number of Share Buyback Firms and Value RM of Treasury Shares of Malaysian Listed Firms from 2007 to 2015	35
Table 4.1	Constructing the Composite Score of the BOD Effectiveness	166
Table 4.2	Constructing the Composite Score of the AC Effectiveness	169
Table 4.3	Summary of the Study's Variable Measurements	176
Table 4.4	Sample selection process for Accretive Share Buyback Firms	180
Table 5.1	Actual Share Buyback Activities between 2010 to 2015	188
Table 5.2	Accretive Share Buyback Activities from 2010 to 2015	190
Table 5.3	Details of Accretive Share Buyback Firm Observations from 2010 to 2015	192
Table 5.4	Descriptive Analysis of the Variables (n = 601)	193
Table 5.5	Hausman Test for Choosing Random/Fixed Effect Models	200
Table 5.6	Pearson Correlation Matrix of the Variables Used in the Main Model	203
Table 5.7	Standard Tests on VIF Results	204
Table 5.8	Breusch-Pagan / Cook-Weisberg Test for Heteroscedasticity	205
Table 5.9	Wooldridge Test for Autocorrelation in Panel Data	206
Table 5.10	Regression Results for Random Effect OLS Estimation Model	207
Table 5.11	Regression Results for Panel Tobit Estimation Model	224
Table 5.12	Regression Results for Logistic fixed-effect Estimation Model	231
Table 5.13	Regression Results for Random Effect OLS Estimation Model with Excluding MOWN	232
Table 5.14	Panel OLS Regression of Accretive Buybacks with Individual Attributes of Corporate Governance Mechanisms	236
Table 6.1	Summary of the Study Main Model's Findings	246

LIST OF FIGURES

Figure 1.1	Firms Number and RM Value of Actual Shares Buyback between 2010 and 2015	2
Figure 1.2	Accretive Share Buyback in Malaysia over Years 2001 to 2008	14
Figure 4.1	Framework of the Influence of Corporate Governance Mechanisms and ESOS on Accretive Share Buybacks	135
Figure 5.1	RM Value and Shares Number of Accretive Buyback from 2010 to 2015	191
Figure 5.2	Normal P-P Plot of Regression Residuals	201



LIST OF ABBREVIATIONS

ABB	Accretive Shares Buyback
ABBD	Accretive Shares Buyback as Dichotomous Variable
AC	Audit committee
ACEXPRT	Audit committee Expertise
ACIND	Audit committee Independence
ACMEET	Audit committee Meeting
ACSIZE	Audit committee Size
AIM	Accountants Institute of Malaysia
BIG4	Big 4 Audit Firms
BM	Bursa Malaysia
BMLRs	Bursa Malaysia Listing Requirements
BDEXPRT	Board of directors Financial Expertise
BDIND	Board of directors Independence
BDMEET	Board of directors Meeting
BDSIZE	Board of directors Size
BNM	Bank Negara Malaysia
BOD	Board of directors
CCM	Companies Commission of Malaysia
CEO	Chief Executive Officer
CG Blueprint	Corporate Governance Blue Print
CL	Cash Level
CPA	Certified Public Accountant
DSM	Department of Statistics Malaysia
EPS	Earnings Per Share
ESOS	Employee Stock Options
ESOSEXR	Stock Options Exercise
FAMD	Family Ownership
FCCG	Financial Committee of Corporate Governance
FDI	Foreign Direct Investment
FOWN	Foreign Ownership

FSIZE	Firm Size
LEV	Leverage
KPMG	Klynveld Peat Main Goerdeler
MOWN	Managerial Ownership
MASB	Malaysian Accounting Standards Board
MCCG	Malaysian Code on Corporate Governance
MICG	Malaysian Institute of Corporate Governance
MIDA	Malaysian Investment Development Authority
MTB	Market To Book Value
RM	Ringgit Malaysia
SC	Securities Commission of Malaysia
SEC	Securities and Exchange Commission
SOX	Sarbanes-Oxley Act
UK	United Kingdom
US	United States



UUM
Universiti Utara Malaysia

CHAPTER ONE

INTRODUCTION

1.0 Overview of the Chapter

This chapter presents the introduction of the current study. It is divided into several sections. Section 1.1 displays the background of the study. Section 1.1.1 discusses corporate governance mechanisms and real earnings management by accretive share buybacks. Section 1.2 presents the problem statement. The research questions are stated in Section 1.3. Research objectives are presented in Section 1.4. Section 1.5 displays the motivations of this study. Section 1.6 explains the significance and contributions of this study. The chapter proceeds with the scope of the study in Section 1.7. Finally, Section 1.8 proceeds with the organisation of the thesis.

1.1 Background of the Study

Payout policy has gained a significant attention since the mid-twentieth century. Miller and Modigliani (1961) provide a theoretical analysis of the relationship between firms' value and corporate payout policy. Their model indicates that payout policy would not affect firm's value in a perfect market. However, finding a perfect market is impractical due to several factors including information asymmetry, agency problems, tax differentials between dividend and capital gains, and transaction cost (Chen, 2006; Washer & Casey, 2011). Share buyback programs are one of payout policy methods in addition to regular and special dividends payments. The most popular method used by firms to buy back their share is open market buyback (Dittmar, 2000; Grullon & Michaely, 2002; Huang, 2016; Moser, 2009; Su & Lin, 2012).

In Malaysia, share buybacks activities became legally permitted in September 1997 after the Asian financial crisis 1997. Section 67A of Companies Act of 1965 was amended to implement open market share buyback programs. Section 112 (2) of the Companies Act 2016 also allows firms to be involved in share buyback programs. The primary aim of permitting share buyback was to stabilise the prices of shares in the stock market throughout the financial crisis (Isa, Ghani, & Lee, 2011). Figure 1.1 shows the number of firms listed on Bursa Malaysia that were engaged in actual share buyback programs over the period from years 2010 to 2015. The number of firms engaging in share buyback programs grew during this period from 120 to 160 firms.

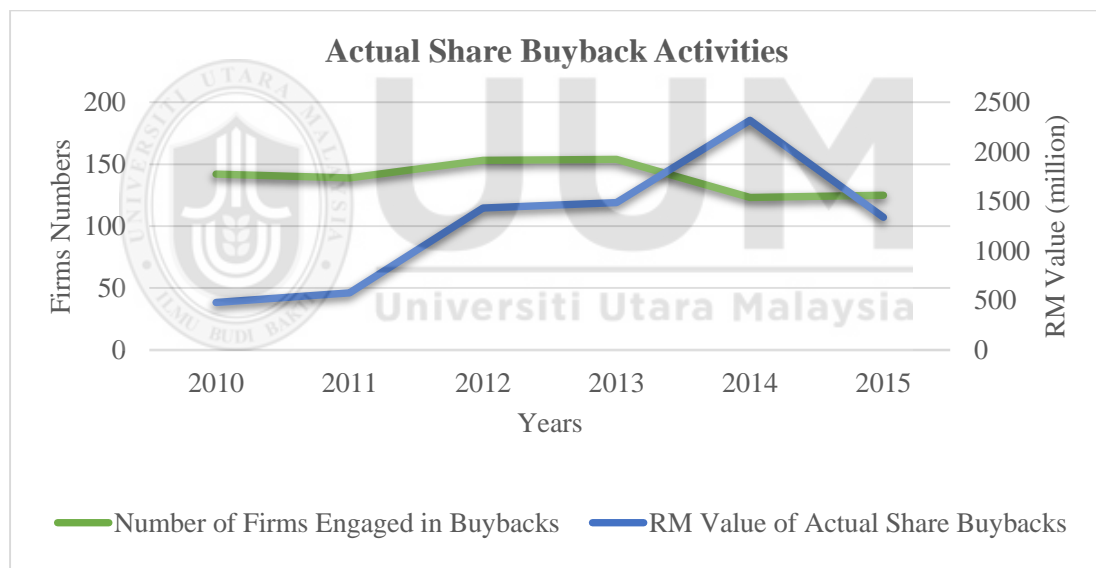


Figure 1.1
Number of firms and the RM Value of Actual Shares Buyback between 2010 and 2015
 Source: Firms' annual reports, Bursa Malaysia website

Figure 1.1 also shows the Malaysian ringgit value of share buybacks through the period after the global financial crisis, which occurred in 2007 and 2008. This crisis caused a significant increase in the number of share buyback firms and the value of share buybacks during the subsequent periods. Accordingly, the value of share buybacks

dramatically increased in the years between 2010 and 2014 and reached the highest point in 2014 at approximately RM 2.2 billion. This significant magnitude of value Ringgits and the numbers of share buyback firms listed on Bursa Malaysia create a questionable issue about the motivations of managers to become involved in share buyback activities, suggesting that share buyback activities have significant complications for the earnings of firms.

Previous studies have identified several hypotheses that related to the motivations of firms to engage in share buyback programs worldwide, namely, the signalling undervaluation hypothesis (e.g. Abdul Latif & Taufil Mohd, 2013; Babenko, Tserlukevich, & Vedrashko, 2012; Dittmar, 2000; Gan, Bian, Wu, & Cohen, 2017; Vermaelen, 1981), the free cash flows hypothesis (e.g. Abdul Latif & Taufil-Mohd, 2013; Dittmar, 2000; Evans, Evans, & Gentry, 2003; Fenn & Liang, 2001; Gan et al., 2017; Grullon & Michaely, 2002; Jensen, 1986), the dividend substitution hypothesis (e.g. Dittmar, 2000; Fama & French, 2001; Jiang, Kim, Lie, & Yang, 2013; Miller & Prondzinski, 2017), the liquidity changes hypothesis (e.g., Barclay & Smith Jr, 1988; Brockman & Chung, 2001; Ginglinger & Hamon, 2007; Hillert, Maug, & Obernberger, 2012; Moore, 2017), the tax savings hypothesis (e.g., Bagwell & Shoven, 1989; Jacob & Jacob, 2013; Korkeamaki, Liljebloom, & Pasternack, 2010; Moser, 2009; Oswald & Young, 2004; Rau & Vermaelen, 2002), the take over-deterrence hypothesis (e.g. Bagwell, 1991; Billett & Xue, 2007; Hai & Doan, 2012) and the optimal capital structure hypothesis (e.g., Andriosopoulos & Hoque, 2013; Dittmar, 2000; Dixon, Palmer, Stradling, & Woodhead, 2008; Gan et al., 2017; Hovakimian, 2004; Miller & Prondzinski, 2017). Finally, stock options hypothesis was among these (Dittmar, 2000;

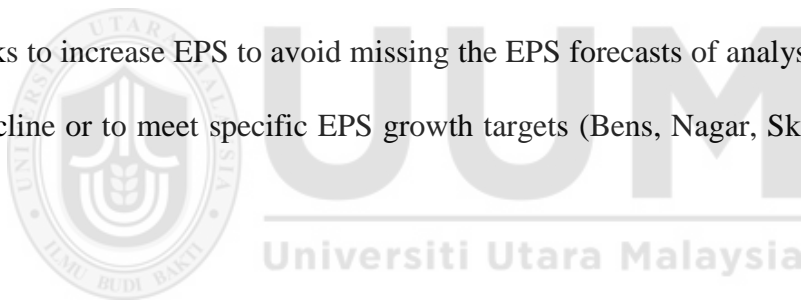
Fenn & Liang, 2001; Hurtt, Kreuze, & Langsam, 2008; Kahle, 2002; Lamba & Miranda, 2010).

The above-mentioned hypotheses related to share buyback are not necessarily mutually exclusive and all have significant empirical support when tested in developed market such as the United States (US) and the United Kingdom (UK), which operate in a corporate governance system with a comparatively high level of ownership dispersion, managerial autonomy and fraction of compensation that is performance-based (Brunswick & Columbia, 1998; Jansson & Larsson-Olaison, 2010). Generally, managers attempt to raise share price when they become under substantial pressure.

Previous studies indicate that share buyback programs mostly serve as positive economic signals to boost shares price (Abdul Latif, Taufil-Mohd, Wan Hussin, & Ku Ismail, 2014; Albaity & Said, 2016; Grullon & Ikenberry, 2000; Grullon & Michaely, 2004; Oswald & Young, 2004; Peyer & Vermaelen, 2009; Pradhan & Kasilingam, 2016). However, managers may engage in share buyback activities to send a false signal to investors (Chan, Ikenberry, Lee, & Wang, 2010; Hamouda & Ben Arab, 2013; Wu, 2012a). Wu (2011) found that the efficiency of signalling by share buyback programs is weakened for firms with more entrenchment problems, implying that share buyback are less informative for firms with higher level of managerial entrenchment. Fried (2005) indicated that insiders use share buyback activities to indirectly trade the shares of firms for themselves at a low price.

Share buyback activities have also started to attract the attention of scholars as a device for real earnings management, which firm managers use to manipulate earnings per

share (EPS) (Bryan & Mason, 2016; Burnett, Cripe, Martin, & McAllister, 2012; Chandren & Nadarajan, 2013; Farrell, Yu, & Zhang, 2013; Horan, 2012; Hribar, Jenkins, & Johnson, 2006). Share buyback is considered as an accretive share buyback when EPS is increased by at least one cent in comparison to the EPS without the effect of share buyback (Burnett et al., 2012; Hribar et al., 2006). Accretive share buybacks adjust EPS through modified outstanding shares that represent denominators of EPS equation, which is different from other real earnings management proxies that modify the nominator of EPS equation. Managers engage in accretive share buyback activities to manipulate EPS to match the forecasts of analysts (Bens et al., 2003; Bryan & Mason, 2016; Burnett et al., 2012; Farrell et al., 2014; Hribar et al., 2006). Hribar et al. (2006) and Myers, Myers, and Skinner (2007) provide evidence that firms employ share buybacks to increase EPS to avoid missing the EPS forecasts of analysts to prevent an EPS decline or to meet specific EPS growth targets (Bens, Nagar, Skinner, & Wong, 2003).



In Malaysia, Chandren and Nadarajan (2013) reported that more than 50% of share buyback programs over the period from 2001 to 2008 were accretive shares buyback, leading to significant change in the EPS of firms, which bought back their shares. Chandren and Nadarajan (2013) found a significant and positive association between accretive shares buyback and the EPS estimates of analysts. Recently, Abdul Latif, NishamTaufil, and Kamardin (2016) found that Malaysian firms frequently bought back their shares to manage reported EPS. Farrell et al. (2013) and Chandren, Ahmad, and Ali (2015) examined the role of mechanisms of corporate governance, board of directors (BOD) features and managerial ownership in mitigating real earnings

management through accretive share buybacks. They reported a significant relationship between corporate governance and accretive share buybacks.

However, this current study contributes to prior studies by exploring the impact of more mechanisms of corporate governance including audit committee (AC), audit quality, family ownership, and foreign ownership as well as employee stock options scheme (ESOS) besides BOD and managerial ownership on accretive share buyback activities as a tool for real earnings management.

Previous studies have revealed that managers engage in earnings management to meet the forecasts of analysts (Gunny, 2010; Skinner & Sloan, 2002), maximise stock price prior to security issuance (Graham, Harvey, & Rajgopal, 2005; Teoh, Welch, & Wong, 1998a; Teoh, Welch, & Wong, 1998b) and maximise managerial compensation (Cheng & Warfield, 2005; Healy, 1985). Furthermore, managers are involved in earnings management practices to avoid losses (Burgstahler & Dichev, 1997; Chandren, 2016; Roychowdhury, 2006).

Principally, managers use earnings management practices to hide the economic and financial information of firms, which may alleviate the quality of financial reporting and hence mislead current and potential investors. Thus, corporate governance mechanisms are essential to protect investors by aligning of the interests of shareholders with the interests of managers, which lead to the increased integrity of the financial reporting process and enhancing financial information reliability (Farrel et al., 2013; Watts & Zimmerman, 1986).

1.1.1 Corporate Governance Mechanisms and Accretive Share Buybacks

Effective mechanisms of corporate governance are more likely to enhance the quality of financial reporting than protect the rights of investors (Hussain, Hasnan, Sanusi, & Mahenthiran, 2016). These mechanisms decrease the information asymmetry between insider and outsider shareholders, and they improve the quality of financial reporting (Cohen, Krishnamoorthy, & Wright, 2004). According to agency theory and resource dependence theory, corporate governance mechanisms have significant roles in monitoring and controlling the actions of a firm's management (Al-Rassas & Kamardin, 2016; Dhaliwal, Naiker, & Navissi, 2010; Du, Jian, & Lai, 2017; Hillman & Dalziel, 2003; Hillman, Withers, & Collins, 2009). Managers may engage in earnings management actions to mislead investors about firms' performance. Thus, it is important for firms to have effective corporate governance devices to protect the rights of investors by providing precise and fair information on the firm activities (Abdul Rahman & Ali, 2006; Persakis & Iatridis, 2016; Yatim, Iskandar, & Nga, 2016).

Effective corporate governance mechanisms may decrease agency conflicts in firms and enhance the quality of financial information (Adiguzel, 2013; Al-Rassas & Kamardin, 2016; Pergola & Joseph, 2011; Song & Windram, 2004). Previous studies have provided empirical evidence that effective corporate governance mechanisms have negative relationships with earnings management practices (e.g. Al-Rassas & Kamardin, 2016; Epps & Ismail, 2009; Habbash, 2012; Saleh, Iskandar, & Rahmat, 2007; Shayan-Nia, Sinnadurai, Mohd-Sanusi, & Hermawan, 2017; Soliman & Ragab, 2014; Song & Windram, 2004). Thus, effective mechanisms of corporate governance are more likely to have the ability to mitigate practices of earnings management and then protect current and potential investors from misleading financial information.

The primary attention has been given to the main players of corporate governance including the BOD, the AC, and external auditors (Norwani et al., 2011). The BOD communally has responsibility for the long-term success of firms. The BOD plays a critical role in providing good governance and ethical practices for firms (SC, 2017). The key role of the BOD is to perform the supervision and monitoring of management actions on behalf of shareholders (Fama & Jensen, 1983; Jensen, 1986). In Malaysia, Companies Act 1965 in section 67A and the new Companies Act 2016 in section 14(2) states that listed firms are allowed to engage in share buyback programs.

Accordingly, the BOD has the responsibility for decisions involving share buyback activities. Thus, an effective BOD is more likely to restrain earnings management actions through accretive share buybacks than an ineffective one. Prior studies report a vital role for the BOD in mitigating accretive share buyback as a device for real earnings management. Farrell et al. (2013) documented that the presence of independent directors on the BOD mitigates accretive share buybacks. However, Chandren et al. (2015) in Malaysia found a positive impact of some features of the BOD including independence, CEO duality and BOD size on the accretive share buyback as a proxy for earnings management.

The AC also plays a crucial role in a governance structure of firms (Li, Mangena, & Pike, 2012; Madi, Ishak, & Manaf, 2014). An effective AC can bring the independent judgment and transparency that are required to monitor the process of financial reporting (SC, 2017). An AC with a suitable level of knowledge, skills, experience and commitment is critical for achieving its monitoring functions effectively (Bin-Ghanem & Ariff, 2016). Despite the significant role of the AC in the quality of financial report

information, previous studies have not considered its relationship with accretive share buyback activities. According to MCCG 2012, the AC has the responsibility for the truthfulness of the financial reports. This current study explores the effectiveness of BOD via independence, size, meetings, and financial expertise and AC effectiveness via independence, size, meetings, and financial expertise in constraining accretive share buyback activities as a device for real earnings management.

In addition to the BOD and AC, audit quality is considered to be another mechanism of corporate governance. Audit quality has a crucial role in limiting the ability of managers to use their discretion for earnings management (Balsam, Krishnan, & Yang, 2003; Becker, Defond, Jiambalvo, & Subramanyam, 1998; Chiang, Huang, & Hsiao, 2011; Elshafie & Nyadroh, 2014; Francis, Maydew, & Sparks, 1999; Francis & Yu, 2009; Houqe, Ahmed, & van Zijl, 2017; Lin & Hwang, 2010; Muttakin et al., 2017). More qualified auditors are more likely to help reduce violations of accounting standards and mitigate financial reports restatements (Elshafie & Nyadroh, 2014; Romanus, Maher, & Fleming, 2008). Francis and Yu (2009) indicated that Big 4 audit firms can realise better audit quality and practice more effective monitoring than non-Big 4 audit firms. Big 4 audit firms have more experience and knowledge about the clients and their specialisations in relationship to non-Big 4 auditors (Francis & Yu, 2009; Krishnan, 2003).

Ownership structure is also seen as another corporate governance mechanism that may mitigate agency problems between the management and shareholders of a firm (García-Meca & Sánchez-Ballesta, 2009; Farrell et al., 2013). However, high concentrated ownership creates agency conflicts (type II) between controlling shareholders and

outside investors (Claessens, Djankov, & Lang, 2000; Fan & Wong, 2002). The investor protection level depends greatly on the quality of the corporate governance system and a firm's ownership structure (Claessens et al., 2000; Fan & Wong, 2002). Wong, Loo, Mohd and Mohamad (2009) found the ownership concentration negatively affected the ability of intuitional investors to monitor a firm's management. Al-Rassas and Kamardin (2015a) also documented that ownership concentration has a positive effect on earnings management through discretionary accruals. Family-owned shareholdings dominate East Asian countries (Claessens et al., 2000; Filatotchev, Yung, & Piesse, 2005), and Malaysia is an emerging market with high concentrated shareholding (Abdul Rahman & Ali, 2006; Ball, Robin, & Wu, 2003; Fan & Wong, 2002; Ibrahim & Samad, 2011).

The Malaysian capital market has the broad presence of family-controlled firms in which family members hold important positions in the top management and dominant sensitive positions on BOD (Amran & Che Ahmad, 2010a; Chen, 2013; Haji, 2014; Hasnan, Rahman, & Mahenthiran, 2013). Previous studies have found a positive association between concentrated shareholdings by a family group with earnings management (Chi, Hung, Cheng, & Tien Lieu, 2014; Mohd-Saleh & Omar, 2014; Setia-Atmaja, Haman, & Tanewski, 2011; Tai, 2017). Despite the significant presence of family ownership in Malaysian market in which about 70% of the listed firms on the Bursa Malaysia are family controlled (Amran & Ahmad, 2010b; Claessens et al., 2000; Ibrahim & Samad, 2011), the existing literature does not examine the role of family-owned firms in determining accretive buyback activities as a proxy for real earnings management. Thus, this current study seeks to fill this gap.

With respect managerial ownership, previous studies have revealed a positive association between managerial ownership and earnings management practices (Al-Fayoumi, Abuyazed, & Alexander, 2010; Gopalan & Jayaraman, 2012; Halioui & Jerbi, 2012; Leuz, Nanda, & Wysocki, 2003; Oluku, 2017). However, Farrell et al. (2013) in the US and Chandren et al. (2015) in Malaysia have found that managerial ownership has an effective role in limiting accretive buyback activities.

Foreign ownership is also realised as an effective corporate governance mechanism, precisely in emerging markets with a low level of investors protections (Bayrakdaroglu, Ersoy, & Citak, 2012; Choi, Park, & Hong, 2012). Foreign investors can enhance corporate governance system through their participation in the BOD room (Yatim, Iskandar, & Nga, 2016). They have competitive features that would help transfer their specific knowledge to domestic firms (Choi et al., 2012). Prior studies have found a negative association between the proportion of foreign ownership and earnings management practices (Ben-Nasr, Boubakri, & Cosset, 2015; Guo, Huang, Zhang, & Zhou, 2015; Mohd Ali, Mohd Salleh, & Hassan, 2010).

Beside corporate governance mechanisms, employee stock options (ESOS) have been found to encourage managers to be involved in accretive share buyback activities. The stock options hypothesis argues that managers engage in share buyback programs to avoid dilution in EPS caused by the exercise of employee stock options (Bens *et al.*, 2003; Kahle, 2002). Dittmar (2000), Bens et al. (2003), and Weisbenner (2000) have provided empirical evidence that firms use share buybacks to handle the dilution in EPS when firms distribute stock options. Managers holding large stock options are more likely to manipulate earnings to meet performance forecasts (Bergstresser & Philippon,

2006; Cheng & Warfield, 2005; Houmes & Skantz, 2010). Thus, it is essential to investigate the linkage between stock options and accretive share buybacks.

Overall, based on the previous discussions, this current study examines the effect of the BOD' effectiveness, AC effectiveness, audit quality, family ownership, managerial ownership, foreign ownership and ESOS on accretive shares buyback activities as a device for real earnings management.

1.2 Problem Statement

Managerial decisions on payout policy are a fundamental issue related to the agency conflict between managers and shareholders (Jensen, 1986). Share buyback policy is another method to distribute cash to shareholders of a firm (Brown, Beekes, & Verhoeven, 2011; Dittmar, 2000; Grullon & Ikenberry, 2000; Grullon & Michaely, 2002). Management decides on share buyback on behalf of a firm (Ginglinger & Hamon, 2009). The managers of firms are involved in share buyback to decrease the number of outstanding shares and then increase the value of EPS, which is known as an accretive share buyback and classified by scholars as as real earnings management tool (Burnett et al., 2012; Hribar et al., 2006). Previous studies have provided empirical evidence that managers use accretive share buyback as a tool for real earnings management (Burnett et al., 2012; Farrell et al., 2013; Hribar et al., 2006). Accretive share buybacks increase EPS value through decreasing the outstanding number of shares that represent the denominator of the EPS equation.

Principally, managers engage in earnings management through real economic activities to match specific earnings targets rather than to increase a firm's performance in the

long term (Roychowdhury, 2006; Cohen et al., 2008). Earnings management actions lead to hide economic and financial information of firms, which may negatively affect the quality of financial reporting and mislead current and potential investors. Accordingly, using accretive share buyback in managing earnings may negatively affect the performance and financial report quality of a firm. The existing literature provides empirical evidence that share buyback programs are used by managers to mislead investors (Chan et al., 2010). Almeida, Fos, and Kronlund (2016) found that managers are willing to trade off employment and investments for involvement in share buybacks to meet EPS estimations. Accretive share buybacks are likely to be costly to firms because the cash used in the buyback is unavailable for profitable activities (Burnett et al., 2012).

In Malaysia, share buyback activities have become more prevalent during the last decade. Malaysian listed firms increasingly engaged in share buyback programs, where only 12 firms engaged in share buybacks in 1999 (Ramakrishnan, Ravindran, & Ganesan, 2007). Dramatically, the number increase by 2013 to reach more than 150 firms and the value of actual share buybacks was more than RM 2.4 billion as shown in Section 1.1 Figure 1.1. Behind the increase in share buyback trends, accretive share buybacks were also increased. Chandren and Nadarajan (2013) reported that more than 50% of share buyback activities of Malaysian listed firms from 2001 to 2008 were accretive share buybacks as presented in Figure 1.2. In other words, managers use share buyback policies to manage EPS to match the analysts EPS estimations.

Consistently, Siew-Peng and Isa (2015) surveyed the motivations of share buyback in the Malaysian context and found that 23% of the firm managers used share buyback

activities to manage EPS. Similarly, Abdul Latif, Taufil Mohd and Kamardin (2016) found that Malaysian listed firms frequently were involved in share buyback activities to manage reported EPS. These debates support that notion that firms in Malaysia are involved in share buybacks to manage EPS. This share buyback is known accretive share buyback, which is indicative for the real earnings management. Earnings management practices typically lead to misleading both existing and potential investors through hiding the real economic performance of firms. This shows the importance of corporate governance mechanisms to protect the investor's rights.

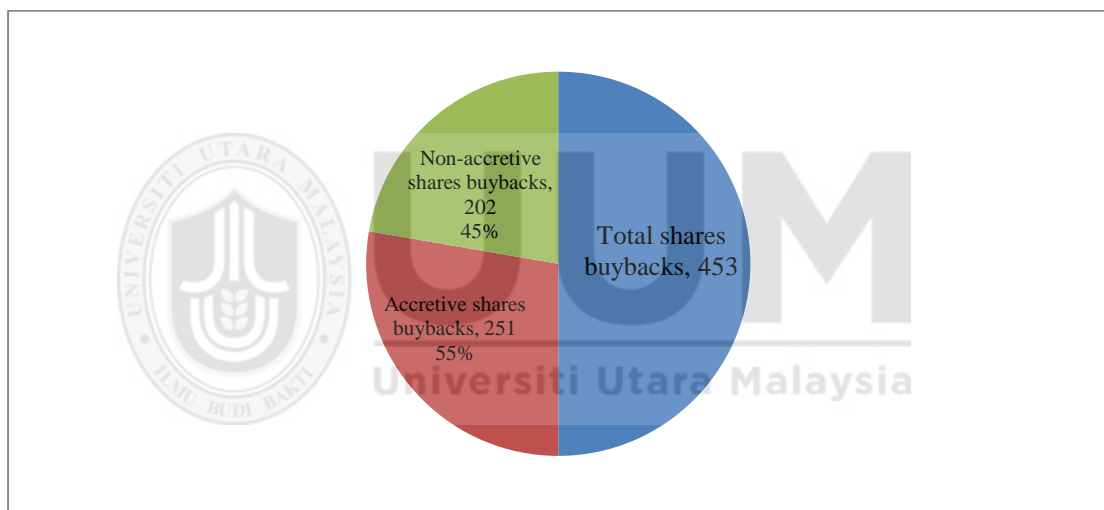


Figure 1.2
Accretive Share Buybacks in Malaysia over the Years from 2001 to 2008.
Source: Chandren and Nadarajan (2013)

As mentioned before, managers engage in earnings management practices to hide economic and financial information of firms, which may mitigate the quality of financial reporting and then mislead current and potential investors (Burnett et al., 2012; Roychowdhury, 2006). Thus, corporate governance mechanisms are an essential to protect investors by aligning of the interests of shareholders with the interests of

managers, which lead to the increased integrity and credibility of the financial report's information.

The issues of corporate governance are vital in emerging markets like Malaysia. The Asian financial crisis was the articulation point to improve the corporate governance system in Malaysia. In the subsequent periods, the Security Commission of Malaysia (SC) and relevant regulatory agencies delivered MCCG 2000, 2007, and 2012 to improve the roles and responsibilities of governance mechanisms, especially the composition of the BOD, AC and external auditors. Recently, MCCG 2017 aimed to strengthen the internalisation of the culture of corporate governance with an emphasis on accountability and transparency.

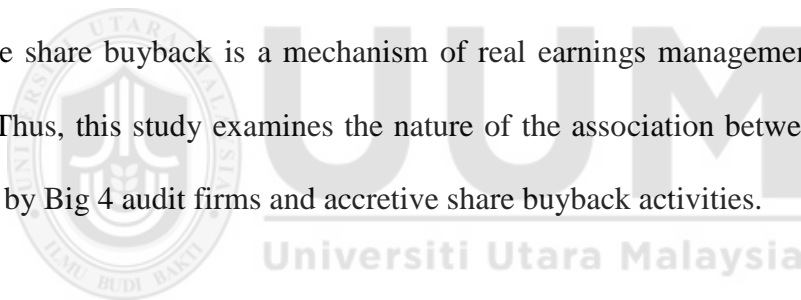
Previous studies such as Farrell et al. (2013) have investigated the relationship between the BOD independence and managerial ownership with accretive share buyback. In Malaysia, Chandren et al. (2015) examined the association between the characteristics of BOD (independence, size, meetings, CEO duality, multiple directorships) with accretive share buybacks. Their results revealed a significant role for corporate governance mechanisms in mitigating accretive share buybacks activities. Chandren et al. (2015) recommended future studies to investigate the relationship between corporate governance mechanisms and accretive share buyback in the scope of MCCG 2012.

For the contributions of this current study to the literature, MCCG 2012 and BMLRs state that the quality of financial reporting is the main responsibility of AC. The AC can mitigate agency problems by reducing the information asymmetry between insiders and minority shareholders (García, Barbadillo, & Pérez, 2012; Vafeas, 2005).

Consequently, an opportunity exists to extend the literature on AC effectiveness and accretive share buyback. Thus, this study combines four features of AC including independence, size, meetings, financial expertise as one variable called AC effectiveness to investigate the synergistic effect of AC effectiveness on accretive share buyback as a tool for real earnings management. That is because corporate governance is an interrelated system and is effective only in particular combinations rather than isolated best practices (Aguilera, Filatotchev, Gospel, & Jackson, 2008; Bin-Ghanem & Ariff, 2016).

Besides AC, this study examines the association between the BOD features and accretive share buybacks. The BOD is considered a primary mechanism of internal corporate governance (Cremers & Nair, 2005). It is responsible for monitoring the manipulative actions of management and ensuring that best interests of shareholders are promoted (Abor & Fiador, 2013; Andres & Vallelado, 2008). Previous studies have revealed that BOD effectiveness relies on several primary attributes, which include BOD independence, size, expertise and efficiency of the BOD (Abidin, Kamal, & Jusoff, 2014; Al-Rassas & Kamardin, 2015; S Chandren et al., 2015; De Andres, Azofra, & Lopez, 2005; DeZoort, Hermanson, & Houston, 2003; Fama & French, 2001). This current study considers four key features of the BOD, which include independence, size, meetings, and financial expertise. However, to be different from the study of Chandren et al. (2015), these features of the BOD are combined to create a composite score that represents the BOD effectiveness to determine the nature of the relationship with accretive share buyback as a proxy of real earnings management.

In addition, audit quality is an external mechanism of corporate governance to improve the quality of a financial report and to protect investors from misleading information. Effective audit quality is likely to mitigate earnings management practices. The managerial discretion in managing earnings can be constrained if the firm is audited by qualified auditors as proxied by Big 4 auditors (Becker et al., 1998; Chiang et al., 2011; Francis et al., 1999; Francis & Yu, 2009). Big 4 auditors have more skills and experience to audit the financial activities of clients and detect the violations in financial reports as well as having more knowledge about the clients and their specialisations in relative to non-Big 4 auditors (Francis & Yu, 2009; Krishnan, 2003). Accordingly, detecting real earnings management is a substantial challenge for external auditors compare to accruals-based earnings management (Burnett et al., 2012). Consistently, accretive share buyback is a mechanism of real earnings management as mentioned above. Thus, this study examines the nature of the association between audit quality proxied by Big 4 audit firms and accretive share buyback activities.



Furthermore, the Malaysian market is highly characterised by individual investors and family groups (Amran & Che Ahmad, 2010a; Claessens et al., 2000; Ibrahim & Samad, 2011; Omar & Mohd-Saleh, 2011). Unlike the developed market in which inside shareholders serve as an active monitoring device because of the widespread equity (Mohd Ali, Mohd Salleh, & Hassan, 2008; Yeo, Tan, Ho, & Chen, 2002), controlling shareholders in emerging markets with highly concentrated ownership like Malaysia may pressure management to realise their own interest at the expense of other shareholders (Fan & Wong, 2002; Mohd Ali et al., 2008). Prior studies have empirically found that dominant shareholders tend to engage more in opportunistic earnings

management to handle the negative effects of their self-serving actions (Kim & Yi, 2006).

Farrell et al. (2013) and Chandren et al. (2015) have found an effective role for managerial shareholdings in limiting accretive buyback activities. Foreign ownership is substantial in the Malaysian market and may have significant effects on firms governance and strategy (David, Yoshikawa, Chari, & Rasheed, 2006). Zakaria et al. (2013) have mentioned that limited studies exist on the relationship between ownership structure and share buyback activities in emerging markets. Despite of the substantial existence of family ownership in Malaysian market, which represent about 70% of listed firms on the Bursa Malaysia (Amran & Ahmad, 2010b; Claessens et al., 2000; Ibrahim & Samad, 2011), prior studies do not examine their role in determining accretive share buyback as a proxy for real earnings management. Further, previous studies on ownership structure ,including family controlled and managerial shareholdings, and earnings management activities have revealed inconclusive outcomes (e.g., Adiguzel, 2013; Alves, 2012; Mohd Ali et al., 2010; Saleh, Iskandar, & Rahmat, 2005; Setia-Atmaja, Haman, & Tanewski, 2011; Wang, 2006; Warfield, Wild, & Wild, 1995).

Thus, this current study explores more on the impact of ownership structures (family, managerial, foreign ownership) on accretive share buyback activities as they have been very significant in explaining the occurrence of share buyback activities in Malaysia. This study investigates the impact of ownership structure (family, managerial and foreign ownership) on accretive share buyback as a proxy for real earnings management.

Finally, regarding the employee stock options (ESOS). Previous studies have revealed that employee stock options are a significant explanation for the increased number of firms engaging in share buyback activities (Dittmar, 2000; Kahle, 2002; Lamba & Miranda, 2010). Furthermore, existing literature documents that firms with more managerial stock options are more likely to manage earnings by accruals to meet performance forecasts (Bergstresser & Philippon, 2006; Cheng & Warfield, 2005; Houmes & Skantz, 2010). To the best knowledge of the researcher, no prior study in Malaysia has discussed the association between employee stock options (ESOS) and real earnings management by accretive shares buyback. Particularly, firms with a high magnitude of stock options are more likely to be involved in accretive share buybacks to enhance EPS value. Therefore, this current study extends previous research by examining the nature of the relationship between ESOS and accretive share buybacks.

Based on the above discussion, whether the corporate governance mechanisms can mitigate the practice of accretive share buybacks as a mechanism to manage EPS remains ambiguous. Thus, this current study investigates the influence of corporate governance mechanisms (BOD effectiveness, AC effectiveness, audit quality, family ownership, managerial ownership, foreign ownership), on accretive share buyback. From the views of the stock options hypothesis, this study also examines the impact of stock options exercised on accretive share buybacks as a mechanism for real earnings management in Malaysia.

1.3 Research Questions

This study is arranged to answer questions related to examining the influence of corporate governance mechanisms and employ stock options (ESOS) on real earnings management through accretive share buybacks. This study uses composite measurements (scores) for both the features of BOD and AC to reflect their effectiveness. Specifically, this study seeks to answer the following questions:

1. Does BOD effectiveness (independence, size, meetings, and financial expertise) influence accretive share buyback used as a mechanism for real earnings management?
2. Does AC effectiveness (independence, size, meetings and financial expertise) influence accretive share buyback used as a mechanism for real earnings management?
3. Does audit quality influence accretive share buyback used as a mechanism for real earnings management?
4. Does ownership structure (family ownership, managerial ownership and foreign ownership) influence accretive share buyback used as a mechanism for real earnings management?
5. Do employee stock options (ESOS) influence accretive share buyback used as a mechanism for real earnings management?

1.4 Research Objectives

Specifically, this study is conducted to fulfil the following objectives:

1. To examine the effect of the BOD effectiveness (independence, size, meetings, and financial expertise) on accretive share buyback used as a mechanism for real earnings management;
2. To investigate the effect of AC effectiveness (independence, size, meetings and financial expertise) on accretive share buyback used as a mechanism for real earnings management;
3. To examine the influence of audit quality on accretive share buyback used as a mechanism for real earnings management;
4. To examine the effect of ownership structure (family ownership, managerial ownership and foreign ownership) on accretive share buyback used as a mechanism for real earnings management; and
5. To investigate the influence of employee stock options (ESOS) on accretive share buyback used as a mechanism for real earnings management.

1.5 Motivations for the Study

The researcher has several motivations for conducting this study in the Malaysian context. First, a share buyback phenomenon in Malaysia began during the Asian financial crisis 1997-1998. As mention before, the primary purpose was to stabilise the share price of listed firms (Isa et al., 2011). Subsequently, Malaysian listed firms increasingly engaged in share buyback programs from year to year. Only 12 firms engaged in share buybacks in 1999 (Ramakrishnan, Ravindran, & Ganesan, 2007), while the number grew by more than a dozen times by 2013 to reach more than 150 firms and the Malaysian ringgit value of actual share buybacks was more than 2.4 billion, as presented before in Figure 1.1. Further, Chandren and Nadarajan (2013) reported that more than 50% of actual share buyback activities in Malaysia were

accretive share buybacks over the period from 2001 to 2008, using shares buyback to manage EPS as shown in Figure 1.2. Therefore, this study is concerned with the issue of using accretive a share buyback as a method for real earnings management.

Second, issues of corporate governance are vital in emerging markets like Malaysia. MCCG 2000, 2007, and 2012 were delivered to improve the roles and responsibilities of governance mechanisms, especially the composition of the BOD as well as the independence of the AC and external auditors. Recently, MCCG 2017 aimed to strengthen the internalisation of the culture of corporate governance with an emphasis on accountability and transparency. Effective mechanisms of corporate governance are more able to introduce higher-quality information for investors protections. Therefore, share buybacks in firms with effective mechanisms of corporate governance have better credibility with investors than firms with weak corporate governance mechanisms (Babenko et al., 2012; Chahine, Zeidan, & Dairy, 2011; Wu, 2012b).

The third motivation is that Malaysia has an emerging capital market with a high ownership concentration by family groups and dominant individuals (Abdul Rahman & Ali, 2006; Amran & Che Ahmad, 2010a; Amran & Che Ahmad, 2013; Claessens et al., 2000; Fan & Wong, 2002). Based on a view of agency theory, the dominant shareholders may engage in share buybacks to gain personal interests at the expense of minority shareholders (e.g. Fried, 2005; Wu, 2011; Wu & Wang, 2015). Controlling shareholders may influence managers to undertake share buybacks to manage earnings targets. Several existing studies on the associations between corporate governance mechanisms and share buyback behaviours have been conducted in countries like the United States (Babenko et al., 2012; Chahine et al., 2011; Jiraporn & Ning, 2006),

Australia (Yarram, 2013), Sweden (Jansson & Larsson-Olaison, 2010), and Taiwan (Huang, Wang, Lin, & Jhao, 2010; Wu, 2012b).

However, limited studies have conducted in terms of using accretive share buybacks as a mechanism for real earnings management, especially in emerging markets like Malaysia. Chandren et al. (2015) found a significant relationship between the features of the BODs and managerial ownership with accretive share buybacks. Thus, it is essential to identify the nature of relationship between corporate governance mechanisms, including the BOD, the AC, audit quality, and the ownership structure (family, managerial, foreign ownership) with accretive share buybacks. Thus, this study extends previous studies by examining the impacts of corporate governance mechanisms on accretive share buybacks.

Finally, the primary purpose of employee stock options is to align the interests of management and shareholders as well as to gain their loyalty to maximise the wealth of shareholders (Bickley, 2012; Katan, Ariff, Chowdhury, & Mohamad, 2013). In the late 1980s, Malaysian firms were permitted to be involved in employee stock options scheme (ESOS) and could use 15% of their issued and paid-up capital to do so. Stock options in Malaysia became widely prevalent starting from the 1990s (Ghazali, 2012; Long, Gondyah, & Musibau, 2013), and more than 250 listed firms on the Bursa Malaysia became involved in stock options between the years from 1999 to 2007 (Katan et al., 2013). Recently, descriptive analysis has revealed that around 30% of accretive buyback firms were involved in ESOS over the years from 2010 to 2015. This statistic means that stock options are more likely to become a substantial motivation for accretive share buyback as a proxy for real earnings management.

1.6 Significance of the Study

This study contributes to the theoretical and practical views of corporate governance, accretive share buyback, and compensations policy in emerging market as follows;

1.6.1 Theoretical Significance

Prior studies like Bens et al. (2003), Hribar et al. (2006) and Myers et al. (2007) provided evidence that managers use share buyback programs as a device to manage EPS, which is called accretive share buyback. Regarding the role of corporate governance mechanisms on accretive buyback activities, previous studies have documented a significant relationship between several mechanisms of corporate governance and accretive share buyback. Farrell et al. (2013) in the United States examined the impact of firm features and BOD independence on accretive share buybacks. Burnett et al. (2012) examined the impact of audit quality on the trade-off between accruals-based earnings management and accretive share buyback. Furthermore, Chandren et al. (2015) explored the influence of BOD features including independence, size, duality, meeting and multiple directorships on accretive buyback activities in Malaysia.

Most existing research has been conducted in developed countries where there is a real separation between ownership and management which, in turn, created a traditional agency problem between them. However, this current study is conducted in an emerging market with high ownership concentration in which the agency conflict is between majority shareholders and minority shareholders. From the lenses of agency theory and resource dependency theory, this study extends previous studies by using

mechanisms of corporate governance such as the BOD, AC, audit quality, family ownership, managerial ownership, and foreign ownership to examine their association with accretive share buybacks. Further, drawn from stock options hypothesis, this study also investigates the relationship between employee stock options exercise and accretive share buybacks.

With respect to the association between the effectiveness of the BOD and AC with accretive share buyback as a mechanism for real earnings management, this study extends previous studies like Farrell et al. (2013) and Chandren et al. (2015) in two ways. First, this study explores the impact of AC effectiveness on accretive share buyback. To the best of this researcher's knowledge, very limited studies have examined the relationship between the AC and accretive share buyback activities. Second, the study uses a composite measure (score) for the effectiveness of the BOD and AC (independence, size, meetings and financial expertise) rather than isolated measurements, which may be more reliable and produce fewer measurement errors than using individual features to measure effectiveness of the BOD and the AC (Srinidhi, He, & Firth, 2014).

The present study also adds to the viewpoint of the agency theory in an emerging market, where the firms are controlled by major shareholders such as family groups or individual block shareholders, in which the agency problem is different from those of the developed countries where ownerships are widely dispersed. A noticeable feature in Malaysian market is that the ownership of firms is highly concentrated (Claessens et al., 2000; Fan & Wong, 2002). Despite family groups dominate the shareholdings of firms on the Malaysian market (Abdul Rahman & Ali, 2006; Amran & Che Ahmad,

2010a; Ibrahim & Samad, 2011), very limited studies have been conducted on the relationship between family-controlled firms and accretive share buyback activities as a mechanism for real earnings management. Thus, the current study fills this gap, and in doing so, enriches literature on the issue.

In addition, this study extends the literature by using the agency theory to explain the role of managerial shareholdings in restricting accretive buyback activities. The study is different from Chandren et al. (2015) and Farrell et al. (2013) who use direct shareholdings of executive directors and CEO shareholding as a measure of managerial ownership respectively. This study, however, uses both direct and indirect ownership (indirect shares refer to the shares of individual owners or firms through interests held in another related company or by the shares of their family members) of executive directors as a proxy to measure ownership directors.

Further, this study explores the impact of foreign ownership on limiting accretive share buyback activities. Regarding foreign ownership, this study depends on the perspective of the knowledge spillover hypothesis that predicts the knowledge of foreign investors is superior relative to that of local investors, which may lead to mitigating earnings management through accretive share buyback activities (Guo, Huang, Zhang, & Zhou, 2015). To the best knowledge of this researcher, very limited study has been conducted on the association between foreign ownership and accretive share buyback as a tool for real earnings management. Thus, this study is carried out to fill this gap.

Finally, this study contributes to existing literature of accretive share buyback and compensation policies from the lens of the stock options hypothesis. Prior literature in

developed market reports evidence that managerial stock options induce insiders to be involved in a share buyback to fund the exercise of stock options or mitigate dilution in EPS caused by stock options exercised (Kahle, 2002; Lamba & Miranda, 2010; Weisbenner, 2000). This study extends the prior literature by focusing only on accretive share buybacks, which represent those actual share buyback that lead to managing EPS (Bens et al., 2003; Hribar et al., 2006). Also, this study uses more recent data to examine the influence of employee stock options on accretive share buybacks in Malaysia.

1.6.2 Practical Significance

From the practical perspective, the findings of this study would be useful to stakeholders in Malaysia such as regulators, investors, policymakers, analysts and academicians. All of them need more understanding of the determinations and motivations that lead managers to engage in share buyback programs. More specifically, regulators require more understanding about shares buyback programs to assist them in creating new rulings and guidelines related to share buyback programs to provide more protection for minority shareholders, especially in emerging markets with highly concentrated ownership by families and controlling individuals such as in the case of Malaysia.

In addition, the outcomes of this study would be beneficial for policymakers and investors in Malaysian firms. This study would provide more understanding about the ability of corporate governance mechanisms including the BOD, the AC and external auditors to monitor and control the actions of managers. Particularly, managers may use accretive share buyback to manage EPS to gain personal benefits and mislead current and potential investors. This study also enriches investors and policymakers in

Malaysian listed firms with a better understanding of the role played by controlling shareholders, family ownership, managerial ownership and foreign ownership on share buyback policy. Finally, the relationships of this study provide a more precise picture for investors and concerned stakeholders on whether share buyback programs are employed as a device to expropriate uninformed minority shareholders, or as a payout method to mitigate agency costs and to maximise firms value.

1.7 Scope of the Study

This study investigates the effect of corporate governance mechanisms and employee stock options on accretive share buyback activities of Malaysian firms. This study focuses only on shares buybacks that are used as an earnings management device, called accretive share buyback. All non-financial firms with accretive share buyback listed on the Bursa Malaysia from 2010 to 2015 are selected to achieve this study's objectives. Financial listed firms are excluded as they are subjected to Financial Service Act 2013, which differ regarding regulatory requirements and have unique characteristics (Abdul Latif & Taufil Mohd, 2014; Chandren & Nadarajan, 2013; Yunos, Smith, & Ismail, 2010). To realise the objectives of this study, a quantitative approach depending on secondary data (collected from annual reports and DataStream database) is utilised.

This study uses the annual reports of firms available on the Bursa Malaysia website over the period from 2010 to 2015. The study has two reasons for choosing the given period; the first one is to avoid the effect of the global financial crisis as well as the immediate recovery year of 2009, and this allows examining the market during normal conditions, which started in 2010. The second reason is to cover the period around the scope of MCCG 2012 as suggested by Chandren et al. (2015). The sample covers until

2015 to avoid clashing with the new code of corporate governance MCCG 2017 that was developed during 2016, which established new rules and guidelines to improve the corporate governance system in Malaysia.

1.8 Organization of the Thesis

The first chapter presents the background of the study and identification of the research problem, research objectives, research questions, the significance and the scope of the study. The second chapter reviews the literature of the dependent variable, share buyback programs. This chapter involves several sections that discuss definitions, types, and motivations for share buyback programs. It also explores trends and regulations of share buybacks in Malaysia. Furthermore, the second chapter discusses the accretive share buybacks as a tool for real earnings management.

The third chapter reviews the underpinning theories, namely, agency theory, resource dependence theory, and the stock options hypothesis. It also has a literature review of the independent variables and their relationships with earnings management activities, including BOD effectiveness, AC effectiveness, audit quality, ownership structure (family, managerial and foreign), and employee stock options (ESOS).

The fourth chapter describes the research methodology used to accomplish the research objectives. It provides the theoretical framework, hypothesis development of the study, the research design, the measurement of variables, the sampling procedure and the procedure for data collection and finally the data analysis method. Chapter Five presents the descriptive statistics of the variables, diagnostic tests and regression results, discussions, and additional empirical analysis. This thesis concludes with

Chapter Six with a summary of the findings, study implications, limitations, recommendations for future research and the conclusion.



CHAPTER TWO

LITERATURE REVIEW (SHARE BUYBACK PROGRAMS)

2.0 Overview of the Chapter

The primary objective of this chapter is to discuss the literature on share buyback programs. This chapter initially enumerates and discusses share buyback as a phenomenon and its trends worldwide. It also reviews practices and regulations of share buyback in Malaysia. In addition, the current chapter discusses the motivations of shares buyback programs as well as the economic influence of shares buyback on share prices. Further, this chapter provides a review of the literature on using accretive share buyback as a device for real earnings management.

2.1 Share Buyback Programs

Share buyback is a mechanism to return excess cash to the shareholders by which a firm buybacks its shares from targeted shareholders, individuals or groups at a specific price (Grullon & Ikenberry, 2000). Firms make an announcement to inform shareholders of their intentions to engage in shares buyback programs; this process is named a share buyback announcement. Then, after a specific period, the firms begin buying their shares from shareholders; this action is named the trading or implementation of shares buyback. There are three primary methods firms use to undertake share buyback programs, namely, open-market share buyback, fixed-price tender offers and Dutch auction tender offers (Grullon & Ikenberry, 2000).

Grullon and Michaely (2004) and Rau and Vermaelen (2002) have indicated that over the last decade, open market share buyback has become the primary method of

corporate payout policy used by public listed firms. With an open market share buyback program, firms announce the total number of shares authorised for potential buybacks but offer no commitments about price, timing or even implementation of shares buyback (Grullon & Ikenberry, 2000). In recent years open market share buyback programs have become a significant payout method for many US firms. According to the data from Compustat, between the years 1984 and 2000 firms spent approximately 26% of their total annual earnings on buybacks. More than 90% of these buybacks are open market buyback programs (Grullon & Michaely, 2004).

Second, a fixed price tender offer is an off-market share buyback method (Zhang, 2008). Firms begin by making an announcement to invite shareholders for the tender of shares buyback over a period of time at a specified price reflecting some premium usually around 15 to 20% above the prevailing price in the market (Grullon & Ikenberry, 2000; Zhang, 2008).

Third, the Dutch-auction is also a fixed-price deal for a share buyback (Grullon & Ikenberry, 2000). Through this method, firms start the tender by announcing that it is looking for tendering specified proportion of its shareholding by the shareholders at a range of premium above the shares' market value (Comment & Jarrell, 1991; Grullon & Ikenberry, 2000). The shareholders respond to the tender through informing the firm within a specified time the price and the number of shares they are willing to sell (Zhang, 2008). At the close period of the offer, the firm collects the individual offers and categorises them based on the price to determine the precise price level at which the buyback is completed (Grullon & Ikenberry, 2000). The price stops at the point

when the aggregate number of shares equals the identified magnitude of the share buyback (Grullon & Ikenberry, 2000).

Recently, accelerated share buyback has become an innovative method of share buyback that has become popular (Chemmanur, Cheng, & Zhang, 2010). In this type of share buyback, investment banks play the role of mediator between a firm and shareholders, wherein the investment bank borrows the shares from its customers or lenders and trades the borrowed shares to firms (Bargeron, Kulchania, & Thomas, 2011). There are two separate transactions that should be applied for an accelerated share buyback, which include acquisitions of treasury stock and a forward contract of corporate stock settlement (Chemmanur et al., 2010).

2.2 Trends of Share Buyback Programs Worldwide

During the last decades the firms involving in share buyback programs have dramatically increased around the world. Share buybacks initially appeared in the United States in the late 1960s and became very popular by the mid-1980s (Cook, Krigman, & Leach, 2003) and have become an economically significant payout method (Ben-Rephael, Oded, & Wohl, 2011). In 1985, only 129 open-market share buyback programs were announced in the United States, whereas by 1996 they had reached 1,319 announcements in (Jagannathan & Stephens, 2003). Prior studies have reported that firms in the United States have spent more money annually on share buybacks than on dividend payments over the last two decades (Grullon & Ikenberry, 2000; Grullon & Michaely, 2002; Grullon & Michaely, 2004; Haw et al., 2011; Skinner, 2008). Grullon and Michaely (2002) reported that the volume of share buybacks had increased from 4.8% relative to earnings in 1980 to 41.8% in 2000.

Share buyback programs have become popular also in other developed countries besides the United States. For instance, in the United Kingdom, share buybacks started in the early 1980s and now occur with considerable frequency. Of the 489 share buyback announcements made by European firms from January 1980 to June 1998, firms in the United Kingdom alone accounted for 60% (293) of such buybacks (Benhamouda & Watson, 2010). Further, for the period from 2001 to 2004, the value of share buyback programs in the United Kingdom was more than 68 billion Euros (Benhamouda & Watson, 2010). In the Canadian market, only 62 open-market share buyback were announced in 1993 with a total value of 1,458.7 million Canadian dollars. However, there were 172 buyback programs with a total value of nearly 10 billion Canadian dollars in 1997 (Ikenberry, Lakonishok, & Vermaelen, 2000). According to Ginglinger and Hamon (2007), more than 350 firms embarked in share buyback over the period from 2000 to 2002 in France, with a value higher than 33,925 million Euros. In the late 1990s, share buyback were initially allowed in Asian countries such as Thailand, Malaysia, Singapore, Korea and Taiwan (Abdul Latif, 2010). Although share buybacks are new in these countries, the listed firms engaging in share buyback programs have significantly increased over time. For example, Wang, Lin, Fung and Chen (2013) show that an average 261 listed firms announced share buybacks each year from the inception year in 2000 until 2012 in Taiwan. Park and Jung (2005) showed that more than 990 firms engaged in share buyback activities from 1994 to 2000 in Korea. In the Japanese market, Zhang (2002) indicated that only 2 share buyback programs were announced in 1995 involving a total value around 25 billion Yen, while in 1997 more than 35 share buyback activities were announced with a total value of 394.2 billion Yen. Similarly, Hatakeda and Isagawa (2004) indicated that share

buyback announcements dramatically increase in Japan for the period from 1995 to 1998. Brockman and Chung (2001) observed that only 8 Hong Kong share buyback programs were announced in 1992, while in 1995 there were 100 share buyback announcements.

2.3 Share Buyback Programs in Malaysia

In September 1997, share buyback programs were allowed by the Malaysian market authority. The primary purpose of permitting share buyback programs was to stabilise the share price of firms during the Asian financial crisis (Isa et al., 2011). During the beginning period, only a limited number of firms embarked on open market share buybacks. However, in subsequent years, Malaysian firms started to gain sufficient knowledge related to buybacks, and, since then, firms have actively engaged in open market share buybacks activities in Malaysian market (Ramakrishnan et al., 2007).

Studies conducted by Ramakrishnan et al. (2007) and Abdul Latif (2010) showed that more than 300 Malaysian listed firms that represented 30% of all firms listed on the Bursa Malaysia engaged in share buyback announcement from 1997 to 2005. Table 2.1 sets out the number of firms involved in shares buyback during the years 2007 to 2013, as well as the Ringgits spent on buyback programs. As it appears in the table, listed firms embarking on actual share buyback activities significantly increased through the years from 2007 to 2013. Only 133 firms were engaged in buying back their shares in 2007, whereas more than 150 firms involved in buying back their own shares in 2013. The Malaysian ringgit value of treasury shares in 2013 was RM 3.597 billion which is significantly higher than the value of treasury shares in 2007.

Table 2.1

Number of Share Buyback Firms and Value RM of Treasury Shares of Malaysian Listed Firms from 2007 to 2015

Year	Numbers of Share Buyback Firms	Total RM Value of Treasury Shares (million)
2007	133	2,484
2008	162	3,169
2009	170	3,030
2010	142	2,959
2011	139	2,401
2012	153	3,044
2013	154	3,597
2014	123	3,371
2015	125	3,386

Source: Firms' annual reports and DataStream.

In July 1998, Malaysian Accounting Standards Board Technical Release (MASB-TR1) was launched to prescribe the appropriate accounting treatment for share buybacks and treasury shares (Abdul Latif, 2010). Shares buyback through open the market is the only buyback method allowed for firms listed on Bursa Malaysia (BMLRs, 2013). In the Malaysia environment, many statutory bodies are responsible for the establishment and implementation of share buyback programs, namely, the Securities Commission of Malaysia (SC), the Companies Commission of Malaysia (CCM), the Malaysian Accounting Standards Board (MASB) and the Bursa Malaysia (BM) (Abdul Latif, 2010).

The Companies Act 1965 in section 67A required that several conditions are met before Malaysian listed firms were allowed to engage in share buyback programs. First, the company must be solvent at the announcement date. Second, buyback activities must be an open market buyback. The third is that the buyback is made with honest intention and the best benefit for the firm. Recently, section 112 (2) of the Companies Act 2016 that has been enforced since January 2017 stated that engaging in share buyback should not lead to the firm being insolvent or its capital becoming impaired at the date of the solvency statement and the firm must still be solvent for six months after share buyback declaration.

The Companies Act 2016 in section 113 (5) also stated that the directors of the firm offering to become involve in a share buyback program shall make a declaration that the share buyback action is necessary for the firm and made in an honest intention and the interests of the firm. The Companies Act 2016 states that listed firms with actual share buybacks have three choices for shares to be bought back, namely, to cancel the shares bought, to retain the shares bought under treasury shares or to both cancel part or retain the others. The directors of a firm are allowed to distribute treasury shares to shareholders in the form of a share dividend or resell the treasury shares on the market of the stock exchange as provided in Subsection (3B) of the Act.

In addition, the Company Regulation Act 1966 in regulation 18A, part IIIA required the BOD of firms to meet to announce the intention of share buyback, which would be valid for six months from the date of the announcement. In addition, Regulation 18B requires the directors to get the approval of its intention from the Bursa Malaysia within seven days after the declaration of the intention.

Furthermore, the Malaysian Financial Reporting Standard, (MFRS 132 Financial Instrument: Presentation) requires firms that reacquire their shares from the open market to deduct those shares from the equity of the firm. The gain or loss should not be recognised in profit or loss on the shares repurchased, sold, issued or cancellation of the firm's equity. However, if the treasury shares are acquired and held by the companies or by other affiliates of the consolidated group, consideration paid or received shall be recognised directly in the equity section. In addition, MFRS 132 also set out that the number of treasury shares held should be disclosed separately either in the statement of financial position or the notes.

2.4 Motivations for Share Buyback Programs

The following subsections discuss various hypotheses that consider the motivations for managers to engage in share buyback activities.

2.4.1 Undervaluation Signalling Hypothesis

Miller and Modigliani (1961) argued that firms can convey information related to future cash flow through adjusting payout policy in case of imperfect financial markets. That is managers are better informed about the firms' real value than outside investors are. This information asymmetry may lead to instances in which the management of firms has good news about future profitability, which means the current stock prices cannot reflect this because outside shareholders have access only to public information (Andriosopoulos & Hoque, 2013; Grullon & Ikenberry, 2000). Firms may engage in buyback activities for signalling undervalued shares to the market, which can lead to a positive reaction in share prices around the events of shares buyback (Wu, Kao, & Fung, 2008). According to prior studies (e.g., Babenko et al., 2012; Dittmar, 2000; Abdul

Latif & Taufil Mohd, 2013; Louis & White, 2007; Vermaelen, 1981), firms engage in share buyback programs to signal whether the shares of firms are currently undervalued.

Dittmar and Dittmar (2008) conducted a survey that revealed that about 86% of managers supported the notion that undervalued shares were the most substantial motive for share buyback. Makasi and Kruger (2013) provided evidence that managers use buyback policy to signal undervaluation for investors. However, Rau and Vermaelen (2002) provided evidence that the signalling hypothesis is debatable because open market share buyback is not a cost signal and carries no obligation for a firm to buy back shares.

In the Malaysian context, Isa et al. (2011) reported evidence that pre-buyback period experiences consecutive price declines, which is consistent with the undervaluation signalling hypothesis. In addition, Abdul Latif and Taufil-Mohd (2013) empirically supported this hypothesis. Their results show that Malaysian firms buy back their shares relatively for signalling the undervaluation of stock prices and for better operating performance.

2.4.2 Free Cash Flow Hypothesis

In addition to undervaluation hypothesis, the free cash flow hypothesis posits that firms tend to exercise shares buyback when these firms hold a high level of free cash flows and have poor investment opportunities so that they can mitigate agency costs caused by free cash flow surplus (Easterbrook, 1984; Jensen, 1986). Jagannathan and Stephens (2003) indicated that high level of free cash flow may negatively affect the efficiency of a firm's capital operations. In other words, share buyback programs allow firms to

avoid investing in under-profit investments and signal the reduction in agency costs to the market, thereby leading to a positive price reaction following share buyback announcements. The association between the firm and the market is increased by distributing cash to shareholders when a firm has strong market monitoring, which leads to reducing agency costs (Wu et al., 2008).

Prior studies (e.g., Abdul Latif & Taufil-Mohd, 2013; Dittmar, 2000; Evans et al., 2003; Fenn & Liang, 2001; Grullon & Michaely, 2002b; Jensen, 1986; Jiang et al., 2013; Tsetsekos, Liu, & Floros, 1996) support the hypothesis of free cash flow. Dittmar (2000) found that US managers are more likely to buy back shares if they have high expected and unexpected cash flows. Furthermore, Fenn and Liang (2001) provided strong support for the excess cash flow hypothesis; the predicted signs were statistically and economically significant with three payout level regressions (share buyback, dividends, and total payouts). Chahine, Zeidan and Dairy (2011) reported evidence supporting the free cash flow hypothesis. However, Chan, Ikenberry and Lee (2004) examined free cash flows as an incentive to share buyback announcements but failed to find significant support for the free cash flow hypothesis.

2.4.3 Tax Saving Hypothesis

According to Miller and Modigliani (1961) in the absence of taxes, transaction costs, agency costs and informational asymmetries among managers and shareholders, the impacts of share buybacks and dividends are indifferent. Their model established the foundation of subsequent studies on corporate payout policies, namely, share buybacks and dividends. The difference in tax treatment between capital gains and dividends are one of the factors allowing investors to distinguish between dividends and share

buybacks in refunding free cash to shareholders. For example, a Malaysian ringgit of a dividend will be more valuable than a Malaysian ringgit of capital gains when the tax on the dividend is lower. Likewise, when the tax rate on capital gains is lower, investors are more likely to prefer share buybacks than dividends.

Chen (2006) argues that investors may have a biased evaluation of a company's value due to their discernment between dividends and capital gains. The tax advantage hypothesis assumes that investors may prefer to invest in a firm whose corporate payout policy aligns with their best interests. Consequently, managers would attempt to make a decision related to payout policy to be consistent with the best interests of their shareholders (Kawano, 2014). Lie and Lie (1999) investigated the impact of shareholder taxes on the choices for corporate payouts within various tax systems in the United States. They found that firms with a low tax rate for both dividends and capital gains tend to pay out cash to investors via shares buybacks rather than in the form dividends.

In a survey of 384 financial executives, Brav, Graham, Harvey and Michaely (2005) showed that more than 65% of the respondents said that dividend distribution decisions would not be affected by the decrease in dividend tax rates. In the United Kingdom, Rau and Vermaelen's (2002) study report evidence to support the tax saving hypothesis of share buyback programs. However, Oswald and Young (2004) replicated Rau and Vermaelen's (2002) study during the same period while using a more comprehensive sample. They showed a different picture in that the tax advantages failed to explain the surges in share buyback activities. They found that undervaluation issue still represented a significant driver of share buyback activities.

Moreover, Jacob and Jacob (2013) investigated the taxation effect on corporate payout choices for 25 countries. They claimed that taxation on dividend and capital gains were significant determinants of corporate payout choices internationally. Unlike developed countries such as the United States and the United Kingdom, tax treatments of share buyback and dividends in Malaysia are indifferent (Abdul Latif, 2010). According to the Single-Tier Tax System issued in the budget of 2008, shareholders are exempted from payment of personal income tax on the dividends; hence, dividends are paid after corporate income tax (Isa et al., 2011).

2.4.4 Dividend Substitution Hypothesis

Share buyback and cash dividends are mechanisms used by management to return cash to shareholders (Grullon & Michaely, 2002). The substitution hypothesis indicates that managers utilize share buybacks as a substitute payout method for dividends (Dittmar, 2000). Theoretically, when a firm paid cash dividends, its shares price would come down proportionally with an amount of dividends paid (Benhamouda & Watson, 2010). The announcement of corporate intention to buy back shares increasingly pushes the share price by an average return of 3 to 4% during the announcement period (Dittmar, 2000; Fama & French, 2001; Grullon & Michaely, 2002; Jiang et al., 2013). Positive price repercussions after buybacks certainly creates a strong inclination for a firm to choose buybacks rather than cash dividends.

Bagwell and Shoven (1989) indicated that managers learn to substitute share buyback for dividends to reduce the tax burden. Grullon and Michaely (2002) investigated the relationship between dividend forecast errors and buyback yields; the dividend forecast

errors turned to the negative as buybacks yield increased. The evidence also shows a negative relationship between share buyback expenditures and forecast errors of dividends. Along the same line, Brown, Handley, and O'Day (2015) tested the association between share buybacks and dividend changes in an environment without tax variation between capital gain and dividend payments. Their findings supported the substitution hypothesis between dividends and share buybacks.

Nevertheless, Dittmar's (2000) study provided weak evidence to support the hypothesis that suggests a company buys back its shares as a substitute for dividends. A survey by Brav et al. (2005) showed that, for managers, dividend decisions are a priority to investment decisions, which are, in turn, prioritized over buyback decisions. Whereas, Abdul Latif and Taufil-Mohd (2013) found that firms consider shares buyback as a complement to dividends but not as a substitute in Malaysia.

2.4.5 Optimal Capital Structure Hypothesis

The principle of target capital structure has a primary role in several approaches to corporate financing (Hovakimian, 2004). This hypothesis argues that managers may employ share buybacks to adjust the company's capital structure intentionally. For instance, a survey conducted by Dixon et al. (2008) provided empirical evidence that the primary motive for share buybacks in the United Kingdom was to accomplish an optimal capital structure.

When a firm's leverage is lower than the target ratio, a company is more likely to buy back their shares to reduce the level of equity and consequently increase the debt ratio (Abdul Latif, 2010; Andriosopoulos & Hoque, 2013; Dittmar, 2000; Dixon et al., 2008).

Fried (2005) found evidence that firms may use shares buyback to discharge the required changes in capital structure between equity and debt. Hovakimian (2004) assumed that firms prefer an equity adjustment (issuing or share buyback) over debts to reach their target leverage. However, the results showed that company uses issuing debt rather than issuing equity or using a share buyback to achieve the target leverage.

2.4.6 Liquidity Changes Hypothesis

There are two competing arguments concerning how share buyback programs can influence the liquidity of the shares (Chemmanur et al., 2010). The first argument suggests that a share buyback may create competition for market producers and potentially increase the liquidity of the shares. The second argument is that, because managers have an informational advantage over outside investors, they would trade strategically on this information when engaging in open-market share buyback programs. This can widen the bid-ask spreads of the firm's stock and then reduce firm's liquidity (Chemmanur et al., 2010).

Consistent with the second argument, Barclay and Smith (1988) propose that US firms prefer to pay dividends to shares buybacks, despite dividend tax disadvantages, because shares buybacks reduce liquidity. Using the annual bid-ask spread as a proxy for changes in liquidity, Barclay and Smith (1988) found that the bid-ask spread during open market announcements increases, which means that liquidity has decreased. Decreased liquidity implies that an increase exists in a firm's cost of capital, which, in turn, could lead to lower prices (Barclay & Smith, 1988).

However, McNally and Smith (2011) investigated the impact of Canadian open market share buybacks on liquidity and provided evidence that supports the role of share buybacks in making stocks of the firms more liquid in a comparison of the periods before share buybacks and non-share buyback days. Hillert et al. (2012) studied the association between share buyback and liquidity. They showed evidence that a small share buyback consumes liquidity whereas more significant buyback enhance liquidity.

2.4.7 Stock Options Hypothesis

The innovation of using a firm's stock as compensation for executives and employees under stock options schemes may be considered as one factor that helps explain the increase in buyback trends (Dittmar, 2000; Kahle, 2002; Lamba & Miranda, 2010). Wu et al. (2008) documented two reasons for firms with stock options to embark on share buyback programs, namely, to fund outstanding executive-employee stock options and to get positive reactions for the price of stock options that are exercisable in the near future. The relationship between stock options and accretive share buyback is discussed in more detail in Sections 3.1.3 and 3.8.

2.4.8 Takeover Deterrence Hypothesis

All previously mentioned hypotheses of share buybacks are related to the internal decisions of firms that affect the company and its shareholders (Dittmar, 2000). Managers may employ share buyback activities to influence the relationship between the company and outsiders (Bagwell, 1991; Billett & Xue, 2007; Dittmar, 2000; Hai & Doan, 2012). Dittmar (2000) argued that share buyback can increase the acquisition price because shares with the lowest reservation value have been selected in share buyback activities by shareholders. Therefore, a share buyback can be employed as a

tool to prevent a takeover because undertaking in share buyback behaviour may lead to increased share prices (Bagwell, 1991).

2.5 Economic Effect of Share Buyback Programs

As mention before, prior studies have reported that the primary motivations for share buyback programs are undervaluation and the free cash flow hypotheses, which explain the positive performance of shares for share buyback events (Albaity & Said, 2016; Dittmar, 2000; Grullon & Ikenberry, 2000; Grullon & Michaely, 2002; Kahle, 2002; Su & Lin, 2012). The extant literature indicates that share buyback programs mostly serve as positive economic signals that are beneficial to investors (Abdul Latif, Taufil-Mohd, Wan Hussin, & Ku Ismail, 2014; Grullon & Ikenberry, 2000; Grullon & Michaely, 2004; Oswald & Young, 2004; Peyer & Vermaelen, 2009; Pradhan & Kasilingam, 2016).

Numerous studies have focused on the short run period to examine the initial effect of a buyback announcement on share price performance (Abdullah, 2007; Haw, Ho, Hu, & Zhang, 2011; Ikenberry, Lakonishok, & Vermaelen, 2000; Isa, Ghani, & Lee, 2011; Isa & Lee, 2014; Khin, Tee, & Ying, 2011; Pradhan & Kasilingam, 2016; Zhang, 2005), whereas others have focused on the long-term performance of firms (Abdul Latif *et al.*, 2014; Albaity & Said, 2016; Lie, 2005; McNally & Smith, 2007; Pradhan & Kasilingam, 2016; Su & Lin, 2012; Yook, 2010). Zhang (2005) examined the effect of an actual share buyback on share price performance. The study found that small firms are more likely gain higher abnormal returns in immediate market reactions to the event of a buyback in comparison to large firms. Further, Mudipalli and Ramana (2014) investigated the impact of open market share buyback announcements on the

performance of shares and found that shares are undervalued before the announcement of share buyback programs. They also provided evidence that positive abnormal returns after share buyback announcements indicate that market is reacting positively to the news of share buybacks announcements.

2.6 Share Buyback as a Real Earnings Management Device

Healy and Wahlen (1999) said that earnings management occur “when managers use judgment in financial reporting and structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers” (p. 368). Earnings management is defined as an accounting technique practised by the managers of firms who rely on their discretion to manipulate or manage earnings reported in financial reports (Chandren, 2016). Commonly, managers are involved in earnings management actions to achieve certain objectives.

Prior literature reveals that the managers of firms engage in earnings management for several reasons, which are: to meet analyst’s forecasts (Chandren, Ahmad, & Ali, 2015a; Chandren, Ahmad, & Ali, 2015b; Gunny, 2010; Skinner & Sloan, 2002), to maximise stock price before security issuance (Graham, Harvey, & Rajgopal, 2005; Teoh, Welch, & Wong, 1998a; Teoh, Welch, & Wong, 1998b), and to increase manager’s wealth (Cheng & Warfield, 2005; Healy, 1985). Based on the guidelines of the capital markets, analyst-expected EPS is considered as a performance benchmark (Burnett et al., 2012). Firms that constantly meet or beat analysts’ EPS expectations experience higher credibility and valuation premiums (Brown & Caylor, 2005; Graham et al., 2005).

Managers have two broad types of mechanisms to engage in earnings management (Chandren, 2016). First, accrual-based earnings management arises when managers decisively select influencing earnings using accounting choices and estimations (Bhaumik & Gregoriou, 2010; Leuz, Nanda, & Wysocki, 2003). Second, real earnings management involves managerial decisions affecting both cash flows and reported earnings, such as capital investment decisions, research and development expenditures and share buyback programs (Burnett et al., 2012; Chandren, 2016). Both mechanisms of earnings management are questionable because managers employ them to change outcomes of firms to mislead investors or to influence accounting-linked contractual provisions (Healy & Wahlen, 1999).

Real earnings management occurs through manipulating operational activities that directly influence cash flows (Sun, Lan, & Liu, 2014). Roychowdhury (2006) has defined the activities of real earnings manipulation as “departures from normal operational practices, motivated by managers’ desire to mislead at least some stakeholders into believing specific financial reporting goals have been met in the ordinary course of operations” (p. 337.) Cohen et al. (2008) provided evidence that real earnings management practice increased in the period after SOX, which means that firms have substituted accrual-based earnings management by the methods of real earnings management.

Share buybacks that are potentially increasing reported EPS are typically in the form of open market share buybacks, occurring when firms buy back their shares from the open market (Lin, Chen, You, & Chang, 2009; Vermaelen, 2005). This kind of share buyback

is named accretive share buyback (Burnett et al., 2012; Hribar et al., 2006). The net impact of share buybacks on EPS depends jointly on three elements, namely, the timing of the buyback, the number of shares in the buyback and forgone future returns from the cash used to buy back shares (Horan, 2012; Hribar et al., 2006).

The first two elements, the timing of the buyback and the number of shares bought back, increase EPS by decreasing the denominator of EPS equation. The timing of buyback matters, because when the share buybacks happen at the beginning of the financial period, these shares are usually removed from outstanding shares for the whole period, whereas if the shares buyback happens at the end of the fiscal period, the EPS denominator is unaffected in that period (Farrell et al., 2013). However, the third element decreases EPS by reducing the numerator because of foregone returns of cash used in the buyback. Share buyback programs are accretive only when the timing and the amount are sufficient to outweigh the decreative impact of the foregone returns (Horan, 2012; Hribar et al., 2006).

Bens et al. (2003) examined employing share buybacks to mitigate EPS dilution caused by the exercise of employee stock options. They found that share buybacks increase in the years when managerial stock options related to EPS dilution increases and annual earnings are below the level required to sustain past EPS growth rates. Along the same line, Hribar et al. (2006) indicated that firms engage in share buyback programs to meet analysts' EPS forecasts. Furthermore, Burnett et al. (2012) provided evidence that high audit quality firms are more likely to use share buyback programs to manage EPSs and are less likely to use accrual-based earnings management because the risk for deducting discretionary accruals is high.

In Malaysia, Chandren and Nadarajan (2013) examined whether firms listed on the Bursa Malaysia engage in activities related to accretive share buybacks. The authors also attempted to identify the nature of the association between the amount of accretive share buyback and EPS analysts' forecast under the lens of prospect theory. The results showed that 251 of the sample observations of 453 share buyback firm-observations over the years from 2001 to 2008 were accretive shares buyback, which represents 55% of actual buyback activities as presented in Chapter One, Figure 1.2. The results also show that firms engage in accretive share buybacks to match analysts' EPS expectations.

Moreover, Abdul Latif, NishamTaufil, and Kamardin (2016) found that Malaysian firms frequently bought back their shares to manage reported EPS. Recently, Chandren, Ahmad, and Ali (2017) examined the impact of accretive buyback activities on firm performance and found no adverse effects for accretive buyback on the long-term performance of firms. The current study investigates the role of corporate governance mechanisms and stock options (ESOS) in limiting the practices of real earnings management, proxied by accretive share buyback activities of Malaysian firms.

2.7 Summary

This chapter comprised a review of the definitions and types of share buyback programs. It also displayed the trends of share buybacks activities in some developed countries and many Asian markets. This chapter discussed share buyback activities in Malaysia in terms of trends and regulations. Further, the motivations and the economic

effect of share buyback programs were discussed in this chapter. Finally, the current chapter presented the accretive share buyback as a device to manage EPS.



CHAPTER THREE:
UNDERPINNING THEORIES, CORPORATE GOVERNANCE
MECHANISMS, OWNERSHIP STRUCTURE, AND ESOS

3.0 Overview of the Chapter

This chapter mainly reviews the theoretical and empirical literature that has been carried out in the area of this study. This chapter starts with a discussion of the underpinning theories of the current study including agency theory, resource dependence theory and the stock options hypothesis. It also discusses the connections of corporate governance mechanisms, namely, BOD effectiveness, AC effectiveness and audit quality with share buybacks and earnings management activities. The chapter also contains a debate about ownership structure variables including family, managerial and foreign ownership with share buybacks and earnings management. Finally, the role of employee stock options in accretive share buyback is presented in this chapter.

3.1 Underpinning Theories

This section highlights the theories utilised in the current study. Although several theories are related to corporate governance mechanisms, this study focuses on agency theory and resource dependency theory, which has become prominent in the recent times. This study also considers the stock options hypothesis as motivation for accretive share buybacks.

3.1.1 Agency Theory

Berle and Means's (1932) study regarding the separation between shareholding and control of great corporations is a fundamental source of agency theory (Walsh & Seward, 1990). Jensen and Meckling (1976) established the agency theory to clarify the

association between the principal (shareholders) and the agent (managers). Jensen and Meckling (1976) explained the agency relationship as a contract between the owners and management authorising the second party (management) to make decisions pertaining to the benefits of the first party (owners) and then maximising the value of the firms. However, the agency theory suggests that a manager would tend to maximise their personal interests at the expense of maximisation of shareholders' wealth due to the information asymmetry among the managers and owners (Claessens et al., 2000; Fama, 1980; Fama & Jensen, 1983; Jensen & Meckling, 1976).

However, in countries having a high ownership concentration, agency problems stem from the interest conflicts between insider shareholders (majority) and outside shareholders (Fan & Wong, 2002; Jensen & Meckling, 1976; La Porta, Lopez-De-Silanes, & Shleifer, 1999). Controlling shareholders who are also the managers of a firm may exert manipulation actions to achieve personal interests rather than maximising the wealth of shareholders especially those of minority shareholders (Omar & Mohd-Saleh, 2011). Because insiders hold more information on a firm's positions than outside shareholders, agency theory predicts that insiders may choose the method and amount of payout policy that maximises their interests instead of maximising the wealth of shareholders (Jensen, 1986).

Jensen and Meckling (1976) argued that the ownership structure may affect the structure and amount of corporate payout policy under the existence of agency costs. Faccio, Lang, and Young (2001) provided evidence that the agency problem in Asian countries exists between minority shareholders and controlling shareholders because family and individual investors highly concentrate the ownership in those countries.

Jiraporn (2006) argued that a strong protection mechanism for shareholders has a significant and positive influence on share buyback programs whereby they force managers to return cash via share buyback programs. For example, corporate managers may engage in share buyback programs to gain personal benefit from a positive performance of share price (Chan et al., 2010; Wu, 2012a) or a modification of EPS (Burnett et al., 2012).

A share buyback is a method to return cash from the firm to shareholders (Dittmar, 2000; Grullon & Ikenberry, 2000; Grullon & Michaely, 2002). Prior studies have suggested that share buyback programs are commonly realised as positive economic signals that are beneficial to investors (Abdul Latif et al., 2014; Grullon & Ikenberry, 2000; Grullon & Michaely, 2004; Oswald & Young, 2004b). Therefore, when managers are under substantial pressure to raise share price, they may announce share buyback programs to send a false signal to investors (Chan et al., 2010; Wu, 2012a). In addition, the discretion provided by regulations grants managers the flexibility to employ share buyback programs as a method to manipulate EPS to match analysts' forecasts (Bens et al., 2003; Chandren & Nadarajan, 2013; Farrell et al., 2014; Hribar et al., 2006).

Furthermore, De Cesari, Espenlaub, Khurshed, and Simkovic (2012) provided evidence that share buyback programs are timed for achieving benefits for non-selling shareholders, and these benefits are significantly linked to ownership structure. Fried (2005) disputed that non-selling owners gain benefits from the buyback process pro rata to their pre-share buyback shareholdings. Fried (2005) found that the larger the ownership of insiders, the more they benefit and the greater are their motivations to

time a share buyback. In Malaysia, Abdul Latiff and Taufil Mohd (2014) reported a strong relationship between managerial ownership and actual share buyback activities. Siew-Peng and Isa (2015) conducted a survey about managers' incentives to be involved in share buyback activities in Malaysia and indicated that 23% of the managers engaged in buyback activities to manage reported EPS. Recently, Abdul Latif, NishamTaufil, and Kamardin (2016) provided evidence that Malaysian firms were frequently involved in share buyback activities to manipulate reported EPS.

Overall, agency theory utilises the concern concept in reviewing the role of corporate governance mechanisms to oversee managers of the public listed firm worldwide. Agency theory considers corporate governance mechanisms, internal mechanisms, external auditing and ownership as reducing agency problems created from the separation of the ownership of the firms and their control, as well as the agency problem between the controlling shareholders and minority shareholders in the case of an emerging market with high ownership concentration (Claessens et al., 2000; Epps & Ismail, 2009; Jensen & Meckling, 1976; Saleh et al., 2005). Corporate governance mechanisms mitigate the opportunistic behaviours of management, which leads to decrease agency costs (Fama, 1980; Fama & Jensen, 1983; McKnight & Weir, 2009; Shleifer & Vishny, 1986).

Based on the agency theory and the above scenario, corporate governance through the BOD, the AC, and external auditing is a device for shareholders to monitor management's actions accurately. Weak monitoring of the management may provide chances for managers and dominant shareholders to satisfy their own interests. As mentioned above, share buyback programs are employed by firm managers to manage

EPS. Therefore, this current study assumes that effective corporate monitoring through good corporate governance may minimise management's accretive shares buyback activities. In addition, this study purposes that a firm's ownership structure may substantially influence the accretive shares buyback activities.

3.1.2 Resource Dependence Theory

In addition to agency theory that explains the role of corporate governance attributes in monitoring firm management, the resource dependence theory is another important theory that clarifies the role of external directors with relevant knowledge and experience in enhancing firms' control and performance. Pfeffer (1972) and Pfeffer and Salancik (1978) developed this theory to highlight the function of non-executive directors (external directors). The theory presumes that non-executive directors on the BOD provide more choices of resources for a firm and enhances its ability to contact with the external environment, which leads to a decrease the uncertainty in the market (Hillman & Dalziel, 2003; Kassim, 2013; Pfeffer, 1972).

Much of the existing literature that employs resource dependency theory examines the BOD focusing on BOD composition and BOD size as indicators of the ability of the BOD to provide value-added resources for control and performance (Dalton, Daily, EllstrandL, & Johnson, 1998; Hafsi & Turgut, 2013; Ho & Williams, 2003; Ishak & Manaf, 2013; Sultana et al., 2015; Zahra & Pearce, 1989). Dalton et al. (1998) conducted a meta-analysis regarding the role of BOD attributes such as size and composition in relationship to firm performance and concluded that the success of firms depends on their interactions with the external environment. Hillman, Cannella, and Paetzold (2000) advocated that directors provide various valued-added resources a firm

including unique skills, special information and access to key constituents such as suppliers, educators, environmental groups and government policymakers. Those resources provided by external directors may assist firms in mitigating the management's manipulation actions and improving a firm's value.

According to resource dependence theory, a larger size of AC provides a chance to appoint members with various value-added qualities including knowledge, expertise and experience (DeZoort et al., 2003; Turley & Zaman, 2007). Experienced members enable the AC to hold power over financial accounting information and linked disclosures instead of relying on corporate management and the external auditors (Sultana, Singh, Der Zahn, & Mitchell, 2015). For instance, Ghafran and O'Sullivan (2013) also reported that a consensus existed among previous studies that the independence and financial expertise of ACs have a positive effect on the quality of financial statements and alleviation of manipulation behaviours.

Finally, based on the dependence resource theory, a large proportion of external directors on the BOD and its sub-committee may provide firms with skills, experience and knowledge that would mitigate managerial behaviours related to earnings manipulation. Prior studies have shown that share buyback programs are often employed by insiders for opportunistic purposes like managing EPS (Hribar et al., 2006) or the expropriation of rights and benefits of minority shareholders (De Cesari et al., 2012; Massa et al., 2007). Thus, this current study proposes that a large number of outside directors on the BOD and its committees with relevant skills and experience in the BOD and its committees may lead to constraining activities of accretive shares buyback.

3.1.3 Stock Option Hypothesis

The most mainly debated hypotheses of share buybacks are the signalling undervaluation hypothesis and free cash flow hypothesis. However, they are not enough to explain the dramatic increase in the share buyback programs. The innovations of using the stock of firms as compensation for executives and employees under stock options schemes may be considered to be one of the factors that explain the increase in buyback trends (Kahle, 2002). Two reasons exist for the firms with stock options scheme to embark on share buyback programs (Kahle, 2002; Wu et al., 2008). The first reason is that, when firm executives have a large number of stock options, they have incentives to engage in share buybacks, which leads to improving the price of undervalued price. The second reason is to avoid a reduction of EPS caused by stock options (Wu et al., 2008). Managers may frequently be involved in share buyback activities to increase stock prices that might benefit managerial stock options (Franks & Mayer, 2017).

Dittmar (2000) and Weisbenner (2000) provided evidence that firms use shares buyback to decrease the dilution of EPS caused by stock options. Consistently, Kahle (2002) presented evidence that the total stock options of a firm have a positive association with share buyback programs. Kahle (2002) also found that exercisable stock options are significantly and positively associated with share buyback, whereas unexercisable stock options are not related share buyback, which means that firms embark on buyback programs to fund exercisable stock options. Bens, Nagar and Wong (2002) and Bens et al. (2003) focused on the dilutive impact of employee stock options (ESOS). Their results indicate that a share buyback is a managerial response to dilution in reported EPS caused by the stock options that are exercised.

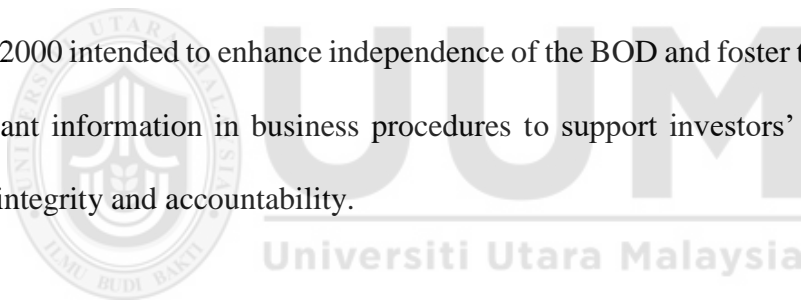
Lamba and Miranda's (2010) study showed that the higher percentage of executive stock options outstanding, the more probable it is for firms to undertake larger open-market share buyback programs. Lamba and Miranda (2010) also found that firms with a greater amount of executive stock options have less negative abnormal returns before a share buyback announcement. Conversely, Dominguez (2010), who examined the impact of employee stock options on share buybacks in the Swedish market, found no relationship between stock options and the magnitude of the payout policy (dividends payment and share buyback activities).

This current study employs the stock options hypothesis, which assumes that firms with a significant level of stock options are more likely to exercise accretive shares buyback activities. As mentioned before, firm managers use share buybacks to mitigate the dilution of EPS incurred by the use of stock options.

3.2 Corporate Governance in Malaysia

The Asian financial crises 1997-1998 has been considered as a wake-up call for the need for high-quality corporate governance in Malaysia (Liew, 2007; Sulong & Nor, 2008). The corporate landscape in Malaysia has been blemished by several cases of bad corporate governance firms such as Malaysia Airlines System, Renong and Perwaja Steel (Norwani et al., 2011). Several reasons are behind the failure of firms listed in the Malaysian market, which led to a weakness in investors' confidence. Among these reasons were a lack of good corporate governance, insufficient transparency and the ineffectiveness of regulatory agencies in enforcing legislation in punishing offenders and protecting minority shareholders (Hussain et al., 2016).

Therefore, the Financial Committee of Corporate Governance (FCCG) established the Malaysian Institute of Corporate Governance (MICG) to increase awareness and practices of good corporate governance in Malaysia (Muhamad Sori & Karbhari, 2005). The Malaysian Code of Corporate Governance (MCCG) was published in March 2000. MCCG 2000 is divided into three parts, including principles and best practices and principles and best practices for other corporate participants, which firms should implement in their processes to help realise ideal governance framework. The code discusses several issues including the composition of the BOD and procedures of for the recruitment and remuneration of directors as well as the structure and functions of BOD committees. Some recommendations by the MCCG 2000 have already been adapted into the Bursa Malaysia Listing Requirements (BMLRs). Furthermore, the MCCG 2000 intended to enhance independence of the BOD and foster the transparency of relevant information in business procedures to support investors' confidence and sustain integrity and accountability.



The MCCG 2000 was revised in October 2007 by the Securities Commission of Malaysia (SC). The primary aims of the revised code (MCCG 2007) were to strengthen the BOD and ACs (SC, 2007). According to MCCG 2007, the BOD should undertake procedures to be carried out annually for assessing its effectiveness, individual director the BOD's committees. The revised code in 2007 also provided several attributes for proposed directors such as knowledge, skills, expertise, integrity, professionalism and the ability of those directors to discharge their responsibilities (Kamardin & Haron, 2011). Regarding ACs, MCCG 2007 requires the AC to comprise at least three members from the directors of the BOD, all of whom must be non-executive directors and the majority must be independent. Furthermore, MCCG 2007 recommends all

members of the AC should have financial expertise and at least one director serving on the committee should have a membership in an accounting association or have experience in the relevant bodies.

In July 2011, the Securities Commission announced a new five-year Corporate Governance Blueprint (CG Blueprint). The Blueprint outlines an action plan to boost Malaysian corporate governance standards by strengthening market discipline and progressing greater internalisation of the culture of good corporate governance (SC, 2011). The CG Blueprint comprises six chapters covering the role of BODs, institutional investors and gatekeepers, shareholder rights, disclosure and transparency and public and private enforcement (SC, 2011). The CG Blueprint was followed by the issuance of the Malaysian Code on Corporate Governance.

3.2.1 The Malaysian Code on Corporate Governance (MCCG 2012)

The MCCG 2012, which was officially established in March 2011, is considered a landmark in Malaysian corporate governance reform. MCCG 2012 is the first deliverable of the Corporate Governance Blueprint (CG Blueprint) and supersedes MCCG 2007. Unlike the previous codes, MCCG 2000 and MCCG 2007, that mainly focused on formations of governance packages, the BOD and its committees as well as the internal audit function, MCCG 2012 was intended to improve the effectiveness of internal mechanisms of Malaysian corporate governance.

The main aim of MCCG 2012 was to improve the role and the responsibility of directors, to promote directors' commitment and to foster effectiveness of the BOD' structure, as well as to foster internal and external auditing. Compliance with the

MCCG 2012 by listed firms in Bursa Malaysia is voluntary, but corporate governance statements are subject to mandatory disclosure in an annual financial report (SC, 2012). MCCG 2012 focuses on clarifying the role and responsibilities of directors and improving directors' commitment to discharging monitoring functions effectively. The code also attempts to foster auditing functions including an internal and external audit.

MCCG 2012 contained eight principles, and each principle comprised numerous recommendations, which are standards expected to be adopted by Malaysian listed firms. The code also contains a commentary for each recommendation, which provides more details to help firms to understand and implement the recommendations. The first principle is establishing clear role and responsibilities of the BOD. It requires the BOD to clarify and provide more details about; functions that are delegated to managers, ethical standards, sustainability, procedure allowing directors access information and devices and BOD charter. The second principle focuses on the composition of the BOD. This principle requires the BOD to establish a nomination committee, which is responsible for nominating appropriate directors for the BOD and its committees.

The third principle is aimed at reinforcing the independence of directors, which requires the BOD to evaluate the independence of directors each financial year. It also limits the period of service of an independent director to no more than nine years as well as the majority of directors on the BOD should be independent in case of the BOD's chairman is not independent. Principle four is about fostering the commitment and expertise of directors to achieve their functions effectively.

The fifth principle is concerned with AC effectiveness. The BOD must create an effective AC with a view to ensuring that a financial statement is reliable and relevant for investors and other related parties and is prepared in accordance to the applied financial reporting standards. This principle also covers the responsibilities of the AC in reviewing and monitoring independence and rationalizing an external audit. The AC should take a written assertion from external auditor to confirm its independence throughout audit process based on the professional and regulatory requirements. Principles six to eight are concerned with risk management and internal audit functions, including a timely and high-quality disclosure and enhancing the relationship between the firm's management and its shareholders.

In summary, the MCCG 2012 establishes broad principles and detailed recommendations on governance's structures and processes, which are recommended for firms listed on the Bursa Malaysia to follow to create sufficient corporate governance. The MCCG 2012 enhances the effectiveness of a BOD's leadership role by strengthening its structure and reinforcing its independence. It is also concerned with the role of the AC in assuring the integrity and quality of financial statements as well as independence and the suitability of an external audit. Furthermore, the MCCG 2012 encourages firms to create corporate disclosure policies that symbolise values of sufficient disclosure.

3.2.2 The Malaysian Code on Corporate Governance 2017 (MCCG 2017)

Recently, the Securities Commission of Malaysia (SC) released a projected draft of the new code on corporate governance. The new code differs from the last one by adopting a different approach. This is an innovative approach that aims to inspire progression

and offers greater utility for firms and relevant stakeholders. The draft classifies corporate governance practices into two groups, which called Core and Core+ practices. Based on these rules, Firms must disclose their adherence to the Core practices or justify the use of an alternative basis. The Core+ contains exemplary practices that firms should follow to realize good governance practices (SC, 2016). The Securities Commission of Malaysia (SC) issued the final draft of MCCG 2017 on 26 April 2017. All listed firms with the financial year's end of 31 December 2017 are required to fulfil its requirements. The principal objective of MCCG 2017 is to strengthen the internalisation of a culture of good corporate governance with an emphasis on accountability and transparency.

MCCG 2017 comprises three broad principles, which are related to a firm's BOD, audit and risk management and stakeholders. The code also contains 36 practices and guidance in support of those principles. The new code is different from the previous one (MCCG 2012) in several ways. First, the MCCG adopts the "apply or explain the alternative" approach. BOD should apply MCCG 2017 with regard to the environment, size, and the nature of risks. If the BOD realizes difficulties in applying code practices, the BOD has the choice of applying a suitable alternative practice to achieve the same outcomes but must explain why they did so.

Second, MCCG 2017 states that a two-tier voting process is required for the appointment of long-serving independent directors, which gives the same voting power to minority and majority shareholders. The new code also states that the BOD must be comprised of at least half of independent directors. Nevertheless, more than 50% of

BOD members have to be independent for large firms included in the Top 100 Index or firms with a minimum RM2 billion market capitalisation.

Third, The MCCG 2017 states that firms must establish a strategy on gender diversity and openly disclose their strategies for assigning more women to the BOD, and large firms should assign a minimum of 30% women to the BOD. Fourth, the code requires firms to appoint independent directors to the AC, and the chairman of the AC should not be the chairman of the BOD. Finally, MCCG 2017 requires firms to disclose the remuneration of each director, including fees, salaries, bonuses and other payments. Similarly, the remuneration senior managers must be disclosed in bands of RM50,000 (SC, 2017).

3.3 Corporate Governance and Shares Buyback Programs

Corporate governance, in the simplest aspect, means several procedures for governing a firm's actions to safeguard the welfare of all shareholders. Andres and Vallelado (2008) mentioned that corporate governance is a set of mechanisms employed by stakeholders to confirm that directors and managers manage corporate resources in an efficient manner to achieve the best interests of firms. The separation between the owners and control has created the need to employ suitable governance instruments to confirm a sufficient alignment between the benefits of owners (principals) and management (agents). A substantial concern in corporate governance and corporate finance is the design of an effective mechanism of internal monitoring control that makes managers act in the best interests of all shareholders (Brown et al., 2011).

The corporate scandals of large firms, for example, Enron and WorldCom in United States and the United Kingdom in 2001 and 2002 have reduced investor's confidence in the integrity of corporate disclosure, resulting in the questioning of corporate reporting. The collapses of high profile businesses around the world have highlighted the attention for reforms of corporate governance worldwide (Norwani et al., 2011). The primary attention has been placed the main players in the body of corporate governance such the BOD, the AC, managers, and auditors under a microscope (Norwani et al., 2011). The financial failure of several firms in Asia has led to the decline of investor's confidence in the integrity of corporate disclosure and management acts (Hasnan, Rahman, & Mahenthiran, 2013; Johari, Saleh, Jaffar, & Hassan, 2009; Norwani, Mohamad, & Chek, 2011).

Weakness in corporate governance systems and Asian financial crisis were primary factors in shaking the confidence of investors (Sawicki, 2009). Weak corporate governance and poor standards were blamed in part of the Asian financial crisis in 1997 (Nam & Nam, 2004). Leng (2004) reported that, because of weak confidence of foreign investors in Asian countries, the authorities planned corporate governance reforms to recover investors' trust. Corporate governance is an essential issue in developing countries because corporate governance is intrinsically linked to economic development (Pergola & Joseph, 2011).

Corporate governance devices have a vital role in the monitoring function of firms in emerging markets because of weak market controls in developing countries (Lei & Song, 2004). Cohen et al. (2004) showed that internal mechanisms of corporate governance can improve financial reporting quality and decrease information

asymmetry between insiders and outsiders. Bujaki and McConomy (2002) indicated that investors typically consider the governance system of the firm when making investment decisions, and investors prefer to put higher investments in firms with good corporate governance.

Several theories have been advanced to diminish the assumptions of perfect capital markets (Jiraporn, Kim, & Kim, 2011); one critical theory that has been extensively examined in the literature and has received supporting evidence is the agency theory. This theory concerns the agency problems created from the segregation of ownership (principal) from the control (agent) of firms (Jensen & Meckling, 1976). Thus, due to information asymmetry arising between insiders and outsiders, managers may tend to the method and amount of payout policy to maximise their interests rather than maximizing the wealth of shareholders (Faccio et al., 2001; Jensen, 1986). Agency theory has been employed in existing academic studies to clarify the role of corporate governance mechanisms in reducing the manipulative actions of managers. In addition, resource dependence theory highlights the significant role of governance mechanisms in supporting and monitoring firm management (Hillman et al., 2009). Kamardin and Haron (2011) found that non-executive directors and managerial ownership were positively related to the dimensions of the monitoring role of the BOD.

To engage in share buyback programs, regulatory bodies in Malaysia, as mentioned in the last chapter, required the directors on the BOD first to propose share buybacks and then to receive approval from shareholders to exercise share buyback activities. In other words, the BOD has the responsibility from making decisions regarding shares buyback, which dominant directors can exploit to achieve personal benefits. Corporate

governance mechanisms have the responsibility for monitoring the actions of management to align with the interests of all shareholders (Fama & Jensen, 1983). Prior studies have documented that good corporate governance has a positive connection with the economic effect of share buyback announcements on the market (Chahine et al., 2011; Wu, 2012b), on the credibility of share buyback announcements (Wu, 2012b). These findings are in line with the notion that investors in firms with good governance and adequate minority protection are more informed and more confident in outcomes and decisions making of firms than their counterparts with weak governance (Wu, 2012b; Wu & Wang, 2015).

Based on the perspective of agency theory, majority shareholders may employ mechanisms or policy such as share buyback activities to achieve personal interest at the expense of outside shareholders (Wu, 2012a). Using share buyback activities to mitigate agency conflicts or otherwise as an earnings management device is widely dependent on the country-level investor protection environment (Haw, Ho, Hu, & Zhang, 2011). Prior studies have provided empirical evidence that share buyback activities are used to mislead investors (Chan et al., 2010) as well as to mimic the performance of good firms (Massa, Rehman, & Vermaelen, 2007). Furthermore, Farrell et al. (2013) found that firms with effective BOD are less likely to exercise accretive share buyback activities. Therefore, Wu (2012b) recommends examining the influence of corporate BOD on the managerial decision of share buyback programs.

In Malaysia, several studies have examined the effect of internal mechanisms of corporate governance (BOD and AC features) on earnings quality and financial reporting quality measured by earnings management (e.g. Al-Rassas & Kamardin,

2016; Ahmed Hussein Al-Rassas & Kamardin, 2015; Chandrasegaram, Rahimansa, Rahman, Abdullah, & Mat, 2013; Hashim & Devi, 2008a). Abdul Latif et al. (2016) examined the impact of mechanisms of the BOD including BOD size and ethnic diversity on frequency of share buybacks and have found that a large-sized BOD can reduce the frequency of buyback activities. They also found that firms with a less diverse BOD are more likely to be involved in a share buyback to improve reported EPS frequently.

Overall, the flexibility of the share buyback process through open market share buyback programs is related to firms in markets with high ownership concentration. This may motivate firm managers to use accretive share buybacks as a tool to manage EPS. Several prior studies have supported this notion, using accretive shares buyback as a mechanism to manage EPS (Bens et al., 2003; Bryan & Mason, 2016; Chandren & Nadarajan, 2013; Farrell et al., 2013; Hribar et al., 2006).

However, to the best knowledge of this researcher, limited studies have been conducted on the association between corporate governance mechanisms and real earnings management by accretive share buyback activities. Thus, this study examines the impact of the BOD effectiveness, AC effectiveness, audit quality, family ownership, managerial ownership, and foreign ownership on accretive shares buyback activities as a device for real earnings management.

3.4 Board of Directors' (BOD) Effectiveness

The BOD is considered as a primary mechanism of internal corporate governance. The BOD is the key mechanism of corporate governance since it is expected to monitor and

protect the welfares of shareholders (Kassim, Ishak, & Manaf, 2013). The BOD is a monitoring device that assists in mitigating agency problems through executing due diligence on behalf of shareholders (Core, Holthausen, & Larcker, 1999; Webb, 2008). The BOD has the responsibility for monitoring firm managers and to constrain their opportunistic behaviours and ensure that the rights of all shareholders are promoted (Abor & Fiador, 2013; Andres & Vallelado, 2008). Lefort and Urzúa (2008) argued that the BOD is the key monitoring device to control the actions of manager and to align them with shareholders' interests. Fama and Jensen (1983) and Jensen (1986) indicated that the key role of the BOD is to supervise and monitor management actions on behalf of the shareholders, veto poor investment-production decisions and give advice.

With respect to views of agency theory and resource dependence theory, the BOD is responsible for ensuring that managers run firm activities to maximise the wealth of shareholders rather than their own benefits (Ishak & Manaf, 2013; Al Matari, Al Swidi, & Fadzil, 2014; Saleh et al., 2005; Zahra & Pearce, 1989). Regarding share buybacks, Webb (2008) indicated that little evidence exists on whether the BOD features reduce the probability of insider trading with share buybacks. Moreover, Wu (2012b) suggested examining the role of the corporate BOD in the managerial decisions regarding share buyback programs.

In emerging markets with high ownership concentration, the key role of the BOD is to monitor and control the controlling shareholder's actions to safeguard the rights of minority shareholders (Fama & Jensen, 1983). Fooladi (2012) reported that the corporate governance model in Malaysia is a one-tier system, in which the highest governing body in the firms is the BOD because shareholders do not hold complete

control over management's decisions. The success of BOD in achieving its fiduciary responsibilities and monitoring roles can mitigate the manipulative behaviours of managers and hence increase a firm's value and boost the wealth of shareholders (Abdullah, 2004). Abdul Latif et al. (2016) found that a BOD with a large size and ethnic diversity can limit the frequency of share buyback activities used by managers for opportunistic purposes. Thus, an effective BOD is more likely to mitigate real earnings management such as accretive share buyback activities.

According to MCCG 2000, the BOD should comprise a balanced structure including executive directors and independent non-executive directors to confirm that the decision making on the BOD is not dominated by a specific party. The code also recommended best practices in which the tasks of chairman of the BOD and chief executive officer (CEO) should not be held by the same person to enhance balance of power and authority (Abidin, Kamal, & Jusoff, 2014). MCCG 2012 has focused on the role and responsibilities of the BOD to reinforce its effectiveness in performing its responsibilities for protecting the interests of firm shareholders. MCCG 2012 primarily focuses on enhancing the effectiveness of the BOD through strengthening its composition and reinforcing its independence (SC, 2012).

Okon and Amran (2014) indicated that, because the BOD holds the function of monitoring the interests of shareholders, they ought to have a greater interest in the appointment of directors to ensure that qualified, experienced and educated directors are appointed. The effectiveness of the BOD relies mainly on three of its attributes including: 1) composition, 2) size and 3) internal structure (De Andres et al., 2005). Abdullah (2004) and Fama and Jensen (1983) claimed that BOD leadership structure

and independence are essential characteristics that determine its effectiveness. Conger, Finegold and Lawler (1998) mentioned that independence, meetings and the expertise of the BOD are the main components necessary for the BOD effectiveness in discharging its monitoring role.

Prior studies have developed composite governance scores to measure the BOD effectiveness. A composite score is utilised based on the viewpoint that argues that corporate governance is an interrelated system and is effective only in particular combinations rather than in isolated best practices (Aguilera, Filatotchev, Gospel, & Jackson, 2008; Bin-Ghanem & Ariff, 2016). In addition, using a composite score for a corporate governance mechanism is a better research approach as particular mechanism's effectiveness depends on other mechanisms (Ward, Brown, & Rodriguez, 2009). Consequently, considering corporate governance mechanisms as a package gives a stronger outcome for measurement than just examining them individually (O'Sullivan et al., 2008).

Previous studies have focused on several features representing the effectiveness of the BOD, which include independence, size, meeting and the financial expertise of the BOD, in exploring their relationship to earnings management activities (Abdul Latif et al., 2016; Ahmed, 2013; Bin-Ghanem & Ariff, 2016; Chandren, Ahmad, & Ali, 2015; Saleh, Iskandar, & Rahmat, 2005; Xie, Davidson, & Dadalt, 2003). For the purpose of this current study, the score of the BOD effectiveness is represented by the most effective features of the BOD including independence, size, meetings and financial expertise.

3.4.1 Board of Directors' (BOD) Independence

Chapter One of Bursa Malaysia Listing requirements (BMLRs) define an independent director as “a director who is independent of management and free from any business or other relationship which could interfere with the exercise of independent judgement or the ability to act in the best interests of an applicant or a listed issuer” (p. 105). An independent director is an individual director who is not an executive director, not a major shareholder, not a family member of any major shareholder, executive director or officer, not acting as representative or a nominee of any major shareholder or executive director and not engaging as an officer or advisor for the said firms (BMLRs, 2015).

The BMLRs state that a BOD of listed firms must comprise at minimum two independent members or one-third of the directors must be independent, whichever is the higher. The independence of the BOD is one main measure of the quality and the effectiveness of the BOD (Al-Matar, Al-Swidi, & Bt Fadzil, 2014). The independence of the BOD becomes a significant issue because the BOD represents the key mechanism of governance to monitor and control management actions, (Abdullah, 2004). Abidin et al. (2014) argued that the larger proportion of independent directors on the BODs, the more is the monitoring and control of the manipulation actions of managers and the more protection is provided for shareholders' wealth.

Previous studies have documented that BOD independence has a positive influence on its effectiveness as a monitoring device for firm managers, whereby independent directors assist in protecting the wealth of shareholders (Baysinger & Butler, 1985; Perry & Shivdasani, 2005; Song & Windram, 2004a). Fama and Jensen (1983) argued

that independent directors are important because they can control and make decisions. Therefore, the existence of independent directors on the BOD may assist in disclosing all relevant information to shareholders, monitoring and controlling the manipulative behaviours of management and objectively contributing in the assessment of the management (Abidin et al., 2014; Norwani et al., 2011).

MCCG (2000) recommends that the BOD structure should be balanced with at least one-third of the directors to be independent directors to maintain objectivity in decisions of the BOD. MCCG (2012) was aimed to reinforce the independence of the BOD through recommending that the majority of directors must be independent in a situation in which the chairman of the BOD is non-independent director. It also limits the tenure of independent directors to be no more than nine years. Furthermore, the new code MCCG (2012) requires the BOD to evaluate the independence of independent directors annually. Abdul Latif, Kamardin, Taufil Mohd, and Adam (2013) claimed that, in countries with high ownership concentration such as Malaysia, the role of outside directors is extremely crucial for protecting the benefits of the minority shareholders. In firms with highly concentrated shareholding, the controlling shareholders are at the same time the executives and senior managers (Fama & Jensen, 1983).

3.4.1.1 Board of Directors' (BOD) Independence and Earnings Management

Agency theory argues that the separation between the principal (ownership of firms) and the agent (management) would hand managers the opportunity to achieve their benefits at the expense of the interests of owners (Jensen & Meckling, 1976). Agency theory also highlights the significance of the existence of independent directors serving

on the BOD to effectively monitor management actions (Fama & Jensen, 1983). In addition, resource dependence theory assumes that, when the BOD has external members, this representation would enrich the flow of relevant information, diminish the uncertainty of the market and secure resources for firms (Hillman & Dalziel, 2003; Pfeffer, 1972).

Prior studies have revealed empirical findings that enhance the role of independent directors serving on the BOD in limiting managerial practices of earnings management (Davidson, Goodwin-Stewart, & Kent, 2005; Peasnell, Pope, & Young, 2000; Peasnell, Pope, & Young, 2005; Song & Windram, 2004a). Xie et al. (2003) also provided evidence that the larger percentage of independent directors serving on a BOD, the lower level of accrual-based earnings management. Further, Siagian and Tresnaningsih (2011) found that, when the BOD has a large number of independent directors, the fewer are practices of accrual-based earnings management.

Shiri, Vaghfi, Soltani and Esmali (2012) documented a negative connection between the percentage of independent directors serving on the BOD and discretionary accruals practices. This is in line with the contention that independent directors offer more monitoring for the BOD and lessen activities of earnings manipulation (Shiri et al., 2012). Consistently, Alves (2014) provided evidence that independent directors on a BOD have a positive connection with earnings quality via decreasing earnings management. Setia-Atmaja et al. (2011) documented that a higher proportion of independent directors serving in family firms leads to less earnings management. However, Sun et al. (2014) failed to provide evidence supporting the role of independent directors in constraining real earnings management.

In the Malaysian context, Saleh et al. (2005) found that the percentage of independent directors serving on the BOD had a significant and positive relationship with discretionary accruals projected to avoid losses. Abdul Rahman and Ali (2006) and Abdullah and Nasir (2004) revealed that a large percentage of independent directors on the BOD was not significantly associated with practices of earnings manipulation. In addition, Hashim and Devi (2008b) also showed a significant and positive relationship between the BOD independence and higher income-increasing earnings management. Recently, Al-Rassas and Kamardin (2015a) also documented a positive connection between BOD independence and discretionary accruals as a measure of earnings quality. These results are inconsistent with the estimations of agency theory. Abdul Rahman and Ali (2006) and Al-Rassas and Kamardin (2015a) justified the unexpected findings via insufficient expertise of independent directors and the effect of the ownership structure in Malaysia, which has a highly concentrated ownership system.

In the field of share buyback activities, only a few studies have examined the association between BOD independence and share buyback policy and these show inconclusive findings. Webb (2008) investigated the influence of the percentage of outside directors on the BOD on the proportion of shares announced to be repurchased scaled by outstanding shares in US banks. The results show that a significant and positive effect of outside directors serving on BOD with the proportion of shares repurchased in the banks. However, using a sample of 255 listed firms in Australian market over the years from 2004 to 2010, Yarram (2013) found no strong connection between BOD independence and share buyback announcements.

Further, Wu (2012b) documented a positive association between independent directors serving on the BOD and the credibility of share buyback announcements. Farrell et al. (2013) showed that firms with more independent directors serving on the BOD were less likely to practice earnings management through accretive share buybacks. Recently, Alquhaif et al. (2017) found a significant relationship between BOD independence and accretive share buyback activities in the Malaysian context. Chandren et al. (2015) documented a positive association between BOD independence and accretive share buybacks. They justified these unexpected results as being the effect of management dominance on independent directors as well as their insufficient knowledge about real activities manipulation through accretive share buybacks.

In summary, the evidence of the effectiveness of independent directors on earnings management activities and earnings quality is mixed. Specifically, most evidence of earnings management and BOD independence in Malaysia is insignificant and positive with earnings management as mentioned before, which is a conflict with agency theory and resource dependence theory. Several studies have justified these results by means of ownership concentration as well as the features of the independent directors (Abdul Rahman & Ali, 2006; Al-Rassas & Kamardin, 2015; Hashim & Devi, 2008a). Therefore, this current study focuses not only on the percentage of independent directors, but also focuses on the other features such as the size of the BOD, the frequency of their meetings and the financial expertise of BOD members to investigate their effects on mitigating the use of accretive shares buybacks to manage EPS.

3.4.2 Board of Directors (BOD) Size

BOD size or the number of directors serving on BOD is a major factor in the effectiveness of the BOD (Andres & Vallelado, 2008; Ismail, Dunstan, & Van Zijl, 2010). BOD size is an important characteristic of the BOD that affect its effectiveness and the financial reporting quality (Beasley, 1996; Salihi & Jibril, 2015; Xie et al., 2003). Jensen (1993) opined that the optimal number of directors serving on a BOD is about eight directors, as any larger number is more likely to limit group dynamics and constrain BOD performance. In Malaysia, MCCG (2000) recommends that the impact of the number of directors on the effectiveness of the BOD should be considered, but the code does not recommend any identified size (Hashim & Devi, 2008a). Existing studies have revealed that the average number of members on the BOD in Malaysian firms is eight members (Abdullah, 2004; Amran & Che Ahmad, 2011; Germain, Galy, & Lee, 2012; Wan Abdullah, Shahnaz, & Nurasyikin, 2008).

Theoretically, two opposing arguments viewing of the impact of BOD size on BOD effectiveness. Agency theory generally supports a negative association between the BOD size and its effectiveness, arguing that problems of poor communication, coordination and decision making are more likely to dominate BODs with a large number of directors (e.g., Dalton, Daily, Johnson, & Ellstrand, 1999; Epps & Ismail, 2009; Pathan & Faff, 2011). Additionally, the excessive CEO control is more likely to dominate BODs with a large number of directors and, thus, constrain the monitoring and control functions of the BOD, which then increases the chance for manipulation actions of management (Dalton et al., 1999).

On the other hand, resource dependency theory argues that large BODs increase a firm's opportunity to access more resources and improve the information processing capabilities of BODs that, in turn, improve the quality of advice provided to firm management (Dalton et al., 1999; Hafsi & Turgut, 2013; Zahra & Pearce, 1989). Furthermore, larger BODs provide more balance to BOD discussions, promote the process of decision making and increase the harmony among stakeholders of firms (Ho & Williams, 2003). Xie et al. (2003) claimed that a large number of directors serving on a BOD may limit practices of earnings manipulation relative to a BOD of a smaller size because larger BODs have more chances to hold more independent members with a high level of corporate and financial skills.

3.4.2.1 Board of Directors' (BOD) Size and Earnings Management

Previous studies have provided empirical evidence that BOD efficiency can decline if the BOD size is too large (Epps & Ismail, 2009), which supports the assumption of agency theory. For example, Epps and Ismail (2009) found that BODs with a small size limit accruals-based earnings management. Dimitropoulos (2011) showed that the size of the BOD had a positive association with earnings manipulation practices. Chekili (2012) found a positive association between the BOD size and earnings management. Furthermore, Kumari and Pattanayak (2014) and Zgarni, Halioui, and Zehri (2014) documented that the BOD size was positively and significantly related to earnings management practices. Recently, Salihi and Jibril (2015) provided evidence that a larger number of directors on the BOD is not efficient in mitigating the tendency for earnings management. In Malaysia, Abdul Rahman and Ali (2006) documented that earnings management activities have positive connections with BOD size. Hashim and

Devi (2008a) also provided evidence that BOD size and accruals quality were significantly and negatively associated at the 10% level.

Conversely, several studies have supported the argument of resource dependency theory that a large BOD size enhances the ability of the BOD in the monitoring and supervision of management. Andres and Vallelado (2008) claimed that a large number of directors in the BOD provides sufficient monitors and advisors who contribute to lessening the discretionary power of corporate managers. Andres and Vallelado (2008) also argued that a large number of monitors enhances the quality of strategic decisions through providing the integrated skills and expertise of directors with the experience of CEO and senior managers.

Aygun, Ic, and Arvas (2010) also reviewed the connection between the BOD features and managing earnings activities. The result showed a negative association between the BOD size and accounting manipulation. Ghosh, Marra, and Moon (2010) also found that firms having a smaller BOD size practice larger discretionary accruals, suggesting that a larger number of directors on the BOD holding a greater range of knowledge is more effective in oversight and monitoring financial reporting. However, Sun et al. (2014) failed to provide evidence that supports the role of the BOD size in constraining real earnings management.

Regarding share buyback activities, only a few researchers have examined the association between BOD size and share buyback activities. The findings are also inconclusive. Wu (2012) revealed a positive and significant relationship between BOD size and share buyback announcement. This result means that investors consider and

appreciate the role of a large BOD in monitoring share buyback decisions. Further, Yarram (2013) found that no significant linkage between BOD sizes and share buyback.

Abdul Latif et al. (2016) examined the impact of the size of the BOD on the frequency share buybacks activities and provided evidence that a large-sized BOD more likely to mitigate the frequency of buyback activities that managers employ to adjust reported EPS. However, Chandren et al. (2015) documented a positive association between BOD size and real earnings management by accretive share buyback. Recently, Alquhaif et al. (2017) examined the linkage between BOD size and accretive share buyback as a device for real earnings management and found an insignificant connection between BOD size and accretive share buyback activities in the Malaysian context.

The discussions show mixed results on the influence of BOD size on the practice of earnings management. Ghosh, Marra, and Moon (2010) have mentioned that the effect of BOD size on the ability of the BODs in monitoring functions is ambiguous. Thus, this current study extends previous research by investigating the influence the size of the BOD on mitigating accretive share buybacks.

3.4.3 Board of Directors' (BOD) Meetings

The main manner in which directors acquire needed information is by attending BOD meetings (Adams & Ferreira, 2012). According to Adams and Ferreira (2009), BOD meetings and attendance by members at these meetings is an important channel by which directors find specific relevant information for assisting in fulfilling their controlling and monitoring role. Furthermore, Wincent, Anokhin, and Ortqvist (2010) have argued that more frequent meetings of the BOD provide more chances to translate

BOD knowledge, expertise and skills into promoting a firm's outcomes. In other words, frequent BOD meetings could help to overcome the problems related to a large BOD and provide directors with adequate time to discuss and rationalise a firm's strategic decision making (Al-Musali, 2013).

Xie et al. (2003) indicated that a BOD with more frequent meetings may be able to mitigate behaviours of earnings management. Along the same line, Adams (2005) and Vafeas (1999) mentioned that BOD meetings allow directors to play their important role of better monitoring and supervising effectively because providing rational advice to management is a primary role of the BOD. At the same time, directors can have easy access to information that may assist in bringing about effective monitoring and fair financial reporting (Vafeas, 1999).

MCCG (2000) said that BODs should meet at regular times and disclose the number of meetings throughout a financial year with details of attendance for each director (Hashim & Devi, 2008a). Recently, MCCG (2012) aims to improve the monitoring role and the responsibility of directors and to promote their commitment to enhancing BOD effectiveness. Consequently, the BOD needs sufficient meetings for discussions and decisions making.

3.4.3.1 Board of Directors (BOD) Meetings and Earnings Management

From the perspective of agency theory, BOD meeting frequency is associated with the effectiveness of corporate BODs (Vafeas, 1999). Previous studies have provided empirical evidence on the role of BOD meetings in enhancing monitoring tasks of the BOD. For example, Sarkar, Sarkar, and Sen (2008) examined the effect the number of

BOD meetings by directors on opportunistic earnings manipulation. Using a sample of 500 large Indian firms, the result showed that diligent directors effectively assist in reducing absolute discretionary accruals as a measure to limit opportunistic earnings management. Similarly, Klein (2002) claimed that the effectiveness of outside directors in reducing the earnings management actions of managers depends on the commitment of directors to attend BOD meetings.

Moreover, Vafeas' (1999) provided evidence that the frequency of the BOD meetings was an essential element of BOD oversight functions, which is associated with corporate governance and ownership features. Xie et al. (2003) found that BOD meeting frequency is negatively related to the level of discretionary accruals. Recently, Zgarni et al. (2014) found a negative effect for BOD meeting on real earnings management through sales and overproduction. However, Sukeecheep, Yarram, and Farooque (2013) failed to find evidence of the association between BOD meetings and earnings management in emerging market of Thailand.

In the Malaysian context, Mohamad, Abdul Rashid, and Shawtari (2012) documented that the BOD meetings negatively affected earnings management activities, suggesting that BOD meeting frequency is an effective governance mechanism that limits opportunistic activities of firm management. However, Hashim and Devi (2008a) found no significant relationship between accruals quality and the frequency of BOD meetings. Chandren et al. (2015) documented an insignificant connection between the frequency meetings of the BOD and real earnings management proxied by accretive share buybacks.

Based on the above discussion, the frequency of BOD meetings is essential because more frequent meetings may provide more sufficient time for expert directors to limit the manipulative actions of managers such as using share buyback programs to achieve personal benefits at the overall expense of shareholders' interests. Thus, this current study investigates whether the frequency of BOD meetings contributes to mitigating accretive share buybacks.

3.4.4 Board of Directors' (BOD) Financial Expertise

A director is an expert when that director has substantial skills, experience and knowledge of a firm's business. MCCG (2007) recommends that the nominating committee should consider the skills, qualifications and expertise in recruiting directors. BMLRs (2013) also stated that the nominating committee must give regard to the mix of independence, expertise and diversity that are needed for a listed firm. BOD with relevant expertise and experience may be better at both monitoring and providing resources (Hillman & Dalziel, 2003). Empirical evidence reveals that BOD must comprise directors with good financial expertise to enhance the ability of the BOD to monitor the management (Yunos, Smith, & Ismail, 2012).

Financial and accounting expertise is necessary for the directors to be able to monitor management actions to mitigate earnings management (Yunos et al., 2014). Directors with relevant expertise represent influential governance instruments to alleviate agency costs and safeguard shareholders' wealth (Li, 1994). Amran and Che Ahmad (2011) mentioned that directors with professional expertise in relevant fields, such as finance, accounting, law and consultations, support managers in decision making. The shortage of financial and accounting knowledge and the experience of the BOD members was a

main factor that contributing to the financial failure of Enron and WorldCom (Lanfranconi & Robertson, 2002).

BOD members expertise is critical in ensuring that the BOD has an effective monitoring role (Yunos et al., 2012). Carcello, Hermanson, Neal, and Riley (2002) examined the efficacy of governance mechanisms regarding auditing services and concluded that directors with financial expertise are crucial to create effective monitoring. Along the same line, Agrawal and Chadha (2005) reported evidence that aligns with the argument that the financial expertise of independent directors is significant in conducting oversight of a company's financial reporting practices. Abdullah and Nasir (2004) claimed that the independent directors who are nominated by the BOD must be financial and accounting experts to carry out oversight functions effectively.

3.4.4.1 Board of Directors' (BOD) Financial Expertise and Earnings Management

Based on agency theory, the primary role of the BOD is to monitor managers and controlling shareholders to safeguard the benefits of minority shareholders (Fama & Jensen, 1983). Resource dependence theory also predicts that external directors will provide valuable expertise and advice for strategic areas and monitoring functions (Hillman et al., 2009). Prior empirical studies have documented that financial expertise of the directors on the BOD is a significant factor for assuring that the BOD's monitoring role is effectively satisfied to reduce manipulative actions and, hence, improve the quality of financial statements (e.g., Al-Jaaidi, 2013; Burak Güner et al., 2008; Carcello et al., 2002).

Empirically, Xie et al. (2003) showed a negative relationship between the existence of financial experts on the BOD and the practice of earnings management. Burak Güner et al. (2008) explored several kinds of financial expertise, namely, finance professors, financial executives and bank executives. The study's results revealed that nonbank financial executives promoted better governance. Custódio and Metzger (2014) found that financial expertise in the top management is particularly useful for firms with high information asymmetry. Recently, Martínez-Ferrero, García-Meca and García-Meca (2017) explored whether directors with financial expertise enhance earnings quality and provided evidence that financial expert directors have an effective role in improving earnings quality. However, Sun et al. (2014) failed to provide evidence that supports the effectiveness of financial expertise of directors in constraining real earnings management.

In Malaysia, Yunus et al.'s (2012) study showed a significant connection between the financial expertise of BOD members and asymmetric timeliness, suggesting the accounting knowledge held by directors is important for controlling manipulative actions and producing transparent financial information. Yunus et al. (2014) found that directors with accounting knowledge played a vital role in limiting the manipulative actions of a firm's management, which led to producing high transparency financial information. Recently, Al-Rassas and Kamardin (2016) found that directors with financial expertise have an insignificant direct relationship with accruals earnings management.

Because most studies primarily concentrate on financial expertise on the AC, only limited studies have explored the role of financial expertise on the BOD (Yunos et al.,

2012). Based on the existing literature, directors should be more knowledgeable and expert in financial and accounting fields to improve the BOD's ability to monitor and control firm management and, hence, reduce the probability of managing earnings such as using share buyback programs in managing EPS or expropriating minority shareholders. Therefore, the current study investigates the influence of the financial expertise of the BOD in constraining accretive share buybacks.

3.5 Audit Committee (AC) Effectiveness

The AC is a sub-committee of the BOD (Salleh & Che Haat, 2013), its members are nominated from the members of the BOD. The AC is a communication channel among the BOD, the internal auditor, the external auditor, and executive officers (Song & Windram, 2004). An effective AC assists to improve corporate governance practice of firms (Sori, Hamid, & Nassir, 2006). This ACs can alleviate agency problems by decreasing the information asymmetry between managers and outside shareholders (Al-Najjar, 2011; Klein, 1998; Madi et al., 2014), and also among controlling shareholders and minority shareholders in countries with high ownership concentrations (Fama & Jensen, 1983). The primary role of ACs is to act as an internal control mechanism to monitor the financial reporting process effectively (Salleh & Che Haat, 2014; Song & Windram, 2004). Thus, an effective AC may be able to mitigate the involvement of managers in real earnings management through accretive share buybacks.

The role of the AC is to protect a firm by its authority to ask top management about the handling of financial reporting responsibilities, as well as to verify that corrective and relevant actions are made (Haji-Abdullah & Wan-Hussin, 2015). Based on the perspective of agency theory, AC effectiveness in achieving its duties depends on its

features (García et al., 2012; Karamanou & Vafeas, 2005; Song & Windram, 2004a). Resource dependence theory also explains the role of non-executive independent directors in providing more choices of resources for the firm and in improving its ability to contact with the external environment, which leads to a decrease in market uncertainty (Kassim, 2013; Pfeffer, 1972).

In the Malaysian context, MCCG 2000 required the BOD to establish the AC which comprises at least three members and a majority of whom are independent members. However, revised MCCG in 2007 required that entire members of the AC should be non-executive directors (Salleh & Che Haat, 2013). MCCG (2000) points out that AC with adequate independence may enhance the oversight role of governance mechanisms. The AC also improves the independence of external auditors (Liew, 2007). Subsequently, MCCG (2007) reinforces the role of AC by requiring all listed firms to establish an internal audit function. It also supports the independence of internal audit functions by regulating that head of internal audit should report directly to the AC (Ghazali & Manab, 2013).

Chapter Fifteen of BMLRS states that an AC must comprise a minimum of three members of non-executive directors, and the majority of them must be independent directors (BMLRS, 2013). Based on BMLRs, AC's functions are to review and report to the BOD regarding: 1) procedures and activities related to external auditors such as the audit plan, evolutions of internal control system, the external audit report and the processes of internal audit functions, 2) capability of functions, resource and reports of the internal audit functions, 3) quarterly and annual financial statements and 4) the transactions of related parties and any conflict of interest cases, which may arise.

MCCG (2012) in principle four and its recommendations outlines the role and function of the AC. It highlights that an AC should confirm financial statements prepared in complying with applicable financial reporting standards; it also has the responsibility to evaluate the independence and suitability of external auditors. Furthermore, MCCG (2012) considers the serving tenure of independent directors to be a maximum nine years and recommends assessing the independence of independent directors each year.

The prior empirical literature mentions that the AC effectiveness relies on its independent, its size, its frequency of meetings and the financial expertise of its members (Beasley et al., 2009; Davidson et al., 2005; Ghafran & O'Sullivan, 2013; Goodwin-Stewart & Kent, 2006). Ghafran and O'Sullivan (2013) also examined attributes of the AC as indicators of its effectiveness, including independence, financial expertise and the frequency of meetings. However, a lack of literature existed on the relationship between the AC and accretive share buyback practices. This study examines the effect of AC effectiveness, proxied by independence, size, meeting and financial expertise, on accretive share buybacks.

3.5.1 Audit Committee (AC) Independence

AC Independence has been recognised as one of the main factors that improve AC effectiveness (Ghafran & O'Sullivan, 2013; Klein, 2002). MCCG 2007 attempted to reinforce the role of ACs by recommending that an AC should comprise completely non-executive directors. All members of the AC should have the ability to read, analyse and interpret financial statements, which lead to successfully fulfil their functions

(Ghazali & Manab, 2013). BMLRs (2013) stated that all members of the AC must be non-executive directors, and the majority of members must be independent directors.

Klein (2002) opines that AC members are nominated to perform independently to handle conflicts between inside and outside players and that the independent directors of AC assist in improving the integrity of financial reporting. A meta-analysis conducted by Pomeroy and Thornton (2008) observed that an independent AC is more efficient in improving the quality of auditing, which, in turn, reduces the opportunity for manipulating earnings. Because independent directors are not directly affiliated with management, they would discharge their role and responsibilities more effectively, and, hence, they are more likely to be objective in their decisions (Abdullah, 2004; Haniffa & Cooke, 2002).

3.5.1.1 Audit Committee (AC) Independence and Earnings Management

The agency theory explains the role of independent members in monitoring the agent's activities and reducing the withholding of information (Apadore & Noor, 2013). Consistent with the view of resource dependence theory, Cohen, Dey, and Lys (2008) argued that the presence of a substantial number of independent directors is suitable for firms that need efficient access to relevant resources and knowledge that enhance the ability of AC members to perform their roles effectively. Several empirical studies have investigated the role of independent directors of the AC with respect to the quality of earnings (e.g., Abdul Latiff & Taib, 2011; Cohen et al., 2004; Ismail, Dunstan, & Van Zijl, 2010; Karamanou & Vafeas, 2005).

Klein (2002) found that independent members of the AC were negatively related to abnormal accruals while reductions in this independence led to increasing abnormal accruals. Additionally, Ghafran and O'Sullivan (2012) documented that an AC with a larger number of independent members is more likely to seek a higher level of audit quality. Bukit and Iskandar's (2009) study indicated that the independence of an AC supports large surplus free cash flow firms to decrease earnings management practices. Further, Shiri et al. (2012) provided evidence that proportion of independent members in AC had a negative association with abnormal accruals. The above results indicated that an ACs' effectiveness is higher when the committee has more independent directors.

Conversely, Xie et al. (2003) had results that did not support the role of independent members of the AC in constraining earnings management practices. Felo, Krishnamurthy and Solieri (2003) also documented that independence of AC had no relationship with accruals earnings management. Along the same line, García et al. (2012) found no significant connection between the percentage of independent members who served on an AC and earnings manipulation. Adiguzel (2013) also reviewed the role of independent members performing in the committee in limiting the earnings management behaviours of family-controlled firms in emerging markets. The outcomes of the study showed that that proportion of AC's independent members was not significantly connected with earnings management actions.

In the Malaysian context, Saleh et al. (2007) documented that the independence of the AC had a negative linkage with earnings management. Yunos (2011) provided evidenced that a significant and negative relationship existed between the number of

independent members serving on the AC and discretionary accruals. Hussain Alkdai and Hanefah (2012) also found that directors who are independent, non-executive and serve on the AC had a significant and negative connection with the practice of discretionary accruals employed as a measure for earnings management.

Salleh and Che Haat (2014) examined the impact of AC independence on earnings management pre and post MCGG 2007 and found that AC independence in the post revised MCGG 2007 period was more effective in limiting earnings management compared to pre revised MCGG 2007 period. However, Chandrasegaram et al. (2013) used discretionary accrual as a measure for earnings management and found that firms with either an AC with 100% independent members or non-100% had an insignificant relation with discretionary accruals. Recently, Al-Rassas and Kamardin (2016) found that AC independence had a significant and direct relationship with accruals earnings management. However, Haji-Abdullah and Wan-Hussin (2015) found an insignificant association between independence of AC and real earnings management.

In summary, the results of previous studies on the relationship between earnings management activities and presence of independent members of the AC have been mixed. Furthermore, an insufficient number of studies have been conducted on the connection between AC and accretive shares buyback. Therefore, this study examines the influence of independent members of the AC on mitigating accretive share buybacks to manage EPS.

3.5.2 Audit Committee (AC) Size

BMLRs states that an AC must comprise a minimum of three members, none of whom must be executive directors, and the majority of the members must be independent directors of the BOD. Regulators and policymakers are aware of the importance of the number of directors and the relationship with AC effectiveness (Bédard & Gendron, 2010). Ismail et al. (2010) reported that the AC size has an important impact on its decisions, and an AC with a small number of directors has better coordination. Bédard and Gendron (2010) conducted meta-analysis to highlight the role that AC size plays on the effectiveness of the committee and found that most studies supported the major role of the size of the AC on effective monitoring.

3.5.2.1 Audit Committee (AC) Size and Earnings Management

From the perspective of resource dependence theory, a significant number of independent members on an AC would provide a good mixture of expertise, skills and experience as well as a valuable network with relevant parties, which, in turn, enriches the capability of an AC to discharge its functions effectively (Al-Rassas & Kamardin, 2015b). Previous studies have found a negative association between the size of the AC and earnings management actions. For example, Xie et al. (2003) documented a negative connection between the magnitude of members serving on an AC and earnings management. Felo et al. (2003) indicated that there was a positive association between AC size and the quality of financial reporting.

Ghosh et al. (2010) found that discretionary accruals are significant in firms with small ACs, suggesting that an AC with a large number of members possessed sufficient skills and knowledge and is more effective in monitoring financial reporting. Salihi and Jibril

(2015) documented that an AC with a large size had a negative and significant connection with the magnitude of earnings management. However, Inaam, Khmoussi, and Fatma (2012) found that the number of AC members was positively connected to real earnings manipulation through both sales manipulation and overproduction. However, Sun et al. (2014) failed to provide evidence supporting the role of AC size in constraining real earnings management.

In the Malaysian context, several prior studies have documented positive connection between the size of the AC and earnings management actions, which suggests that the size of an AC is not effective in limiting management manipulations. Abdul Rahman and Ali's (2006) study shows that the manipulation of the accounting process was positively associated with the size of the AC in a sample of 97 firms listed on the Bursa Malaysia over the period from 2002 to 2003. However, Ismail et al. (2010), using 1625 observations of Malaysian firms for the period from 2003 to 2007, found that the number of AC members had a positively and significant relationship with the level of earnings quality. Similarly, Ahmad-Zaluki and Wan-Hussin (2010) documented a significant and positive association between the number of members serving on the AC and the earnings quality of Malaysian initial public offering (IPO) firms.

Nelson and Jamil (2012) used 120 government-linked observations of Malaysian firms over the years from 2003 to 2009 to test the link between AC size and the earnings management. The result of the study aligns with Chandrasegaram et al.'s (2013) view that no significant association existed between the size of the AC and earnings management, using discretionary accruals to measure earnings management.

Additionally, Haji-Abdullah and Wan-Hussin (2015) documented an insignificant association between the size of the AC and real earnings management.

As presented by the above discussion, previous studies focusing on the effect of AC size on earnings quality and earnings management have shown inconclusive results. Additionally, to the best knowledge of this researcher, no study has explored the role of AC effectiveness such as the size of the AC in accretive share buyback activities. Therefore, this research aims to fill the gap in the literature of accretive shares buybacks as a proxy for real earnings management.

3.5.3 Audit Committee (AC) Meetings

The frequency of AC meetings is seen as metric to the level of diligence and monitoring that members of an AC exercise (Ghosh et al., 2010; Raghunandan & Rama, 2007). More frequent meetings performed of AC as seen as an indicator of higher effectiveness whereas a low frequency of meetings is seen as an indicator of the lower effectiveness of an AC (Zaman, Hudaib, & Haniffa, 2011). MCCG (2007) outlines the guidelines on the formation and functions of the AC, which include frequent AC meetings to ensure effective practices of corporate governance. Subsequently, the requirements of the AC structure are authorised in the BMLRs, which stated that all firms listed on the Bursa Malaysia must comply with these requirements or face sanctions (Chandrasegaram et al., 2013).

Saleh et al. (2007) indicated that frequent meetings of an AC are a vital factor in realising its tasks. Agrawal and Chadha (2005) argued that it may be difficult for a small group of external members to detect accounting irregularities or fraud in complex firms

in a short time. Additionally, Karamanou and Vafeas (2005) opined that more frequent meetings would provide more time for ACs to monitor the process of a firm's corporate reporting more effectively.

3.5.3.1 Audit Committee (AC) Meetings and Earnings Management

Previous studies have indicated a substantial connection between AC meetings and earnings manipulation (Beasley et al., 2009; Saleh et al., 2007). García et al. (2012) focused on the effect of the number of AC meeting on enhancing its effectiveness. The study provides evidence of a negative association between the frequency of the activities of the committee and practice of abnormal accruals, which means that the more often ACs meet, the greater the opportunity to detect potential mistakes in financial statements. Xie et al. (2003) also documented that a larger number of meetings conducted by AC is connected with a lower level of earnings manipulation. Further, Inaam et al. (2012) found that an AC that meets more often has a better chance to limit real earnings management as measured by sales manipulation.

In Malaysia, Saleh et al. (2007) examined the relationship between the number of meetings by the AC and behaviours related to earnings manipulation. The study's findings showed a negative linkage between earnings manipulation and meetings frequency of the AC. Salleh and Che Haat (2014) examined the impact of AC meetings on earnings management pre and post MCCG 2007 and provided evidence that AC meetings in the post revised MCCG period was more effective in limiting earnings management compared to pre revised MCCG period. However, Abdul Rahman and Ali (2006) documented no significant connection between the frequency of AC meetings and earnings manipulation behaviours. Along the same line, Chandrasegaram et al.

(2013) provided evidence that a very low relationship existed between the frequency of meetings of the AC and earnings manipulation as measured by discretionary accruals. Recently, Haji-Abdullah and Wan-Hussin (2015) found an insignificant association between the number of meetings of the AC and real earnings management.

The above discussions demonstrated that inconclusive results are present in prior studies about the role of AC meetings with respect to earnings quality, which were measured through discretionary accruals. To the best knowledge of the researcher, no study has investigated the relationship between AC meeting frequency and share buyback programs, in particular, the accretive shares buyback. Therefore, the current study considers filling this gap.

3.5.4 Audit Committee (AC)'s Financial Expertise

MCCG 2007 says that all directors selected to serve on an AC should be about financially literate, and, at a minimum, one of them should have expertise in financial accounting. Recently, the Bursa Malaysia in 2013 adopted the same condition in its listing requirements (BMLRs). More precisely, BMLRs states that at least one member of AC either must be registered in the Malaysian Institute of Accountants as a member or otherwise the member should have working experience including “at least three years with (i) academic qualifications as listed in Part I of the First Schedule of the Accountants Act 1967, or (ii) a member of one of the recognised bodies list out in Part II of the First Schedule of the Accountants Act 1967” (BMLRs). The definition of AC financial expertise used in Malaysia focuses only on the qualifications and experience of directors in accounting and finance field.

The United States Securities and Exchange Commission (SEC) considers a director as a financial expert when the director has expertise in the fields of accounting or finance, and supervisory skills also considered as relevant expertise (Dhaliwal et al., 2010). Accounting expertise is acquired from experience in work field as a qualified public accountant, auditor, accounting officer, chief financial officer or financial controller. Additionally, financial expertise is acquired from experience working in a finance field as a financial analyst or any other role related to financial management. Furthermore, supervisory expertise is acquired from supervising the preparation of financial reporting in the role of CEO or firm president (Dhaliwal et al., 2010).

A financial expert serving on the AC with clear authority supported by sufficient regulations may constrain the earnings manipulative actions of firm managers (Badolato, Donelson, & Ege, 2013). Beasley et al. (2009) indicated that AC members should be experienced and knowledgeable in accounting principles and the procedures of auditing to enhance their oversight functions. In addition, Bédard and Gendron (2010) and Krishnan and Lee (2009) claimed that high-level managers and academics aware of the importance of an AC with financial expertise improve and enhance the effectiveness of financial reporting. Moreover, Emmerich, Racz and Unger (2005) documented that AC members need to have sufficient understanding of accounting and finance to act as effective monitors of the integrity of company's financial reporting process and its disclosure practices.

3.5.4.1 Audit Committee (AC) Financial Expertise and Earnings Management

Agency theory explains the monitoring functions of expert directors in mitigating agency conflicts between managers and owners (Dalton et al., 1999; Nelson & Devi,

2013). Resource dependence theory also suggests that directors holding knowledge and expertise provide vitally, relevant resource and advice to improve a firm's monitoring (Hillman & Dalziel, 2003; Hillman et al., 2009). Existing empirical literature supports notion that AC financial expertise helps in limiting earnings management activities and improves the quality of financial reporting (Ghafran & O'Sullivan, 2013). For instance, Xie et al. (2003) found that the percentage of AC members with corporate or investment banking backgrounds was negatively related to the magnitude of earnings management.

Felo et al. (2003) also tested whether directors with financial expertise serving on an AC are associated with the quality of financial reporting. After controlling for the size of the company, the BOD' composition, the existence of an ethics program, and institutional ownership, the results provided evidence that the proportion of AC members with accounting or financial management expertise was positively associated with the quality of financial reporting. Consistent with this Baxter and Cotter (2009) showed that a negative and significant association existed between the financial experience of the AC and accruals-based earnings management.

Dhaliwal et al. (2010) found a positive relationship between the presence of an accounting financial expert on the AC and accruals quality, which was employed as a proxy for the quality of financial information. These results are in the same direction with Bedard et al. (2004), which reported a negative relationship between the presence of a financial expert on the AC and aggressive earnings management. Furthermore, Badolato et al. (2013) examined the effect of interactions between an AC member with both financial expertise and status on earnings management. The results show that ACs with both high relative status and financial expertise have more ability to constrain

earnings management actions, measured by abnormal accruals and accounting irregularities.

Krishnan, Wen and Zhao (2011) examined whether an AC with legal expert members enhanced financial reporting quality, using two measurements of financial reporting quality, namely, accruals quality and discretionary accruals. The study found that the percentage of AC members with legal expertise had a positive association with financial reporting quality. Hassan and Ibrahim (2014) found that the financial literacy of AC is effective in limiting real earnings management actions. However, Sun et al. (2014) found an ineffective role for the financial expertise of AC members in constraining real earnings management. Martínez-Ferrero et al. (2017) explored whether financial experts on an AC improved earnings quality and found an effective role for the financial experts on an AC in enhancing earnings quality.

In Malaysia, Saleh et al.'s (2007) study revealed that an AC more knowledgeable and experienced members recorded less earnings management, which is consistent with the argument that the more financial expert directors on AC the higher the quality of financial reporting and earnings. Yunos et al.'s (2012) study showed that a substantial association between AC financial expertise and asymmetric timeliness signified the significance of accounting knowledge for controlling the manipulative actions of managers and for producing transparent financial information.

The results of previous studies support the value of legal requirements such as BMLRs and MCCG 2012, which required that all AC members should be financially literate with at least one being a member of a professional accounting body. Recently,

Bamahros and Bhasin (2016) focused on the role of former auditors in the effectiveness of an AC, and the results indicated that former auditors serving on an AC reduce the practice of discretionary accruals.

However, Yeh and Chou (2014) failed to find a statistically significant connection between the existence of independent members with financial expertise in ACs and discretionary accruals as a measure of earnings quality. Along the same line, Al-Rassas and Kamardin (2015b) found no significant connection between the proportion of financial expert members on the AC and discretionary accruals. Haji-Abdullah and Wan-Hussin (2015) documented a low and significant association between the financial expertise of AC and real earnings management. Recently, Al-Rassas and Kamardin (2016) found that AC financial expertise had an insignificant direct relationship with accruals earnings management.

From this research and the often conflicting results, the outcomes of the association between the financial expertise of an AC and earnings management activities are mixed especially in Malaysia. Thus, this current study examines the influence of the financial and accounting expertise of AC members on mitigating accretive share buybacks as a mechanism for real earnings management.

3.6 Audit Quality

Audit services are required as monitoring mechanisms to align the likely conflicts of interest between insiders (managers and controlling shareholders) and outsiders (minority shareholders) (DeAngelo, 1981; Watts & Zimmerman, 1981). An auditor is an independent person who is employed to review financial reports, internal control

mechanisms, and accounting information systems (Dandago & Binti Zamro, 2012). The ability of managers to use their discretion to achieve opportunistic purposes are limited when a company is audited by Big 6 auditors (Becker et al., 1998). Bedard and Biggs (1991) opined that the more knowledge and experience auditors have, the more likely they have the ability to detect data mistakes in financial reporting.

Qualified auditors assist in reducing information asymmetries among insiders and outsiders through improving the credibility of financial reports (Becker et al., 1998). The employment of qualified auditors assists in reducing the violations of accounting standards and limiting restatements of financial reports (Elshafie & Nyadroh, 2014; Romanus et al., 2008) and is positively correlated with the quality of disclosure (Dunn & Mayhew, 2004). The more an auditor is industry-specific, the more likely that auditor can recognise extraordinary transactions, have more experience in industry best practices and have better ability to determine control and inherent risks (Krishnan, 2003).

Large audit firms provide higher audit quality and provide more credibility to financial statements of clients than small audit firms (Lennox, 1999). Francis and Yu (2009) and Francis, Maydew, and Sparks (1999) claimed that international brand of big audit firms is associated with the ability to effectively monitoring and achieve better audit quality than non-Big 6 audit firms. In addition, the largest audit firms are more commonly independent of their clients (Becker et al., 1998). Thus, previous studies employed Big 6 firms as a proxy for audit quality (Becker et al., 1998). Nowadays, the audit firms include the Big 4 firms, namely, Deloitte, PricewaterhouseCoopers, Ernst and Young, and KPMG.

Many factors support using large audit firms as a measure of audit quality. Firms audited by Big 4 audit firms have low information asymmetry, better market prices and less aggressive earnings manipulation than firms using non-Big 4 audit firms (Francis & Yu, 2009; Thoopsamut & Jaikengkit, 2009). Big 4 audit firms have more experience and knowledge related to their clients and their specialisations. Hence, Big 4 auditors are more likely to detect mistakes in financial reporting and the opportunistic behaviours of clients in comparison to non-Big auditors (Francis & Yu, 2009; Krishnan, 2003).

In Malaysia, in the period after the financial crisis of Asian countries 1997-1998, the role of auditors in ensuring the credibility of financial reporting has obtained more devotees (Johl, Jubb, & Houghton, 2007). The quality of audit services operated by Big 4 auditors working in Asia has been criticised by World Bank (Johl et al., 2007). According to Che Ahmad, Houghton, and Yusof (2006), Malaysian market for audit services is dominated by international Big 4 firms.

3.6.1 Audit Quality and Earnings Management Activities

Several prior studies have provided evidence that audit quality acts as a significant constraint for the practice of accrual-based earning management (Becker et al., 1998; Chiang et al., 2011; Francis et al., 1999; Francis & Yu, 2009; Lin & Hwang, 2010; Van Tendeloo & Vanstraelen, 2008). Krishnan (2003) also indicated that discretionary accruals are low in the firms audited by Big 6 auditors. In addition, Balsam, Krishnan and Yang (2003) and Elshafie and Nyadroh (2014) indicated that firms employing qualified auditors are associated with constrained accruals intended for earnings

management. These studies document that clients with industry specialists and large auditors have less discretionary accruals than clients of non-industry specialists and non-large audit firms. These studies argue that firms with high audit quality potentially constrain the practise of accruals-based earnings management because qualified auditors are more likely discover such practices. Furthermore, Chiang, Huang, and Hsiao (2011) showed that the firms audited by low-quality CPAs experience high level of earnings management.

Another view exists on the role of an auditor in real earnings management activities such as accretive share buybacks. Real earnings management is not usually inspected by external auditors because they are responsible for providing a reasonable assertion that financial statements are prepared according to generally accepted accounting principles (Burnett et al., 2012). More particularly, the main responsibility of auditors is to confirm that the financial statements faithfully represent the real financial positions and performance of firms. However, they are not obligated to evaluate motivations of managers for decisions on real activities (Burnett et al., 2012). Roychowdhury (2006) said that real earnings management potentially causes greater long-term costs on firms due the negative affect on future cash flows, whereas earnings management based on accruals imposes larger short-term costs on firms. Therefore, real earnings management is an attractive choice to be used by managers to accomplish short-term earnings objectives (Roychowdhury, 2006).

Empirical evidence regarding the relationship between audit quality and the trade-off between real earnings management and accrual-based earnings management is mixed. Chi, Lisic, and Pevzner (2011) showed that Big 4 auditors and auditor specialisation

are positively related to real earnings management, but have a negative relationship with earnings management based accruals. Similarly, Cohen and Zarowin (2010) found that firms audited by Big 4 auditors are more likely to undertake real earnings management than accrual-based earnings management when involved in a seasoned equity offering. However, Zang's (2012) study failed to find a positive relationship between Big 4 auditors and the practise of real earnings management. This result is in line with the suggestion that the effect of large auditors may reflect fundamental differences in client characteristics rather than differential audit quality (Lawrence, Minutti-Meza, & Zhang, 2011).

Burnett et al. (2012) investigated the impact of audit quality on the trade-off of practising earnings management between discretionary accruals and share buyback activities. The study hypothesises that firms have the incentive to manage EPS (EPS), meet or beat consensus analysts' forecasts, by engaging in accretive share buyback when accruals-based earnings management is constrained by the high quality of audit in the United States. In line with the hypothesis, the results of the study showed that firms with high audit quality are more likely to use accretive share buyback and less likely to use accrual-based earnings management. Bryan and Mason (2016) examined whether earnings management through accretive share buybacks affected auditor perceptions of risk. They argued that auditors are likely to view activities of earnings management through accretive share buybacks as a signal of boost risk, which, in turn, lead to increase audit fees. Consistently, the results showed a significant and positive connection between the use of accretive share buybacks as an earnings management tool and audit fees.

Empirical evidence on the association between audit quality and earnings management from emerging markets is mixed. Muttakin et al. (2017) indicated that the level of discretionary accruals in Bangladesh is negatively associated with audit quality, and this relationship is affected by the level of investors' protection and a complicated ownership structure. Houque et al. (2017) also documented that firms appointing a high-quality auditor practice a lower level of earnings management. Furthermore, Khalil and Ozkan (2016) found evidence that is consistent with the argument that high-quality auditors are effective in mitigating practices of earnings management. However, Habbash and Alghamdi (2017) found only an insignificant linkage with earnings management. They justify this result by the argument that auditors are incapable in the presence of managerial opportunistic activities.

In the Malaysian context, prior studies related to the effect of Big 4 audit firms in the audit quality have uncertain outcomes. For instance, Johl et al. (2007) used a sample of 596 observations of firms listed on the Bursa Malaysia over the period from 1994 to 1999. The result showed that the Big 5 auditors were more likely to issue a qualified audit opinion in the presence of aggressive abnormal accruals than non-Big 5 audit firms, but no evidence for industry-specialist audit firms. However, Abdul Rahman and Ali (2006) documented no significant association between employing Big 5 auditors and the practise of earnings management by the auditees. Furthermore, Carlin, Finch, and Laili (2009) examined audit quality of Big 4 audit firms operating in Malaysia. By using 34 Malaysian firms in 2006, the outcomes of the study revealed a substantial cross-sectional variation among the sample of Big 4 Malaysian auditors and reported obviously low compliance levels. Chandren et al. (2015) indicated a positive relationship between the appointment of Big 4 auditors and accretive share buybacks.

Based on the discussion above, Big 4 audit firms are more able to detect and limit accruals-based earnings management than non-Big 4 auditors. However, to the best knowledge of researcher, limited studies exist on the ability of Big 4 auditors to detect and control real earnings management activities including accretive shares buybacks especially in emerging markets like Malaysia. Therefore, this study was conducted to fill this gap.

3.7 Ownership Structure

Ownership structure can influence firms' decision making as it is related to different degrees of risk aversion and a firm's resource endowment (Chen & Hsu, 2009; Fernández & Nieto, 2006; Moradi, Aldin, Heyrani, & Iranmahd, 2012). In emerging markets where the ownership is highly concentrated in families groups or individuals (high ownership concentration), agency problems stem from the conflicts of interest between outside shareholders and insider shareholders (agency problem type II) (Fan & Wong, 2002; Jensen & Meckling, 1976). Ownership structure in emerging market is considered to be a vital determinant of agency problems between controlling insiders and outside shareholders (Kamardin & Haron, 2011). Ali, Chen, and Radhakrishnan (2007) indicate that the influence of corporate governance mechanisms on earnings quality varies by ownership structure.

Firm ownership in Asian countries is highly concentrated relative to developed countries like the United States and the United Kingdom (Claessens et al., 2000; Fan & Wong, 2002). Faccio et al. (2001) provided evidence that the agency problem in Asian countries is related to expropriation of the rights of minority outside shareholders by

the dominant shareholders because family and individual investors highly concentrate the ownership. The Malaysian capital market is characterised by high ownership concentration by family domination and individual investors (Amran & Che Ahmad, 2010a; Claessens et al., 2000; Ibrahim & Samad, 2011; Omar & Mohd-Saleh, 2011). The ownership concentration raises the information asymmetry between insiders and outsiders, which may motivate the managers of firms to practice and amount of payout policies that maximise their interests rather than the wealth of overall shareholders (Faccio et al., 2001).

The ownership structure of Malaysian listed firms may influence their share buybacks activities significantly. Stringent rules and regulations govern share buyback activities in Malaysia. Firms must also satisfy a minimum shareholding spread of 25% before a request for share buyback programs can be approved by Bursa Malaysia, which expects that only firms with satisfactory directors' ownership would engage in share buybacks activities (Abdul Latif, 2010). Then, directors with high ownership have a better opportunity to affect the decisions of management to embark on share buyback programs (Abdul Latif, 2010). Managers engage in shares buyback programs to reach their desired level of ownership structure (Fried, 2005; González & González, 2004). Abdul Latif and Taufil Mohd (2014) provided empirical evidence that the level of managerial ownership of Malaysian firms is positively associated with their actual share buyback programs.

Previous studies (Claessens et al., 2000; Fan & Wong, 2002; La Porta et al., 1999; Mohd Ali et al., 2010; Shayan-Nia et al., 2017) have classified ownership structure into essential four different types, namely, family ownership, managerial ownership,

governmental ownership, institutional ownership and foreign ownership. Further, Yunos et al. (2010) suggest that it is better to classify ownership into the family, individuals, and institutional ownership. Ghazali (2010) also groups the ownership structure into foreign ownership, director ownership and government ownership to study their effects on the performance of Malaysian firms.

Pertinent to the discussion above, this study investigates the effects of ownership structure (family, managerial and foreign ownership) of Malaysian listed firms on accretive share buyback as a real mechanism for earnings management.

3.7.1 Family Ownership

To recognize a firm as a family controlled, three requirements must exist: 1) the founders and descendants hold positions in the high-level management like CEO or successor of the CEO, 2) serve on the BOD or 3) are among the firm's largest shareholders (Amran & Che Ahmad, 2013, 2011; Mohd-Saleh & Omar, 2014; Wang, 2006). Family ownership or family-controlled firm is the most common form of the business body in the world (Burkart, Panunzi, & Shleifer, 2003; Ibrahim & Samad, 2011). Family-owned or controlled businesses account for one-third of the S&P 500 and hold approximately 18% of equity stake of firms (Anderson, Mansi, & Reeb, 2003). Faccio and Lang (2002) reported that family-related shareholders control 44% of firm ownership in the United Kingdom and Ireland.

Family-controlled ownership is dominant in East Asian countries (Claessens et al., 2000; Faccio et al., 2001). Filatotchev et al. (2005) revealed that two-thirds of the ownership of firms listed in East Asian countries is controlled by single owners, and

60% of the managers of these firms are family members belonging to the controlling owners. In Malaysia, family-controlled firms are prevalent (Amran & Che Ahmad, 2010b; Amran & Che Ahmad, 2011; Wan-Hussin, 2009). About 70% of Malaysian firms are family-controlled firms (Amran & Che Ahmad, 2010b; Claessens et al., 2000; Ibrahim & Samad, 2011). Twenty-eight of the 40 richest people in Malaysia are family related (Ibrahim & Samad, 2011).

3.7.1.1 Family Ownership and Earnings Management Activities

Existing literature shows two different arguments concerning the influence of family ownership on firm management, namely, the entrenchment hypothesis and the alignment of interest hypothesis. According to the entrenchment hypothesis, firms controlled by family ownership are more likely to engage in earnings management (Wang, 2006). This hypothesis is in line with agency theory (type II), which predicts that the agency conflict of interest exists between majority shareholders and minority outside shareholders in a market with highly concentrated shareholdings (Claessens et al., 2000; Fan & Wong, 2002). Family-controlled firms have low efficiency due to the ownership concentration that creates motives for controlling shareholders to expropriate the rights of minority shareholders (Bhaumik & Gregoriou, 2010; Burkart et al., 2003; Fama & Jensen, 1983; Omar & Mohd-Saleh, 2011).

Family members in such businesses commonly hold vital roles in management and on the BOD, and these may reduce the effectiveness of corporate governance especially in monitoring the BOD. The information asymmetry between families members and other shareholders may also negatively affect the monitoring duties of corporate governance and, hence, encourage management to engage in manipulative activities (Bin-

Muhamed, 2013; Wang, 2006). More particularly, high controlled shareholders such as family ownership may pressure the BOD to embark in share buybacks to realise manipulative actions such as mimicking good firms (Massa et al., 2007), manipulating EPS (Hribar et al., 2006) and occasionally increasing share prices (Chan et al., 2010).

Empirically, several studies support the entrenchment view of family ownership. For example, Faccio et al. (2001) assume that family-controlled ownerships tend to expropriate wealth when their cash flow rights are less than control. Faccio et al. (2001) study was consistent with their assumptions in both European and Asian family-controlled firms, which employ payout policy to expropriate the rights of minority outside shareholders. Similarly, Huang, Chen, and Kao (2012) found a positive association between the cash flow rights of controlling families and the level of payout. Huang et al. (2012) also revealed that, when family control is at a low level but holds a higher level of cash flow rights, the associations are positive because the threat of losing control leads them to claim more payouts. However, when family control is at a moderate level, the connection with payout payment is negative due to the entrenchment effect in which family control becomes more robust.

Fan and Wong (2002) investigated the association between earnings informativeness and the concentrated ownership in East Asian countries. The empirical outcomes of the study were in line with the entrenchment and the information affect views. The concentrated ownership that usually includes family controlled raise agency conflicts between controlling shareholders and outside shareholders. Subsequently, controlling shareholders are perceived to report accounting information for self-interested purposes, reducing the credibility of reported earnings. Fan and Wong (2002) also

found that concentrated ownership related with low earnings informativeness due to concentrated ownership may limit access to the information about the rent-seeking activities, which are widespread in East Asia.

Setia-Atmaja et al. (2011) documented that listed family-controlled firms exercise earnings management and practise greater levels of private interests of control than non-family firms. The results also showed that the greater proportion of independent directors in family firms, the less earnings management was experienced. Chi, Hung, Cheng, and Tien (2014) provided evidence that family firms are positively associated with the practice of earnings management. Recently, Tai (2017) examined the trade-off between accrual-based and real earnings management in family-controlled firms and provided evidence that family firms were more likely to be involved in accruals-based earnings management than in real earnings management.

On the other hand, the alignments interest hypothesis argues that family-controlled firms have motivations to limit the different types of manipulation behaviours engaged by the management (Wang, 2006). Family-controlled firms could diminish the ability of management to exercise earnings management because family members possess sufficient knowledge of the activities of their firms, which, in turn, may assist in detecting abusive actions like the manipulation of accounting numbers (Anderson et al., 2003). This view of family ownership is consistent with stewardship theory that assumes controlling owners like family members and managers act as stewards to achieve a firm's objectives rather than demonstrate their propensity to behave destructively for individualistic and self-serving objectives (Amran & Che Ahmad, 2010b; Jaskiewicz & Klein, 2007).

The results of several empirical studies are on the same path as the alignment of interest hypothesis. For example, Adiguzel (2013) documented that the magnitude of accruals-based manipulations is less in family-controlled firms than in non-family controlled firms. Jaggi and Leung (2007) showed that the significant relationship between the AC and constraining earnings management was reduced in family-owned firms, particularly when family members dominate the BOD. Along the same line, Wang (2006) provided evidence that, in general, founding family ownership has significant relationship with higher earnings quality as measured by abnormal accruals.

Ali et al. (2007) replicated the study of Wang (2006) using US data. However, the study applied a different group of earnings quality measures on the same selected sample of S&P 500 firms. Despite the fact that Ali et al. (2007) used substitute measures for earnings quality, the results were similar to those of Wang (2006), showing that family-controlled firms had better earnings quality. Cascino, Pugliese, Mussolino, and Sansone (2010) examined earnings quality between family and non-family firms and found that family firms generally reported high-quality earnings compared to non-family firms.

Moreover, Li and Hung (2013) examined the moderating effect of family ownership between overconfident managers and earnings management. The findings of the study revealed that overconfident managers are more aggressive in engaging in earnings management and family ownership indeed lessened the motivations for earnings management in family-controlled firms. Siregar and Utama (2008) examined the influence of family ownership on efficient and opportunistic earnings management. The

study's results revealed that firms with a high proportion of family ownership had more of a tendency to select efficient earnings management than non-family owned firms.

Achleitner, Günther, Kaserer, and Siciliano (2014) provided evidence that family firms were involve in real earnings management and exhibited more earnings-decreasing in abnormal accruals as compared to non-family firms. They further found that family-controlled firms as compared to non-family firms treated real earnings management as a substitute for accruals-based earnings management rather than as complementary tools. Alzoubi (2016) found a statistically significant adverse association between family ownership and accruals-based earnings management.

Although family-controlled business are widely present on the Malaysian capital market, where family members dominant sensitive positions on BOD and top management (Amran & Che Ahmad, 2010a; Chen, 2013; Haji, 2014; Hasnan, Rahman, & Mahenthiran, 2013), only a few studies have discussed the association between family dominance and earnings management practices in the Malaysian market. Hashim and Devi (2008a) examined the association between the percentage of family members on the BOD and earnings quality, their results revealed a positive connection between family control and the accrual quality. However, the majority of the existing literature focuses on the relationship between family controlled ownership and firm performance (Amran & Che Ahmad, 2009; Amran & Che Ahmad, 2010b; Amran & Ahmad, 2011; Amran & Che Ahmad, 2013; Goh, Rasli, & Khan, 2014; Ibrahim, Abdul Samad, & Amir, 2008; Ibrahim & Samad, 2011; Ong & Gan, 2013).

In addition, a study of Wan-Hussin (2009) found that family ownership (proxied by the proportion of family members on the BOD) were more inclined to disclose all the required items for the primary basis of segment reporting, with more corporate transparency. Omar and Mohd-Saleh (2011) documented that family-owned firms were more likely to recognise the impairment loss of goodwill than non-family owned firms. Abdullah and Ismail (2016) failed to find a significant effect for family ownership that interacted with women serving on the BOD to mitigate earnings management. However, Haji-Abdullah and Wan-Hussin (2015) documented that family-controlled firms restricted real earnings management through related party transactions, which supports the alignment role of family ownership.

From the discussion above, a high level of family ownership of Malaysian firms may affect managers' decisions regarding share buybacks, which may be used as tools to mislead and expropriate the rights of outside minority shareholders. Academically, Ibrahim and Samad (2011) claimed that the previous studies in the field of family-controlled ownership in Malaysia and corporate governance remain limited. To the best knowledge of the researcher, limited studies have discussed the relationship between family ownership and share buyback policies, especially in the Malaysian context. Thus, the current study examined the effect of family ownership on accretive share buyback as a tool for real earnings management.

3.7.2 Managerial Ownership

The classic agency theory claims that managerial ownership assists in aligning the interest of managers and shareholders (Jensen and Meckling, 1976). However, in the case of an environment with high ownership concentration like East Asia, managerial

ownership is not a solution to the agency conflict because another agency problem (type II) is raised between controlling shareholders and minority shareholders (Claessens et al., 2000; Fan & Wong, 2002). Based on the entrenchment hypothesis, controlling shareholders who are at the same time a firm's managers may take advantage of their controlling power to extract firm resources for their interests at the expense of minority shareholders (Omar & Mohd-Saleh, 2011; Wu, 2009). Shleifer and Vishny (1986) indicate that the controlling shareholders have a motivation for engaging in expropriation activities in order to protect their investments.

The managerial entrenchment becomes highly complex through the deviation between controlling owners' control rights and cash flow rights (Claessens et al., 2000; Fan & Wong, 2002). When entrenchment influence rises, the protection of minority shareholders' interests is diminished because their voting rights cannot represent their interests (Wu & Wang, 2015). Consequently, minority shareholders and other outside stakeholders may consider a company's level of controlling ownership when reacting to corporate decision making, which may negatively affect their trust in the judgement of management. This current study focuses on share buyback activities because share buyback programs are not only a method to distribute funds to shareholders but also a mechanism to manage EPS as well as adjusting a firm's ownership structure. Therefore, controlling owners may use a share buyback program to support their power over minority owners.

3.7.2.1 Managerial Ownership and Shares Buyback Activities

According to Abdul Latiff and Taufil Mohd (2014), managerial entrenchment has two hypotheses that affect the share buyback programs of Malaysian firms. The first

hypothesis suggests that, because Malaysian regulators have allowed only 10% of the outstanding shares to be repurchased at any regular time, it is suspected that low ownership managers must repeat share buyback programs many times (years) to gain control of their firms. Furthermore, if a firm's shareholders sense that the intention of managers is to engage in a share buyback is for control purposes, the shareholders may refuse to approve the share buyback process suggested by the firm's management.

Consequently, low ownership managers have less incentive to initiate share buyback programs. Along the same path, the second hypothesis of managerial entrenchment predicts that, when the managers have more than 50% of a firm's equity, the likelihood of a takeover threat from outsiders or other owners is not relevant. Therefore, those managers are less likely to engage in share buyback programs (Abdul Latif & Taufil Mohd, 2014). Zakaria et al. (2013) predicted that ownership concentration may affect share buyback activities of Malaysian listed firms positively. Peyer and Vermaelen (2005) claimed that a significant fraction of managerial shareholdings of a firm could create other motivations, such as entrenchment activities to save their positions and money, for engaging in share buyback programs. Thus, firms with high managerial ownership are more likely to undertake share buybacks.

Abdul Latiff and Taufil Mohd (2014) found a positive association between the amount of share buyback and both the percentage of directors' ownership and the percentage square of directors' ownership in Malaysia. Wu (2011) provided evidence that Taiwanese firms with less managerial entrenchment have larger buyback announcement returns than those with a high entrenchment of management. Further, Wu (2012b) documented a significant and positive association between insider's

ownership and the credibility of a share buyback announcement measured by the change in shareholdings of insiders around share buyback activities. This result is consistent with the argument that share buyback programs announced by a well-governed company are more likely to signal the under evaluation of a firm rather than to support short-term share prices.

However, Mitchell and Dharmawan (2007) documented that insiders with low shareholdings incentives undertake share buyback programs from two aspects: 1) reducing agency costs of the separation of owners and management and 2) increasing the existing value of managerial shareholding via a declining the number of outstanding shares. Mitchell and Dharmawan (2007) also explored the motivation of share buyback in Australia and compared them with those in the United States. The finding showed that managerial motivations for undertaking a share buyback were negatively associated with a firm's level of controlling ownership. Webb (2008) indicated no significant impact for insider ownership on both the proportion of share buybacks announcement and the share values surrounding announcements of share buyback. Whereas, Webb (2008) found that the ownership of insider directors in small banks was positively associated with the magnitude of shares buyback.

Moreover, Farrell et al. (2013) investigated the factors that are related to firms using share buybacks to manipulate EPS. The result of the study showed that firms with a high percentage of CEO ownership were less likely to exercise earnings management through share buybacks, suggesting that managerial ownership assists in mitigating agency conflicts. Moore (2017) examined whether insiders use timing and strategy with respect to share buyback to gain personal benefits. The results suggest a positive

association between CEO equity sales and share buyback activities. Along the same line, Olbe and Nyman (2017) investigated the change in CEO equity around share buyback involvement and found that the fraction of CEO equity increased as a result in the decline of outstanding shares caused by the actual share buyback.

3.7.2.2 Managerial Ownership and Earnings Management Activities

Two fundamental theoretical views of managerial ownership exist concerning the effect on earnings quality (Masmoudi Ayadi & Boujelbène, 2014; Warfield et al., 1995). The first view is the alignment of interest hypothesis, which predicts that managers with higher ownership have stronger incentives to act in line with the benefits of shareholders (Mustapha & Ahmad, 2011). More specifically, the convergence effect suggests that the higher managerial ownership, then the less opportunistic earnings management actions. Conversely, the second view is the managerial entrenchment effect hypothesis, which predicts that managers holding higher ownership are more likely to possess greater control over firms and, therefore, have more freedom to behave in a manner benefitting their private interests (Shleifer & Vishny, 1986; Yeh & Chou, 2014).

Previous studies provide empirical evidence that supports the convergence of interest hypothesis. For instance, Warfield et al. (1995) documented a negative relationship between managerial ownership and the magnitude of abnormal accruals. Alves (2012) also found that earnings management measured by discretionary accruals was negatively connected to managerial ownership as well as to concentrated ownership. Ramadan (2016) provided evidence that managerial ownership is related inversely to

earnings management. Recently, Alzoubi (2016) found a significant influence of managerial ownership on mitigating accruals-based earnings management.

On the other hand, Gopalan and Jayaraman (2012) conducted a comprehensive study to investigate practices of earnings management by firms with insider controlling ownership over 22 countries. The results of the study provided evidence that insider controlled firms in weak minority protection countries have a significant and positive relationship with the absolute value of discretionary accruals compared with firms that are non-insider controlled. This result is along the same path with the entrenchment argument that a high discrepancy between the control rights and cash flow rights of controlling shareholders are related to more earnings management. Leuz et al. (2003) also found that firms that are insider-controlled are more aggressive in practising earnings management than those firms with lower insider control in environments with less investor protection.

In addition, Johari et al. (2009) provided evidence that managerial shareholding of more than 25% are associated with earnings management practices. Similarly, Halioui and Jerbi (2012) showed that firms with a high level of controlling ownership manipulate their earnings more than firms with a low level of controlling shareholders. Furthermore, Al-Fayoumi, Abuyazed, and Alexander (2010) indicated that firms with 15% managerial ownership have a significant and positive relationship with earnings management. More recently, Masmoudi and Boujelbène (2014) found that managerial ownership had a significant and positive influence on practices earnings management. Recently, Oluku (2017) explored the impact of managerial ownership and earnings

management and found that firms with a high level of equity held by managers were more likely to practice earnings management.

In Malaysia, Saleh et al.'s (2005) study found that discretionary accruals as a proxy for earnings management were negatively related to management ownership. Mohd Ali, Mohd Salleh and Hassan (2010) also indicated that managerial shareholdings had a significant and negative relationship with the absolute value of accounting accruals. Mustapha and Ahmad (2011) found that managerial ownership in various segments had a converse association with total monitoring expenditures as assumed in agency theory. These findings are consistent with prior studies in developed market and consistent with the convergence of interest hypothesis.

Shayan-Nia, Sinnadurai, Mohd-Sanusi, and Hermawan (2017) suggested that distressed firms with a high managerial ownership practice real earnings management more than the distressed firms with less managerial ownership. The findings, however, indicate that the size of real earnings management is not significantly related to the level of managerial ownership. Similarly, Chandren et al. (2015) examined the impact of managerial ownership on real earnings management proxied by accretive share buyback. The result of their study reveals that executive directors with a high level of shareholdings are less likely to be involved in accretive share buyback activities for the purpose of managing reported EPS.

Based on the discussion before, mixed inconclusive results have been found related to the influence of managerial ownership on share buyback policies or earnings management activities. Whereas, only very limited studies have focused on share

buybacks as a tool for earnings management. Therefore, the current study examines the association between managerial ownership and accretive share buybacks that are engaged in to manage reported EPS.

3.7.3 Foreign Ownership

David et al. (2006) advised that research in the field of foreign ownership worldwide is needed especially for its effect on corporate governance, strategic decisions, and performance. David et al. (2006) claimed that foreign ownership may affect the allocation of a firm's resource among strategic investments. Firms with foreign ownership usually have strong oversight and monitoring of managers actions (Stulz, 1999). Choi, Park, and Hong (2012) opined that foreign investors commonly have a competitive scientific advantage that may lead to the transfer their specific knowledge to domestic firms. Additionally, Bayrakdaroglu, Ersoy, and Citak (2012) indicated that foreign ownership may become an active corporate governance device in emerging markets. Dahlquist and Robertsson (2001) mentioned that foreign ownership is considered an efficient mechanism of corporate governance to monitor management actions to limit non-value maximising activities as they are mostly institutional investors.

Lin and Shiu (2003) indicated that foreign investors prefer firms with a large size to minimise the undesirable effect of information asymmetry because the degree of informational asymmetry is higher for foreign investors than for local investors. As noted in the literature, foreign investors need more information disclosure and adequate transparency to avoid expropriation by inside shareholders (Ben-Nasr, Boubakri, & Cosset, 2015a). Jiang and Kim (2004) said that foreign shareholding was associated

with low asymmetric information and higher corporate transparency. More specifically, foreign shareholders are less likely to invest in firms with large family controlled and managerial ownership (Leuz et al., 2010). Therefore, this study expects that firms with a high level of foreign ownership are less likely to engage in earnings management activities because their insiders do not have too much to conceal from outsiders.

In Malaysia, Foreign investment has been oscillating between US Dollars 9 billion and US Dollars 12 billion since 2010, which make Malaysia one of the highest recipients of Foreign Direct Investment (FDI) in its region. Based on data from the Malaysian Investment Development Authority (MIDA), the majority of investments came from China, the Netherlands, and the United States (Standard Trade Portal, 2017). Many Malaysian firms are controlled by foreign-owners from European countries, particularly the United Kingdom (Ibrahim & Samad, 2011). Based on a study of Mohd Ghazali (2010), foreign investors in Malaysia hold between 13% and 80% of the equity of firms and 23% is the average. The majority of foreign shareholdings are through a foreign candidate or direct shareholdings by foreign firms (Mohd Ali et al., 2010).

3.7.3.1 Foreign Ownership and Shares Buyback Activities

According to adverse selection hypothesis, foreign shareholders prefer to invest in firms with high dividend payments, but have no significant interest in share buyback programs of domestic firms because foreigners tend to put their major orders on firms with overvalued stocks (Jeon, Lee, & Moffett, 2011). Choe, Kho, and Stulz (2005) in Korea and Dvorak (2005) in Indonesia provided evidence that foreign shareholders have an information limitation in trading local stocks relative to domestic investors.

Consequently, the trades of foreign investors conversely respond to shares buyback programs (Jeon et al., 2011).

Foreign investors are willing to place their investment orders only when the price of shares is overvalued (Jeon et al., 2011), supporting the notion that foreign investors prefer cash dividends over shares buyback programs. Jeon et al. (2011) examined the relationship between foreign ownership and the decisions of payout policy in the Korean stock market. The findings indicate that foreign investors prefer firms that pay high dividends. Additionally, when foreign investors have substantial shareholdings in the firms, they push the company to pay more dividends rather than engaging in share buyback activities. However, Franks and Mayer (2017) documented that higher levels of foreign ownership are significantly related to share buyback increases.

3.7.3.2 Foreign Ownership and Earnings Management Activities

According to the knowledge spillover hypothesis, the superior knowledge of foreign investors is likely to limit real earnings management (Guo et al., 2015). Existing literature reveals that foreign investors put their investments in the firms with good corporate governance and investor protections. For example, Leuz et al. (2010) conducted a comprehensive study across twenty-nine countries and found that foreigners invest less in firms that exist in countries with poor protection and disclosure and have ownership structures that raise governance problems. Jiang and Kim (2004) also provided empirical evidence that foreign investors are likely to be efficient processors of public information and are attracted to low information asymmetry firms.

Guo et al. (2015) documented that proportion of foreign ownership had a significant and negative relationship with practices of real earnings management. A study of Ben-Nasr et al. (2015) documented that foreign ownership is related to higher earnings quality measured by discretionary abnormal accruals. The result also showed the effect of foreign shareholdings on earnings quality, with the country's institutional environment, whereby foreign ownership is related to higher earnings quality in an environment with a higher level of investors protection. Moreover, Wu, Shen, and Lu (2015) found evidence that a high level of foreign investment in banks enhances earnings smoothing.

Poli (2015) also found a statistically significant impact on foreign ownership on earnings management practices proxied by earnings minimization, and earnings change minimization. Further, Yasser et al. (2016) found that foreign ownership had a significant and positive association with the quality of financial reporting. Du, Jian, and Lai (2017) examined the role of foreign members serving on the BOD in mitigating earnings management practices and found that the presence of foreign directors on BOD was significantly and negatively associated with earnings management.

In the Malaysian context, Mohd Ali et al. (2010) reviewed the relationship between different types of shareholdings and earnings management activities with regard to the size of firms. The results revealed that a low magnitude of relationship between foreign ownership and practices of earnings management. Additionally, Anum Mohd Ghazali (2010) provided evidence that substantial foreign and government ownership had a positive relationship with corporate performance. Yasser, Mamun, and Ahmed (2016)

found that foreign ownership is positively associated with the financial reporting quality.

To the best knowledge of the researcher, limited studies have contemplated the effect of foreign ownership on accretive share buyback policy, especially on emerging markets such as Malaysia. Although the significant role of foreign shareholders in monitoring management and limiting manipulation behaviours of management has been shown (Bayrakdaroglu et al., 2012; Ben-Nasr et al., 2015a). Guo et al. (2014) indicate that existing empirical research on the association between foreign ownership and earnings quality is relatively scarce. Therefore, this study investigates the effect of foreign ownership on accretive shares buyback as a mechanism for real earnings management.

3.8 Employee Stock Options (ESOS)

Employee stock options are an innovative device of compensation policies that assist in aligning the interests of the executives and employees with those of firm shareholders (Bickley, 2012). These options provide their holders with the right to purchase a particular amount of stocks by a specified date at an identified price. However, the exercise of stock options may raise the number of outstanding shares and, hence, dilute the EPS figure (Abdul Latif, 2010). Therefore, managers would try to alleviate the dilution of earnings caused by the exercise of stock options, and share buyback programs are one of the ways that may be employed by managers to solve problems of dilutions in EPS (Bens et al., 2003).

Since the late 1980s, Malaysian firms have been allowed to exercise stock options as ESOS to ordinary executives and employees (Katan et al., 2013). ESOS in Malaysian market became widely prevalent starting from the 1990s (Ghazali, 2012; Long et al., 2013). The number of firms adopting ESOS in Malaysia was more than 250 from 1999 and 2007 (Katan et al., 2013). Unlike developed countries such as the United States where the stock options are unlimited, listed firms in Malaysia has been permitted to issue stock options only 15% of the issued and paid-up capital (Katan et al., 2013). As mentioned before, Malaysia is a country with high ownership concentration, where family and highly concentrated individual ownership is widely prevalent. Therefore, the controlling shareholders may use ESOS to support their position and gain private interest at the expense of outside shareholders.

3.8.1 Employee Stock Options and Shares Buyback Activities

Previous studies (e.g., De Cesari & Ozkan, 2015; Dittmar, 2000; Jagannathan, Stephens, & Weisbach, 2000) have documented that the dramatic growth of share buyback activities during the recent decades is due to an essential change in payout policy, which increasingly uses managerial stock options as a means of compensation. Kahle (2002) argued that the undervaluation and free cash flow hypotheses are not adequate to explain the dramatic rise in share buyback programs. Dittmar (2000). Bens et al. (2003) and Weisbenner (2000) mentioned that firms engage in share buybacks to handle the dilution in EPS that have occurred through the exercise of stock options.

Chan, Ikenberry, Lee, and Wang (2006) suggested that managers might employ share buyback programs to influence investors' perceptions and take advantage of the positive price reaction typically related to sharing buyback. Moreover, the incentives to

engage in shares buyback is strong when executives hold exercisable stock options (Balachandran et al., 2008). According to the stock options hypothesis, managers have two motivations to engage in shares buyback programs. The first one is the options-funding hypothesis, suggesting firms that participate in share buybacks to fund stock options that are exercised (Kahle, 2002).

The second is that managers undertake shares buyback programs to avoid dilution in EPS caused by the exercise of stock options, while executive stock options provide an incentive to limit dividend payments due to their effects on decreasing the value of both exercisable and unexercisable stock options held by executives (Bens et al., 2003; Kahle, 2002). In the Malaysian context, only Abdul Latif (2010) has examined the relationship between employee stock options and actual share buyback activities. However, the result showed no significant association between employee stock options and actual share buyback programs.

Empirical evidence on the association between stock options and share buyback programs have mostly supported their effect as an incentive of undertaking shares buyback activities. Bens et al. (2003) found that managers engage in share buyback programs for several aims: 1) handling the EPS dilution related to stock options schemes and 2) meeting or beating analysts' forecasts of earnings. Their findings, however, showed that actual employee stock options are not related to share buyback activities, suggesting they are related to diluted earnings but not to basic EPS.

Kahle (2002) documented a significant association of stock options with share buyback programs. The results provide evidence that firm managers are most probably to declare

a share buyback when the proportions of exercisable stock options are high, as well as when a large number of stock options have been exercised recently. These results are consistent with assumptions that managers with a high level of stock options have more incentives to manage EPS through share buyback programs (Bens et al., 2003).

Moreover, Fenn and Liang (2001) have found that management stock options significantly influence the composition of payout policy. Their results showed that dividend payments have a strong negative association with management stock options, whereas share buyback was positively related to managers' stock options, which can explain the increase of share buyback programs at the expense of dividends in recent decades. Similarly, Lamba and Miranda (2010) found that the more proportion of stock options held by executives, the more likely firms are to embark on open market share buyback programs, suggesting that managers with higher executive stock options would have more incentives to embark on share buybacks to align the dilution of EPS affected by their options (Lamba & Miranda, 2010).

3.8.2 Employee Stock Options and Earnings Management Activities

Previous studies (Bergstresser & Philippon, 2006; Cheng & Warfield, 2005; Houmes & Skantz, 2010) have found that managers holding large stock options are more likely to manipulate earnings to meet performance forecasts. Literature also documents that stock options of CEO and other executives constitute a significant incentive to practice earnings management. For example, Efendi, Srivastava, and Swanson (2007) provide evidence that the proportion of CEO's stock options is associated with the likelihood of financial report restatements. More specific, their results revealed that the association become stronger when unexercisable and exercisable stock options are combined.

Additionally, Cheng and Warfield (2005) and Bedard et al. (2004) viewed that managers with more stock options and shareholdings are more likely to manage earnings to meet or beat analyst forecasts when the probability of negative earnings surprise is diminishing.

Bartov and Mohanram (2004) empirically confirmed that firm managers manipulate earnings through discretionary accruals before the exercise of stock option. Lin, Chen, You, and Chang (2009) provided evidence that managerial stock options affect the magnitude of actual shares buyback positively. Their findings also showed that managers use shares buybacks as a substitute device for discretionary accounting accruals in their earnings management behaviour. Furthermore, Lin et al. (2009) found that managerial exercisable options have a significant and positive relationship with the level of earnings management through discretionary accruals. Consequently, managers with high stock options would be more likely to utilise share buyback programs to handle the dilution effects of EPS caused by their stock options. Kadan and Yang (2016) explored the impact of the grants of executive stock options on the magnitude of earnings management. The results revealed that newly granted stock options are strongly associated with earnings management practices.

Based on the debates before, the conclusion can be made that many empirical studies have reviewed the connection between employee stock options and share buyback activities as well as discretionary accruals, but, to the best knowledge of this researcher, none of them explores it with accretive shares buyback activities. Thus, this study is different from the previous study by focusing on the effect of stock options exercised

on the practice of real earnings management through actual share buyback programs. In other words, share buyback leads to a change in EPS (accretive share buyback).

3.9 Summary

This chapter provides a review and integrates current theories and empirical results presented in previous studies on the issues of the BOD features, AC features, audit quality, ownership structure and ESOS as independent variables, and shares buyback programs and earnings management activities as dependent variables. Agency theory and resource dependence theory were used to explain the influence of BOD and AC features, audit quality and ownership structure on accretive share buybacks. This study also employs the stock options hypothesis to describe the association between ESOS and accretive shares buyback.



CHAPTER FOUR

RESEARCH METHODOLOGY

4.0 Overview of the Chapter

Following the review of relevant literature, the next step is to discuss the research methodology. This chapter includes the research framework and hypothesis development. The measurements of the variables are also discussed and presented in this chapter. Furthermore, it proposes the research design that comprises the procedure of data collection, sampling and techniques of data analysis, which are used to answer the research questions and discharge the study's objectives.

4.1 Research Framework

The Companies Act 1965 and BMLRs in Malaysia state that to engage in a share buyback, the BOD must submit the proposal for approval by the shareholders. A rich literature indicates that an open market shares buybacks often serves as a positive economic signal that is beneficial to shareholders (Abdul Latif *et al.*, 2014; Chan *et al.*, 2004; Grullon & Michaely, 2004; Oswald & Young, 2004; Peyer & Vermaelen, 2009). However, the separation between firm's ownership and control increases the level of manager entrenchment to choose the method and amount of payout policy that maximises their interests rather than maximising the wealth of shareholders (Faccio *et al.*, 2001; Jensen, 1986). Prior studies have provide evidenced that managers are involved in accretive share buyback as a device for real earnings management through decreasing outstanding shares which represent the denominator of EPS calculation, outstanding shares (Bens *et al.*, 2003; Burnett *et al.*, 2012; Farrell *et al.*, 2013; Hribar *et al.*, 2006).

Based on the views of agency theory and resource dependence theory, corporate governance mechanisms are significantly required to protect the rights of investors and shareholders (Abdul Rahman & Ali, 2006; Gulzar & Wang, 2011). Effective corporate governance can handle the conflicts between management and shareholders as well as the conflicts between majority and minority shareholders, which consequently reduce agency costs (Fama, 1980; Fama & Jensen, 1983; McKnight & Weir, 2009; Shleifer & Vishny, 1986). The BOD is the key monitoring mechanism that is responsible for monitoring the actions of managers to protect the interests of shareholders (Abor & Fiador, 2013; Andres & Vallelado, 2008; Fama & Jensen, 1983). The AC also is a subcommittee of the BOD, which is responsible for effectively monitoring the financial reporting process (Song & Windram, 2004).

BMLRs and the MCCG 2012 state that the key role of the AC is to ensure that financial reports are prepared according to the applicable accounting standards and is responsible for evaluating the independence and suitability of external auditors. Previous studies have provided empirical evidence on the effectiveness of role of the AC in mitigating earnings management (Abdul Latiff & Taib, 2011; Al-Rassas & Kamardin, 2016; Cohen, Krishnamoorthy, & Wright, 2004; Haji-Abdullah & Wan-Hussin, 2015; Karamanou & Vafeas, 2005; Wan Ismail, Dunstan, & Van Zijl, 2010).

Beside the BOD and the AC, audit quality has a vital role in mitigating managers' actions related to earnings management (Balsam, Krishnan, & Yang, 2003; Becker, Defond, Jiambalvo, & Subramanyam, 1998; Chiang, Huang, & Hsiao, 2011; Elshafie & Nyadroh, 2014; Francis, Maydew, & Sparks, 1999; Francis & Yu, 2009; Houque,

Ahmed, & van Zijl, 2017; Lin & Hwang, 2010; Muttakin et al., 2017). Big 4 audit firms can realise better audit quality and practice more effective monitoring than non-Big 4 audit firms (Francis & Yu, 2009). The ownership structure is also considered as another mechanism of corporate governance, which can mitigate agency problems between management and shareholders.

With regard to family and managerial ownership, two conflicting arguments exist: 1) the alignment interest hypothesis and 2) the entrenchment hypothesis. The alignment interest hypothesis predicts that managers with controlling shareholders such as family ownership and managers have stronger incentives to act in line with the benefits of shareholders (Mustapha & Ahmad, 2011). Farrell et al. (2013) and Chandren et al. (2015) revealed negative relationships between managerial shareholdings and using accretive shares buybacks to manage EPS.

However, the entrenchment hypothesis assumes that controlling shareholders are more likely to force the management to engage in earnings management (Wang, 2006). This argument is consistent with the viewpoint of agency theory (type II), which argues that the block shareholders are more likely to exploit minority shareholders (Claessens et al., 2000; Fan & Wong, 2002). Faccio et al. (2001) find that family ownership in Europe and Asia utilise dividend policies to expropriate the rights of minority outside shareholders. Fan and Wong (2002) and Setia-Atmaja et al. (2011) provided empirical evidence that controlling shareholders, including family owners, report accounting information to gain self-interests, which limits the credibility of reported earnings.

Regarding foreign ownership, prior studies argue that foreign ownership has a negative association with asymmetric information and higher corporate transparency (Jiang and Kim, 2004). Mohd Ali et al. (2008) reported that foreign shareholdings play a significant role in monitoring the behaviours of manager. Several previous studies (Ben-Nasr et al., 2015a; Guo et al., 2015; Mohd Ali et al., 2010; Wu et al., 2015) have provided empirical evidence that the proportion of foreign ownership is negatively related to earnings management practices. The stock options hypothesis argues that managers have an incentive to engage in shares buyback programs to avoid dilution in EPS caused by the exercise of stock options (Bens *et al.*, 2003; Kahle, 2002). Prior studies have documented that managers with a high level of stock options are more likely to manage earnings (Alquhaif et al., 2017a; Bergstresser & Philippon, 2006; Cheng & Warfield, 2005; Farrell, Yu, & Zhang, 2013; Houmes & Skantz, 2010).

In summary, the relationship between corporate governance mechanisms and real earnings management through the use of accretive share buybacks are underpinned by agency theory, which argues that managers would employ a firm's resources to gain private benefits instead benefitting shareholders' interests (Faccio, Lang, & Young, 2001; Jensen, 1986; Jensen & Meckling, 1976; Wu, 2012). Resource dependence theory is also used to explain the relationships between mechanisms of corporate governance and accretive share buybacks. It predicts that non-executive directors in the BOD would provide more choices for resources for a firm and enhance its ability to contact with the external environment, which leads to declining a market uncertainty and managers opportunistic actions (Hillman & Dalziel, 2003; Kassim, 2013; Klein, 1998; Pfeffer, 1972). Further, the stock options hypothesis assumes that firm managers undertake shares buyback programs to mitigate the dilution of EPS caused by stock

options exercised (Bens et al., 2003; Kahle, 2002; Lamba & Miranda, 2010). Therefore, this study suggests a framework for the influence of corporate governance mechanisms and employee stock options (ESOS) on real earnings management through accretive share buyback as presented in Figure 4.1.

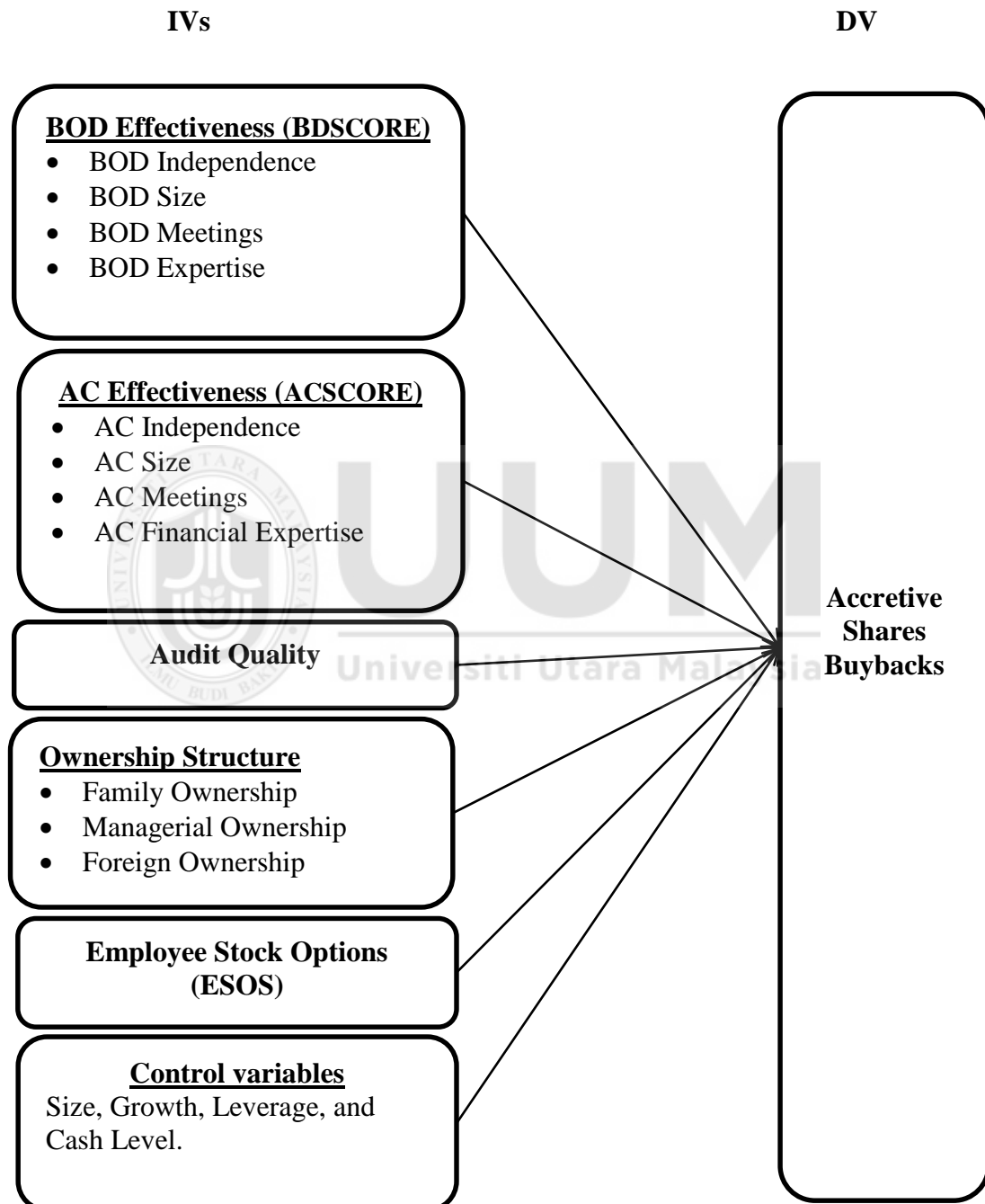


Figure 4.1
Framework of the Influence of Corporate Governance Mechanisms and ESOS on Accretive Share Buybacks

4.2 Hypotheses Development

Based on the study's research model, several hypotheses have been developed to test the model by investigating the influence of firms' corporate governance mechanisms and ESOS on accretive shares buyback. Agency theory and resource dependence theory are used to explain the role of corporate governance mechanisms in limiting accretive shares buyback. Furthermore, the stock options hypothesis explains the effect of ESOS on accretive share buybacks.

4.2.1 Board of Directors' (BOD) Effectiveness and Accretive Share Buyback

The BOD is considered the primary mechanism of internal corporate governance. Its main role is to mitigate the conflict of interests among the shareholders and management through exercising its power for monitoring and controlling the management of firms (Fama & Jensen, 1983). The agency theory argues that independent directors are the main corporate mechanism that is employed to minimise the agency conflict (Jensen & Meckling, 1976). The resource dependence theory also assumes that independent directors can use their knowledge and experience to make more objective decisions at the accurate time (Hillman & Dalziel, 2003; Pfeffer, 1972).

Fooladi (2012) reported that the corporate governance model in Malaysia is a one-tier system, in which the BOD is considered to be the highest governance mechanism in the firm. Previous studies document that several features of the BOD, including independence, size, the frequency of meetings, and expertise, reflect the BOD's effectiveness for monitoring firm managers' behaviours (Ahmed, 2013; Goh, 2009; Saleh et al., 2005; Xie et al., 2003). The primary role of independent directors is to effectively monitor and control firm's management to minimise managerial

manipulative behaviours and the expropriation of firm resources (Abidin et al., 2014). Abidin et al. (2014) and Andres and Vallelado (2008) have argued that BODs with more non-executive directors may control the behaviours of firm managers and then protect the wealth of shareholders.

Prior studies mention that the independence of the BOD plays a major role in its effectiveness as a monitoring task (e.g., Abdullah, 2004; Fama & Jensen, 1983). A rich literature provides empirical evidence that earnings management has a significant and negative association with a larger percentage of independent directors (Davidson et al., 2005; Peasnell et al., 2000; Peasnell et al., 2005; Shiri et al., 2012; Song & Windram, 2004a). Siagian and Tresnaningsih (2011) and Xie et al. (2003) also provide evidence that the larger the number of independent directors on the BOD, the less the practices of accrual-based earnings management. Alves (2014) documented that independent directors serving on the BOD have a negative connection with earnings management. Recently, Alquhaif et al. (2017) found a significant and negative relationship between BOD independence and real earnings management through using accretive share buyback in the Malaysian context.

According to the resource dependency theory, the large number of directors in the BOD increase firms' opportunity to access more resources and improve the information-processing capabilities of BODs that, in turn, enhance the quality of advice given to firm management (Dalton et al., 1998; Hafsi & Turgut, 2013; Zahra & Pearce, 1989). Previous studies (e.g. Klein, 2002; Xie et al., 2003; Zahra & Pearce, 1989) have indicated that BODs with a large number of members could have the sufficient capability to monitor the top management activities, which leads to mitigating the

earnings management behaviours of managers and block holders. Xie et al. (2003) argued that firms with a large BOD may limit earnings management relative to smaller BODs because a larger number of directors may include more independent directors holding sufficient corporate and financial expertise.

Andres and Vallelado (2008) claimed that large numbers of directors serving on the BOD provide adequate monitoring and advice that may lessen the discretionary power of corporate managers or, in other words, facilitate detecting the opportunistic behaviour of executives. Andres and Vallelado (2008) also argued that the presence of a large number of monitors enhances the quality of strategic decisions through providing integrated skills and expertise of directors with experience of CEO and senior managers. Previous studies have documented that firms with larger BODs are less prone to earnings management (Andres & Vallelado, 2008; Aygun et al., 2010; Ghosh et al., 2010). These findings indicate that larger BODs are more efficient in monitoring management actions. Abdul Latif et al. (2016) documented that a large-sized BOD is more likely to mitigate the frequency of buyback activities that managers use to manage reported EPS.

Based on the perspective of agency theory, the frequency of BOD meetings is a vital factor to enhance the effectiveness of corporate BODs (Vafeas, 1999). Adams and Ferreira (2009) reported that attendance at BOD meetings is an essential channel by which directors find specific relevant information about the firms help fulfil the controlling and monitoring functions. The frequency of BOD meetings would provide the opportunity to utilise the knowledge, expertise and skills of members of the BOD to enhance the interest of total shareholders (Wincent et al., 2010). More frequent BOD

meetings could help overcome problems related to large BODs and provide directors with adequate time to discuss and rationalise a firm's strategic decisions making (Al-Musali, 2013). Xie et al. (2003) argued that a BOD that meets more frequently is more likely to constrain earnings management activities than a BOD that meets less frequently.

Empirically, several prior studies have documented a negative association between the frequency of BOD meetings and earnings management experience. For example, Xie et al. (2003) found that the frequency of BOD meeting is negatively associated with discretionary accruals. Zgarni et al. (2014) provided evidence that the BOD meeting has a significant effect on real earnings management through sales and overproductions. The study of Sarkar et al. (2008) showed that diligent directors effectively help reduce opportunistic earnings management measured by absolute discretionary accruals. Also, Klein (2002) claimed that active attendance at BOD meetings is vital for outside and expert directors to achieve control and monitoring functions. Therefore, the frequency of BOD meetings is important because it provides sufficient time for expert directors to limit managers' actions of real earnings management through an accretive share buyback, which mislead firm's investors.

Regarding financial expertise of BOD, agency theory predicts that the BOD monitors both the majority shareholders and management to protect the interests of minority shareholders (Fama & Jensen, 1983). Resource dependence theory also argues that a large proportion of outside directors on the BOD with relevant experience and knowledge may improve the ability of the BOD to limit opportunistic actions of firm managers. The existing literature mentions that financial expertise is a major factor for

directors to achieve their monitoring functions effectively (Al-Jaaidi, 2013; Burak Güner et al., 2008; Carcello et al., 2002).

Empirically, prior studies have documented that the financial and accounting expertise of independent directors is significantly essential for mitigating the manipulative actions of top management (Abdullah & Nasir, 2004; Agrawal & Chadha, 2005; Carcello et al., 2002; Yunus et al., 2014). Burak Güner et al. (2008) showed that, only in the absence of interest conflicts, are the directors with financial expertise a factor for corporate decision making. Consistently, Custódio and Metzger (2014) documented that financial expertise in the top management is particularly useful for firms that experience high information asymmetry. Martínez-Ferrero et al. (2017) provided evidence that financial expert directors have an effective role in increasing earnings quality.

Previous studies used a composite measurement for the effectiveness of BOD (Bin-Ghanem and Ariff, 2016; Chobpichien, Haron, & Ibrahim, 2007; Hunton, Hoitash, & Thibodeau, 2011; Goh 2009; Johl et al., 2013; O'Sullivan et al., 2008; Srinidhi et al., 2014). The use of a composite measure is more likely to avoid a measurement error that may occur in using individual features of corporate governance mechanisms (Srinidhi et al., 2014). Ward et al. (2009) indicated that using corporate governance mechanisms as a bundle is better than using them individually due to fact that the mechanisms of governance mechanism perform to complete each other.

Consequently, this current study utilises a composite measure for the effectiveness of the BOD, which, as discussed before contains, four features of the BOD (independence,

size, meeting, financial expertise) to represent its effectiveness. Based on the views of agency theory and resource dependence theory as well as before discussions, this study posits the following hypothesis:

H1: There is a negative association between BOD effectiveness (BDSCORE) and accretive share buyback as a mechanism for real earnings management.

4.2.2 Audit Committee (AC) Effectiveness and Accretive Share Buybacks

The primary aim of the AC is to oversee the firm's financial reporting process (Klein, 2002). The AC plays a vital role as a coordinator for the firm's outside auditors, internal financial managers and BOD to review firm's financial reports, audit processes and internal controls (Song & Windram, 2004). From the perspective of agency theory, the AC has a vital oversight role with respect to a firm's management actions, which may contribute to limiting the opportunism of managers (García et al., 2012; Karamanou & Vafeas, 2005; Song & Windram, 2004). Additionally, the resource dependence theory explains the role of independent non-executive directors in providing various choices of resource that enable firms to connect with the external environment (Kassim, 2013; Klein, 1998; Pfeffer, 1972).

The agency theory explains the role of independent members in AC in monitoring the agent's activities (Apadore & Noor, 2013). Based on the view of resource dependence theory, Cohen et al. (2008) argued that presence of a substantial number of independent directors on the BOD is suitable for firms that need efficient access to relevant resources and knowledge that enhance the ability of AC members to perform their role effectively. Previous studies revealed that a large number of independent members

serving on the AC constrains earnings management practices measured by abnormal accruals (Bukit & Iskandar, 2009; Ghafran & O'Sullivan, 2013; Saleh et al., 2007; Shiri et al., 2012; Song & Windram, 2004a; Vafeas, 2005, Yunos, 2011). The above results indicate that an ACs' effectiveness is higher when independent directors dominate the committee. Recently, Al-Rassas and Kamardin (2016) suggested that the independence of AC is significantly associated with limiting accruals earnings management. Haji-Abdullah and Wan-Hussin (2015) documented that an AC with a large number of independent directors has an insignificant association with real earnings management.

According to resource dependence theory, a large number of independent directors on an AC would provide a good mixture of expertise, skills, experience and valuable network with relevant parties, which, in turn, enriches the ability of the AC to effectively implement its duties (Al-Rassas & Kamardin, 2015b; DeZoort et al., 2003; Turley & Zaman, 2007). Previous studies have highlighted that the large size of an AC is a fundamental feature that enhances its effectiveness in performing the monitoring functions (e.g., Bédard & Gendron, 2010; Ghosh et al., 2010; Khalifa & Hanefah, 2012). Consistently, the study of Ismail et al. (2010) reported that AC size has a vital effect on its decisions.

Further, Bédard and Gendron (2010) reviewed the literature related to the size of the AC and found evidence supporting the role of the large size of the AC on effective monitoring whereas others had shown both negative results and insignificant relationships. Xie et al. (2003) provided evidence that the size of the AC had a negative association with managers' actions with respect to earnings management. Felo et al. (2003) provided evidence that AC size has a positive association with the quality of

financial reporting measured by abnormal accruals. Ghosh et al. (2010) also found that firms with large-sized ACs are less likely to embark on earnings management actions. Recently, Salihi and Jibril (2015) revealed that an AC with large size had a negative and significant relationship with the magnitude of earnings management.

Through the lens of agency theory, the meetings frequency of AC is a significant aspect of the committee's effectiveness in achieving its monitoring duties (Vafeas, 2005). Prior studies revealed that the frequency of AC meetings is a primary indicator of the diligence of an AC (Raghunandan & Rama, 2007). Some have found that the more frequently the AC meets, the more efficient the AC in exerting its monitoring functions (Karamanou & Vafeas, 2005; Zaman et al., 2011). Saleh et al. (2007) also mentioned that the frequency of AC meetings is an energizing factor in helping an AC realise its tasks. Karamanou and Vafeas (2005) said that more frequent meetings of an AC may provide sufficient time to achieve its monitoring and oversight functions more effectively, such as the process of preparing corporate reports and internal control.

Empirically, Xie et al. (2003) provide evidence supporting the notion that the more AC's frequent meetings, the greater the ability of AC to control and limit actions of earnings management. Consistently, García et al. (2010) found that the frequency of AC meetings has a negative connection with the level of abnormal accruals as a proxy for earnings management. Saleh et al. (2007) found a negative connotation between the practice of earnings management and AC activities frequency. Further, Inaam et al. (2012) documented that an AC with a greater meeting frequency has a better opportunity to constrain real earnings management through sales manipulation. The

results of mentioned studies mean that the higher the number of ACs meetings, the greater is the opportunity to detect potential mistakes in financial statements.

Regarding financial expertise of AC, agency theory supports the notion that an AC may act on behalf of owners by using its knowledge, skills and expertise to perform the monitoring duties diligently to produce quality financial reporting (Nelson & Devi, 2013). The resource dependence theory also suggests that outside directors provide valuable expertise and advice in a variety of strategic aspects (Hillman et al., 2009). Emmerich et al. (2005) cited that a sufficient understanding of accounting and finance is required for AC members to act as active monitors. Defond et al. (2005) and Davidson et al. (2004) empirically provided evidence that the market perceives the existence of a financial expert as positively enhancing the monitoring function of the AC. Aldamen et al. (2012) also found empirical evidence showing that financial expertise in ACs is positively associated with firm performance. Abbott et al. (2004) showed a negative association for presence of a financial expert on an AC with financial restatements. Martínez-Ferrero et al. (2017) found that an effective role for the financial expertise of AC is in enhancing earnings quality.

In the Malaysian context, BMLRs stated that at a minimum one AC member must have a membership in the Accountants Institute of Malaysia (AIM) or otherwise have experience with a minimum of three working years with academic qualifications, or hold membership in one of the bodies that are recognised and listed in the Accountants Act of 1967 (Yunos, 2011). Yunos et al. (2012) is consistent with previous studies highlighting the importance of financial experts' best practices in corporate governance. Saleh et al. (2007) revealed that a more knowledgeable and experienced

AC recorded fewer earnings management practices. Recently, Bamahros and Bhasin (2016) found a negative linkage between former auditors serving on an AC and the practice of discretionary accruals.

In summary, the existing empirical literature provides evidence that the effectiveness of an AC is dependent on its independence, size, the frequency of its meetings and the financial expertise held by its members (e.g. Al-Rassas & Kamardin, 2016; Davidson et al., 2005; Ghafran & O'Sullivan, 2013; Goodwin-Stewart & Kent, 2006). Bédard et al. (2004) documented that financial expertise is an essential feature for independent directors that enables them to monitor the financial reporting process. Dhaliwal et al. (2010) also indicated that the independence of AC members is not enough, but they should have financial and accounting expertise to constrain accruals-based earnings management. Furthermore, Sharma and Kuang (2014) and Woidtke and Yeh (2013) suggested that focusing on the independence of AC alone may be insufficient to restrict earnings quality; hence, independent members who have financial expertise could support the confidence in accounting information and then raise the earnings quality.

Some existing literature uses a composite metric for measuring the effectiveness of an AC (Bin-Ghanem & Ariff, 2016; Brown & Caylor, 2006; Chobpichien et al. 2008; Habbash, 2013; Kent et al., 2010; Hunton et al., 2011; O'Sullivan et al., 2008; Zaman, Hudaib, & Haniffa, 2011). Ward et al. (2009) suggest that using a composite measure for corporate governance mechanisms is better than taking them individually because the effectiveness of a particular mechanism depends on other mechanisms. Consequently, considering the mechanisms of corporate governance as a package gives

a stronger outcome of measurement than just examining them individually (O'Sullivan et al., 2008).

Thus, this current study combines four features of the AC, including independence, size, meetings and financial expertise, to create a composite measure (score) for the effectiveness of AC. Overall, from the viewpoints of agency theory and resource dependency theory as well as based on the previous empirical debates, this study hypothesises the following:

H2: There is a negative relationship between AC effectiveness (ACSCORE) and accretive share buyback as a mechanism for real earnings management.

4.2.3 Audit Quality and Accretive Share Buyback

Dandago and Binti Zamro (2012) indicated that the external auditor is an independent individual or institution that is employed to review a firm's financial reports, internal controls, and accounting information systems. Auditors with more knowledge and experience possess a higher ability to detect mistakes in financial reporting and improve its credibility, which, in turn, leads to a reduction in information asymmetries between firm's insiders and outside shareholders (Becker et al., 1998; Bedard & Biggs, 1991). Prior studies document that the nominations of qualified auditors lead to a fewer mitigating restatements of financial reports (Romanus et al., 2008) and improve voluntary disclosure (Dunn & Mayhew, 2004).

Becker et al. (1998) indicated that the ability of managers to use their discretion to achieve opportunistic purposes is limited when a firm is audited by a Big 6 auditor.

Francis and Yu (2009) mentioned that firms audited by Big 4 auditors experience lower information asymmetry, have less aggressive earnings management practices and have a better market price than firms with non-Big 4 audit firms. Big 4 auditing firms are auditors from internationally recognised professional accounting bodies that include Deloitte, PricewaterhouseCoopers, Ernst and Young and KPMG. Francis et al. (1999) and Francis and Yu (2009) claimed that internationally branded big audit firms have greater ability to effectively monitor firms and achieve better audit quality than non-Big audit firms.

Consistently, Becker et al. (1998) show that firms audited by non-Big 6 audit firms record accruals more often than firms audited by Big 6 auditors. Krishnan (2003) and Chiang et al. (2011) documented that discretionary accrual is low in the firms reviewed by Big 4 auditors and high-quality CPAs. The existing literature reveals that the audit quality serves as a significant constraint against practicing accrual-based earnings management (Balsam et al., 2003; Becker et al., 1998; Chiang et al., 2011; Francis et al., 1999; Francis & Yu, 2009; Lin & Hwang, 2010; Van Tendeloo & Vanstraelen, 2008).

Empirically, Zang (2012) failed to find a positive relationship between Big 4 auditors and the practise of real earnings management. This outcome is consistent with the argument that the impact of Big 4 audit firms may belong to the fundamental differences in client characteristics rather than differential audit quality (Lawrence et al., 2011). Abdul Rahman and Ali (2006) also found that employing Big 5 auditing firms has insignificant relationship with earnings management practices. Furthermore,

Carlin et al. (2009) indicated substantial cross-sectional variation (low compliance levels) between firms audited by Big 4 auditors in the Malaysian context.

However, the opposing argument predicts that, when a firm is audited by a high-quality auditor, managers may practice earnings management through real earnings management rather than through based-accruals activities (Cohen et al., 2008; Rochowdhury, 2006). Cohen et al. (2008) found that firm managers moved to real earnings management practices after the passage of the Sarbanes-Oxley Act (SOX) from accrual-based earnings management because the likelihood of detection of accrual-based earnings management was higher than in pre-SOX periods.

More specifically, Burnett et al. (2012) found evidence that large audit quality firms are more likely to employ shares buyback for earnings management purposes and less likely to use accruals-based earnings management. Chi et al. (2011) also provided evidence that Big 4 auditors and auditor specialists were positively related to real earnings management positively but had a negative relationship with earnings management based accruals. In Malaysia, Chandren et al. (2015) found a positive relationship between Big4 auditors and accretive share buybacks, meaning that firms audited by Big4 audit firms are more likely to involve in accretive share buybacks to manage EPS.

In summary, previous studies have revealed inconclusive evidence on the role of audit quality in constraining earnings management activities. Therefore, this study posited the following hypothesis:

H3: There is a significant association between audit quality and accretive share buyback as a mechanism for real earnings management.

4.2.4 Family Ownership and Accretive Share Buybacks

Regarding the influence of family ownership on earnings management, there are two conflicting arguments: 1) the alignment interest hypothesis and 2) entrenchment hypothesis. The alignment interest hypothesis assumes that family-controlled firms have motivations to mitigate the earnings manipulation behaviours exercised by the managers (Wang, 2006). Based on this opinion, family members have sufficient knowledge about the activities of their firms, which, in turn, may assist in detecting opportunistic actions such as manipulation of accounting numbers (Anderson et al., 2003). This argument is in line with the notion that suggests controlling shareholders such as family ownership and managers behave as stewards to achieve a firm's goals rather than behaving destructively for individualistic and self-serving objectives (Amran & Che Ahmad, 2010b; Jaskiewicz & Klein, 2007).

Consistently, several empirical studies have documented evidence that supports the alignment hypothesis. Wang (2006) provides evidence that the presence of founding family members has a significant association with higher earnings quality measured by abnormal accruals. Along the same line with the results of Wang (2006), Ali et al. (2007) used discretionary accruals to measure earnings quality and found that family-controlled firms experienced better earnings quality. Li and Hung (2013) indicated that family-owned firms indeed mitigated the likelihood of earnings management in the family-controlled firms. Furthermore, Siregar and Utama (2008) found that family-controlled firms experienced higher quality earnings than other types of ownership of

firms. Achleitner et al. (2014) documented that family-owned firms are involved in real earnings management and exhibit more earnings-decreasing in abnormal accruals as compared to non-family firms. In Malaysian case, Wan-Hussin (2009) revealed that family-controlled firms were more transparent in complying with segmental reporting disclosure.

On the contrary, the entrenchment hypothesis argues that family shareholdings might stimulate management to engage in earnings management (Wang, 2006). This argument is consistent with the viewpoint of agency theory (type II) that posits agency problems occur between majority and minority shareholders (Claessens et al., 2000; Fan & Wong, 2002). Prior studies have opined that firms with highly concentrated family ownership have less efficient monitoring functions, which provides a large opportunity to expropriate the interests of minority shareholders by controlling shareholders (Bhaumik & Gregoriou, 2010; Burkart et al., 2003; Fama & Jensen, 1983; Omar & Mohd-Saleh, 2011).

Numerous empirical studies provide evidence that enhances the hypothesis of the entrenchment argument. Fan and Wong (2002) indicated that controlling shareholders, including family ownership, report accounting information to gain self-interests, which limits the credibility of reported earnings. Faccio et al. (2001) found that family ownership in Europe and Asia utilise dividend policies to expropriate the rights of minority outside shareholders. Consistently, Setia-Atmaja et al. (2011) reported that family-controlled firms exercise earnings management to gain private interests of control. Moreover, Omar and Mohd-Saleh (2011) found that managers and controlling shareholders may use goodwill impairment as a tool to manage earnings. Chi et al.

(2014) indicated that family firms are positively associated with the practice of earnings management. Recently, Tai (2017) provided evidence that family firms are involved in both accruals based and real earnings management, but they engage more in real earnings management activities.

Regarding share buyback programs, previous studies have documented that highly controlling shareholders such as family ownership may force the BOD to engage in share buybacks to exercise opportunistic behaviours such as mimicking good firms (Chan et al., 2010), to manipulate EPS (Kahle, 2002), or occasionally to increase share price (Wu, 2011). In summary, according to agency theory as well as the perspectives of the entrenchment hypothesis and alignment hypothesis, this study posits the following hypothesis:

H4: There is a significant association between family ownership and accretive share buyback as a mechanism for real earnings management.

4.2.5 Managerial Ownership and Accretive Share Buyback

The literature shows two different hypotheses related to the influence of managerial ownership on earnings manipulation activities. The alignment of interest hypothesis predicts that higher ownership managers have stronger incentives to improve shareholders' interests (Mustapha & Ahmad, 2011). This viewpoint is similar to the basic argument of agency theory assuming that the high managerial ownership may align the interest of owners and management (Jensen & Meckling, 1976), which leads to limit actions of earnings management (Warfield et al., 1995). Empirically, Warfield

et al. (1995) documented that managerial ownership has a negative association with the amount of abnormal accruals.

Alves (2012) also revealed that discretionary accruals as a proxy for earnings management were negatively associated with managerial ownership. Further, Farrell et al. (2013) found that a high proportion of CEO ownership has a negative association with earnings management through accretive shares buyback. In Malaysia, Saleh et al. (2005) and Mohd Ali et al. (2010) found that managerial shareholdings was negatively related to earnings management as measured by the absolute value of accounting accruals and discretionary accruals respectively. Recently, Ramadan (2016) found that management ownership was related inversely to earnings management.

On the contrary, the entrenchment hypothesis predicts that firms with high managerial shareholdings may use a firm's resource to gain personal benefits at the expense of other shareholders. This hypothesis is consistent with the viewpoint of agency theory (type II) assumes that conflicts may occur between majority shareholders, who are at the same time a firm's managers, and minority shareholders (Fan & Wong, 2002; Warfield *et al.*, 1995). Previous studies have mentioned that firms with a majority of controlling shareholders who are simultaneously a firm's managers may expropriate the resources of a firm for their interests at the expense of the interests of minority shareholders (Omar & Mohd-Saleh, 2011; Shleifer & Vishny, 1986; Wu, 2009; Yeh & Chou, 2014).

Peyer and Vermaelen (2005) argued that a significant level of managerial ownership may create motivations for managers to entrench their position and wealth. The prior

empirical literature documents a positive association between the percentage of managerial ownership and the practices of earnings management measured by abnormal accruals (Al-Fayoumi et al., 2010; Gopalan & Jayaraman, 2012; Halioui & Jerbi, 2012; Leuz et al., 2003). Johari et al. (2009) provided evidence that managerial ownership more than 25% has a relationship with the practice of earnings management. Recently, Masmoudi and Boujelbène (2014) found that managerial ownership has a significant positive influence on practices earnings management. Recently, Oluku (2017) found that firms with a high level of equity held by managers are more likely to practice earnings management.

In the field of buyback policy, Wu (2011) provided evidence that firms with less managerial entrenchment have more economic reactions to a buyback announcement than those with the high entrenchment of management. Webb (2008) found that managerial ownership has a positive association with the number of shares buybacks in small banks. Moore (2017) found a positive association between CEO equity sales and share buyback activities. Along the same line, Olbe and Nyman (2017) suggested that the size of CEO equity is increased as a result of the decrease in outstanding shares due to the actual share buyback. In Malaysia, Abdul Latif and Taufil Mohd (2014) found a positive association between the actual share buyback and directors' ownership.

Based on the previous discussion and the entrenchment hypothesis and the convergence of interest hypothesis as well as the viewpoint of agency theory, this study posits the following hypothesis:

H5: There is a significant relationship between managerial ownership and accretive share buyback as a mechanism for real earnings management.

4.2.6 Foreign Ownership and Accretive Share Buyback

Foreign investors are more likely to become an effective corporate governance device in emerging markets (Bayrakdaroglu et al., 2012). Choi et al. (2012) mentioned that foreign investors have competitive features that would help to transfer their specific knowledge to domestic firms. Ben-Nasr et al. (2015) indicated that foreign investors need more information disclosure and adequate transparency to avoid expropriation by inside shareholders. Jiang and Kim (2004) said that foreign shareholdings are associated with low asymmetric information and higher corporate transparency. Therefore, foreign owners are less likely to invest in firms with large family controlled and managerial ownership (Leuz et al., 2010).

Jeon et al. (2011) documented that foreign investors prefer firms with high dividend payments rather than firms with share buyback programs due to perceptions of foreigners that firms with share buyback programs have overvalued stocks. Choe et al. (2005) and Dvorak (2005) provided evidence that foreign investors have an information disadvantage relative to domestic investors. Thus, foreign traders avoid firms that undertake share buyback programs (Jeon et al., 2011). This may further support the notion that foreign investors prefer cash dividends in comparison to share buybacks.

Several studies have revealed that foreign investors put their investment in the firms with good corporate governance and investor protections. Jiang and Kim (2004) indicated that foreign investors are likely to be efficient processors of public

information and are attracted to firms with low information asymmetry. Mohd Ali et al. (2008a) report that foreign shareholdings play a vital role in monitoring firm behaviours. Furthermore, Anum Mohd Ghazali (2010) provided empirical evidence that foreign shareholdings have a positive relationship with the corporate performance of Malaysian firms. Many prior studies have found a negative association between the proportion of foreign ownership and the exercise of earnings management (Ben-Nasr et al., 2015; Guo et al., 2015; Mohd Ali et al., 2010; Wu et al., 2015). Recently, Poli (2015) and Alzoubi (2016) provided empirical evidence that foreign ownership has a significant and negative association with earnings management activities.

The majority of foreign ownership in Malaysian market is in the form of a foreign candidate or direct ownership of foreign firms (Mohd Ali et al., 2010). On average, foreign ownership in Malaysia is about 23% (Anum Mohd Ghazali, 2010). Numerous Malaysian firms are controlled by foreign owners from European countries, especially from the United Kingdom (Ibrahim & Samad, 2011). Shayan-Nia et al. (2017) documented that the size of real earnings management is significantly mitigated by foreign investors in Malaysian firms. Therefore, foreigners may help improve firm governance, leading to the limitation of the opportunistic actions of managers.

Based on the above debates, this study posits the following hypothesis:

H6: There is a negative relationship between foreign ownership and accretive share buyback as a mechanism for real earnings management.

4.2.7 Employee Stock Option (ESOS) and Accretive Share Buyback

The key objective of employee stock options is to align the interests of the management (executives and employees) with firm shareholders (Bickley, 2012). Managerial stock options may play a vital role as incentives for the manipulative behaviours of managers and controlling stockholders (Bergstresser & Philippon, 2006; Cheng & Warfield, 2005; Houmes & Skantz, 2010; Kahle, 2002). Cheng et al. (2010) provided evidence that, when a bonus of a firm's CEO directly depends on EPS, the firm is more likely to engage in share buyback programs and the number of share buybacks tend to be greater.

According to the stock options hypothesis, firms may engage in share buyback programs to fund stock options that are exercised (Dittmar, 2000; Kahle, 2002), as well as to avoid a dilution in EPS caused by the exercise of a stock option (Bens et al., 2003; Kahle, 2002). Along the same line, the substitution hypothesis posits that employee options motivate management to undertake share buyback programs to limit dividend payments that cause a decrease in the value of both exercisable and unexercisable stock options held by executives (Bens et al., 2003; Kahle, 2002). Previous studies, for example those of Dittmar (2000), Fenn and Liang (2001), Kahle (2002), and Lamba and Miranda (2010), provide empirical evidence that firms with a high level of employee stock options are more motivated to engage in share buyback programs. More specifically, the incentive to initiate buyback programs is more likely when executives have large exercisable stock options (Balachandran et al., 2008). These results suggest that managers with higher executive stock options would be more motivated to embark in share buybacks to reduce the dilution of EPS affected by their stock options (Lamba & Miranda, 2010).

Previous studies have mentioned that firms embark in share buybacks to handle the dilution in EPS occurs through the exercise of stock options (Bens et al., 2003; Dittmar, 2000; Weisbenner, 2000). Furthermore, Lin et al. (2009) provided evidence that managerial stock options affect the amount of actual share buyback positively. Lin et al. (2009) also found that managers use share buybacks as a substitute mechanism for discretionary accounting accruals in their earnings management practices. Furthermore, prior researchers have asserted that managers holding large stock options are more likely to manipulate earnings to meet performance forecasts (Bergstresser & Philippon, 2006; Cheng & Warfield, 2005; Houmes & Skantz, 2010).

Bedard et al. (2004) and Cadbury committees (1992) found evidence that the stock options of directors may limit their independence. Consistently, Efendi et al. (2007) provided evidence that proportion of CEO's stock options is associated with the likelihood of financial report restatement. Bedard et al. (2004) and Cheng and Warfield (2005) indicated that managers with a high level of managerial ownership including stock options have more incentives to manipulate earnings to meet or beat forecasts of analysts, especially when the probability of a negative earnings surprise is high.

Moreover, Bartov and Mohanram (2004) found that firm executives use private information to time abnormally large exercises follow earnings management to increase the price of stocks exercised. Kadan and Yang (2016) examined the association between the grants of executive stock options and earnings management and found that newly granted stock options are positively related to earnings management practices. Stock options (ESOS) decrease EPS. This may increase the possibility of managers being involved in accretive share buyback to increase EPS (offset the EPS dilution). However,

limited studies have proven the positive relationship between stock options and accretive share buyback. Thus, with the support of stock options hypothesis and previous debates, this study posits this following hypothesis:

H7: There is a positive relationship between employee stock options exercised and accretive share buyback as a mechanism for real earnings management.

4.3 Research Design

The research design is defined as a master plan identifying the procedures and methods used for collecting and analysing the particular information (Zikmund, Babin, Carr, & Griffin, 2013). Saunders, Lewis, and Thornhill (2009) said that a research design comprises a general plan on how the study will be conducted to realise its purpose. In other words, a research design provides a framework that facilitates planning the actions involved in the research project (Kassim, 2013). More specifically, a research design is considered as a logical plan for “dealing with at least four problems: what questions to study, what data are relevant, what data to collect, and how to analyse the results” (Yin, 2009, p. 26). In this case, a quantitative research method was the most suitable method to explain the association between and among the measurable variables (Leedy & Ormrod, 2010).

Consequently, this study employs a quantitative approach to determine the influence of corporate governance mechanisms and ESOS on accretive shares buyback as a mechanism for real earnings management. It uses the secondary data to answer its five questions and achieve the relevant objectives. The data were collected from several sources. The annual reports of firms listed on the Bursa Malaysia were used to get data

for actual share buybacks, corporate governance mechanisms, ownership structure and ESOS over the period from 2010- 2015. The DataStream database was employed to get data for the control variables.

4.4 Definition and Measurement of Dependent Variables: Accretive Shares

Buybacks

Share buyback is a method to return excess cash to the shareholders by which firms buy back its shares from targeted shareholders, individuals or groups at a specific price (Grullon & Ikenberry, 2000). According to the Companies Act 2016 and Chapter 12 of the Bursa Listing Requirements, share buyback via the open market is the only method of share buyback that is allowed in the Malaysian context; firms are limited to buying back a maximum of 10% of their outstanding shares. Share buybacks are used by managers to manage reported EPS to match earnings targets (Hribar et al., 2006; Lin et al., 2009; Vermaelen, 2005).

This current study focuses on actual share buyback activities that cause a considerable change in EPS (accretive share buybacks). The net effect of share buybacks on EPS depends jointly on three elements, namely, 1) the timing of the buyback, 2) the number of shares in the buyback, and 3) the forgone future returns from the cash used for share buyback (Hribar et al., 2006). Shares buyback increases EPS only when a firm's earnings yield (ratio of earnings to price) is greater than the foregone return (interest expense incurred) on the cash paid out at the time of shares buyback (Bens et al., 2003; Hribar et al., 2006).

This study follows previous studies (Burnett et al, 2012; Chandren et al, 2015; Farrell et al, 2014; Hribar et al, 2006) to calculate accretive shares buyback, where they identify two steps for calculating accretive buybacks. The first step is to compute EPS without considering the effect of shares buyback activities during the financial year (ASIF-EPS). The study calculates ASIF-EPS by estimating the denominator and numerator effects of accretive shares buyback on EPS as follows:

$$\text{ASIF-EPS}_{it} = \text{NI}_{it} / (\text{Outstanding shares}_{it-1} + 0.5 \times \text{Shares issued}_{it}) \dots\dots\dots (1)$$

Where,

ASIF-EPS_{it} represents the estimated EPS in the absence of share buyback activities.

NI_{it} represents the reported net earnings before comprehensive income available to common shareholders during the firm-fiscal year.

Outstanding shares_{it-1} is the reported number of ordinary outstanding shares at the beginning of the firm-fiscal year.

0.50 is a time-weighted average of the number of outstanding shares during the firm-fiscal year.

Shares issued_{it} is the number of ordinary shares issued during the firm-fiscal year.

Following Burnett et al. (2012), Hribar et al. (2006), and Horan (2012), the issued shares are calculated by the following equation;

$$\text{Shares issued}_{it} = \text{ending outstanding shares}_{it} - \text{beginning outstanding shares}_{it-1} + \text{number of shares bought back during the fiscal year}_{it} \dots\dots\dots (2)$$

The second step of accretive buyback calculations is to compute the EPS difference (EPS.DIFF) between ASIF_EPS and the reported EPS as presented in financial reporting. This study calculates EPS.DIFF in the following equation:

$$\text{EPS.DIFF}_{it} = \text{Reported EPS}_{it} - \text{ASIF_EPS}_{it} \dots\dots\dots (3)$$

Where: **Reported EPS**_{it} represents the reported EPS as it shown in the annual reports.

Based on prior studies (Burnett *et al.*, 2012; Farrell *et al.*, 2014; Hribar *et al.*, 2006), share buybacks are considered as an accretive share buyback if it leads to an increase in EPS at least by one cent (0.01) of a Ringgit. Based on the previous calculations, this current study found 106 listed firms that involved at least one time in accretive share buybacks to increase EPS by at least one cent of Malaysian ringgit during the study's sample period as presented on Section 4.6.2.

Following Chandren *et al.* (2015), this study uses the natural logarithm of accretive share buyback numbers (ABB) as a measurement for the dependent variable, accretive share buybacks. The number of share buybacks represents the total volume of shares bought back by the firm's management during the current year. This study uses the volume of shares bought back rather than the Malaysian ringgit value of share buybacks because reported EPS is affected directly by the number of outstanding shares, which, in turn, are affected by the volume of shares bought back (Hribar *et al.*, 2006; Farrell *et al.*, 2013).

Also, BMLRs in Chapter 12 states that firms required to submit a proposal of share buyback intention to Bursa Malaysia and then send circular to the shareholders for the

purpose of buyback implementation before conducting an annual general meeting or extraordinary general meeting to get the approval of shareholders (Chandren et al., 2015). The BOD proposed the intention of buyback in terms of volume of shares to the shareholders and the actual value in Malaysian ringgit will not be known until the actual buyback activities discharge through open-market share buyback programs. Thus, this current study uses accretive share buyback volume as a measurement for the dependent variable, accretive share buybacks.

4.5 Definitions and Measurements of Independent Variables

The independent variables include the score of the BOD' effectiveness (independence, size, meetings and financial expertise), the score of AC effectiveness (independence, size, meetings, and financial expertise), audit quality, family ownership, managerial ownership, foreign ownership, and employee stock options. Furthermore, the control variables comprise firm size, growth, leverage, and cash level. The specific variables are discussed in detail below.

4.5.1 Board of Directors' (BOD) Effectiveness

Four features of the BOD are used to calculate the score of its effectiveness (BDSCORE), which includes BOD independence, BOD size, BOD meetings and BOD financial expertise. This study follows two steps to produce the scores of the four features of the BOD, which represent its effectiveness. The first step is to measure the four features of the BOD individually, and the second one is to calculate the composite score of BOD effectiveness. The score is developed by transfer the features of the BOD to dichotomous variables, in which the total score ranges from "0" to "4". If the score

of the BOD is higher, this indicates higher effectiveness and a lower score indicates lower effectiveness. More details are included in the following subsections.

4.5.1.1 Board of Directors' (BOD) Independence

BMLRs defined an independent director as “a director who is independent of management and free from any business or other relationship which could interfere with the exercise of independent judgement or the ability to act in the best interests of an applicant or a listed issuer” (p. 105). An independent director is a director who is not an executive director, not a key shareholder, is not a family membership with of any key shareholder, an executive director or officer and not a candidate for any key shareholder or executive director as well as not engaging as an officer or advisor for a firm (BMLRs, 2013).

The director is considered to be independent when the director does not has occupy any executive position or ownership position in a firm. Following previous studies (e.g., Abidin et al., 2014; Al-Matar et al., 2014; Fooladi, 2012; Hashim & Devi, 2008b), this study measures the independence of the BOD (BDIND) by employing the proportion of independent directors scaled by entire number of directors serving on the BOD.

4.5.1.2 Board of Directors' (BOD) Size

BOD size is defined by prior studies (Andres & Vallelado, 2008; Hashim & Devi, 2008a; Ismail et al., 2010) as the total number of directors on the firm's BOD. This study follows the literature, for example Abdul Rahman and Ali (2006), Andres and Vallelado (2008), Aygun, Ic, and Arvas (2010), Dimitropoulos (2011), Epps and Ismail (2009), Hashim and Devi (2008a), Ishak and Manaf (2013), Kumari and Pattanayak

(2014) and Zgarni et al. (2014) by using the total number of directors on a firm's BOD to measure the BOD size variable (BDSIZE).

4.5.1.3 Board of Directors' (BOD) Meetings

Previous studies, for instance, Vafeas (1999), Mohamad et al. (2012) and Xie et al. (2003), define BOD meeting frequency as the number of meetings of the BOD during a year. Following existing literature (Hashim & Devi, 2008a; Sarkar et al., 2008; Vafeas, 1999; Xie et al., 2003; Zgarni et al., 2014), the frequency of BOD meetings is used to measure BOD meetings (BDMEET).

4.5.1.4 Board of Directors' (BOD) Financial Expertise

The Securities and Exchange Commission (SEC) in the United States says that a director is a financial expert when the director has accounting, finance or supervisory expertise (Dhaliwal et al., 2010). BMLRs stated three conditions to consider a director as a financial expert including; the director must have a membership in the Malaysian Institute of Accountants (MIA) or otherwise have experience with a minimum of three working years with academic qualifications, or hold membership in one of the bodies that are recognised and listed in the Accountants Act of 1967. Following previous studies (e.g. Amran & Che Ahmad, 2011; Yunos et al., 2014; Yunos et al., 2012), this study employs the ratio of directors with financial expertise to the total number of directors on a firm's BOD as a metric to measure the financial expertise of a BOD (BDEXPRT).

4.5.1.5 Board of Directors' (BOD) Effectiveness as Score

The existing literature, for example, Hunton et al. (2011), Zaman et al. (2011), Habbash (2013) and Bin-Ghanem and Ariff (2016) utilise an aggregate index to measure governance mechanisms. Those studies develop composite scores to measure the BOD and AC effectiveness. A composite score is used based on the argument that corporate governance is an interrelated system and is effective only in particular combinations rather than in isolated best practices. Aguilera et al. (2008) argued that a corporate governance system is an interrelated and becomes more efficient when considered as a bundle rather than as individual measurements.

Accordingly, using the composite measurement of corporate governance mechanisms provides a stronger effect relative to individual measurement (O'Sullivan et al., 2008). Furthermore, examining a composite measure is more likely to avoid measurement errors that may occur through using an individual features (Srinidhi et al., 2014). Ward et al. (2009) report that using governance mechanisms as a group is better than using them individually because governance mechanisms perform in complementary manner.

Based on previous studies (Bin-Ghanem & Ariff, 2016; Chobpichien et al., 2007; Hunton et al., 2011; Goh 2009; Johl et al., 2013; O'Sullivan et al., 2008; Srinidhi et al., 2014), this study utilises a composite measure for effectiveness of BOD, which, as discussed before, contains four features of the BOD (independence, size, meeting, and financial expertise) to represent its effectiveness. Each of these features is transformed to dichotomous values, which equals "1" if its original value is above its sample median and "0" if otherwise. This process is applied to the four features of the BOD. Then the

dichotomous value of all four features of the BOD is added together to produce a composite score of BOD effectiveness (BDSCORE).

Table 4.1
Constructing the Composite Score of the BOD Effectiveness

Variable	Acronym	Measurement	Theories
BOD independence	BDIND	Dichotomous variable equals “1” if the percentage of independence of BOD members is larger than the sample median and equals “0” if otherwise (Bin-Ghanem & Ariff, 2016; Chobpichien et al., 2008).	Agency theory and resource dependence theory.
BOD size	BDSIZE	Dichotomous variable equals “1” for BOD members larger than the sample median and equals “0” if otherwise (Chobpichien et al., 2008; Johl et al., 2013).	Agency theory and resource dependence theory.
BOD meetings	BDMEET	Dichotomous variable equals “1” if the number of meetings frequency is more than the sample median and equals “0” otherwise (Bin-Ghanem & Ariff, 2016; Chobpichien et al., 2008; Johl et al., 2013).	Agency theory and resource dependence theory.
BOD financial expertise	BDEXPERT	Dichotomous variable equals “1” if the percentage of financial experts is more than the sample median and equals “0” if otherwise (Chobpichien et al., 2008).	Agency theory and resource dependence theory.
BOD effectiveness score	BDSCORE	The sum of four components: BOD score, it is ranging from 0-4 with 0 indicating the lowest effectiveness and 4 indicating the highest effectiveness of the BOD (Bin-Ghanem & Ariff, 2016; Chobpichien et al., 2008; Goh 2009; Johl et al., 2013).	Agency theory and resource dependence theory.

BDSCORE is a summed composite measure of the BOD’s effectiveness that ranges from “0” to “4” in this study. For example, if the value of the four features (independence, size, meetings, and financial expertise) for one observation is 1, 0, 1, and 1 respectively; this means that the value of the score for this observation is "3". The

BDSCORE indicates that BOD with more independent directors, a large size, more frequent meetings and more financial expert members are a highly effective BOD. This means that the higher score of the BOD' effectiveness, the higher effectiveness of the BOD. Table 4.1 shows the process of computing the score of the BOD effectiveness.

4.5.2 Audit Committee (AC) Effectiveness

The same process of measuring BOD effectiveness is replicated to measure the effectiveness of AC. Four features of the AC, independence, size, the frequency of meetings and financial expertise, are summed together to calculate a composite score of its effectiveness. As mentioned before in the section of the BOD effectiveness, the study begins by measuring these features of the AC and then joining them together to calculate the composite score as a proxy for AC effectiveness (ACSCORE).

4.5.2.1 Audit Committee (AC) Independence

Following prior studies, the ratio of independent non-executive directors serving on AC to total number of its members is employed by this study to be a measurement of the AC independence variable (ACIND) (Abdul Latiff & Taib, 2011; Cohen et al., 2004; Karamanou & Vafeas, 2005; Khalifa & Hanefah, 2012; Madi et al., 2014; Saleh et al., 2007; Song & Windram, 2004; Wan Ismail et al., 2010; Xie et al., 2003).

4.5.2.2 Audit Committee (AC) Size

AC size is defined as a number of directors serving on the committee. BMLRs require at least three members to serve on a firm's AC. This current study follows the relevant literature by using the total number of directors serving on a firm's AC as a measurement of the variable of AC size (ACSIZE) (Al-Rassas & Kamardin, 2015; Felo,

Krishnamurthy, & Solieri, 2003; Madi et al., 2014; Salihi & Jibril, 2015; Wan Ismail et al., 2010; Xie et al., 2003).

4.5.2.3 Audit Committee (AC) Meetings

AC meetings are defined as the frequency of meetings held by the AC in a given year (Ghosh et al., 2010). Following previous studies, this study uses the number of AC's meetings as a proxy to measure the AC meetings (ACMEET) (Abbott et al., 2004; Abdul Rahman & Ali, 2006; Chandrasegaram et al., 2013; Madi et al., 2014; Saleh et al., 2007; Song & Windram, 2004b; Xie et al., 2003).

4.5.2.4 Audit Committee (AC) Financial Expertise

The SEC in the United States considers a director to be financial expert director when the director has accounting, finance or supervisory expertise (Dhaliwal et al., 2010). More specifically, BMLRs in Malaysia has defined a director as a financial expert if the director has a membership in "Malaysian Institute of Accountants, or alternatively have at least three years working experience with academic qualifications or a member of one of the recognised bodies list out in the Part II of the First Schedule of the Accountants Act 1967" (p. 1504). Following previous researchers (Al-Rassas & Kamardin, 2015b; Felo et al., 2003; Madi et al., 2014; Saleh et al., 2007; Yeh & Chou, 2014; Yunos et al., 2012), this study uses the ratio of financial expert members scaled by the total number of AC members to be a measure of the AC expertise (ACEXPRT).

4.5.2.5 Audit Committee (AC) Effectiveness as Score

The current study follows previous studies (Bin-Ghanem & Ariff, 2016; Brown & Caylor, 2006; Chobpichien et al. 2008; Habbash, 2013; Kent et al., 2010; Hunton et al.,

2011; O'Sullivan et al., 2008; Zaman, Hudaib, & Haniffa, 2011) in using a composite governance score to measure AC effectiveness. The same processes of computing the BOD score was repeated to calculate the score of AC effectiveness (ACSCORE). Thus, this study first measures AC features (independence, size, meetings, financial expertise). Then, those four features are transferred to dichotomous values equalling

Table 4.2
Constructing the Composite Score of the AC Effectiveness

Variables	Acronym	Measurement	Theories
AC independence	ACIND	Dichotomous variable equals one if the AC independence is larger than the sample median and equals "0" if otherwise (Bin-Ghanem & Ariff, 2016; Cohen et al., 2004; Khalifa & Hanefah, 2012).	Agency theory and resource dependence theory.
AC size	ACSIZE	Dichotomous variable equals "1" for AC size larger than the sample median and equals "0" if otherwise (Bin-Ghanem & Ariff, 2016; Chobpichien et al., 2008; Zaman et al., 2011).	Agency theory and resource dependence theory.
AC meetings	ACMEET	Dichotomous variable equals "1" if the number of meetings frequency is more than the sample median and equals "0" if otherwise (Bin-Ghanem & Ariff, 2016; Chobpichien et al., 2008; Zaman et al., 2011).	Agency theory and resource dependence theory.
AC financial expertise	ACEXPERT	Dichotomous variable equals "1" if the percentage of financial experts is more than the sample median and equals "0" if otherwise (Bin-Ghanem & Ariff, 2016; Chobpichien et al., 2008; Zaman et al., 2011).	Agency theory and resource dependence theory.
AC effectiveness score	ACSCORE	The sum of four components: AC score ranges from 0 - 4 with a higher score indicating a higher effectiveness of the AC (Bin-Ghanem & Ariff, 2016; Chobpichien et al., 2008; Zaman et al., 2011).	Agency theory and resource dependence theory.

“1” if it is above the median and “0” if otherwise to calculate the score as a composite measurement of AC effectiveness. The score refers to the total value of the four-dichotomous value that takes a score ranging from 0 to 4 as presented in Table 4.2 below. Higher scores reflect higher AC effectiveness.

4.5.3 Audit Quality Measurement

An external auditor is an independent party who is employed to review financial reports, internal control and accounting information system (Dandago & Binti Zamro, 2012). Previous researchers have mentioned that international brand of big audit firms is associated with the ability to effectively monitoring and achieve better audit quality than non-Big audit firms (Francis et al., 1999; Francis & Yu, 2009). Based on the existing literature, audit quality (BIG4) is measured by a dichotomous variable equal to one if the firm is audited by a Big 4 audit firm and 0 if otherwise (Becker et al., 1998; Chandren et al., 2015; Francis & Yu, 2009; Thoopsamut & Jaikengkit, 2009).

In addition, Big 4 auditors have more experience and knowledge related to the clients business, which enables them to detect any violations of financial reporting and mitigate earnings manipulation relative to non-Big 4 auditors (Francis & Yu, 2009; Krishnan, 2003). Prior literature employs big audit firms as a proxy for audit quality (e.g., Becker et al., 1998; Chi et al., 2011; Cohen & Zarowin, 2010; Johl et al., 2007; Zang, 2012). Therefore, this study employs Big 4 audit firms as a proxy for audit quality (BIG4).

4.5.4 Family Ownership Measurement

Family-controlled firm are defined “as those where the founder or a member of his or her family by either blood or marriage, is an officer, a director, or a blockholder either individually or as a group” (Mohd-Saleh & Omar, 2014, p. 144). This study uses a more refined definition of family-owned firms that does not exclusively depend on ownership concentration as a main determining standard for identifying family firms. The study identifies family-controlled firms as being one in which: 1) at least one member of the controlling family holds a managerial position such as BOD member, CEO or chairman, or 2) a family block holder holds at least 5% of firms shares (direct and indirect) (Amran & Che Ahmad, 2011; Amran & Che Ahmad, 2013; Anderson et al., 2003; Khan, Muttakin, & Siddiqui, 2015; Mohd-Saleh & Omar, 2014; Wang, 2006).

Cascino et al. (2010) argue that indicating a certain percentage threshold would not make any alteration regarding family and non-family firms because a certain percentage threshold only represents high ownership concentration rather than family ownership and management. Thus, this study uses a dichotomous variable that equals “1” if a firm is considered to be a family-controlled firm and “0” if otherwise, as a measure for the family ownership variable (FAMD) (Khan et al., 2015).

4.5.5 Managerial Ownership Measurement

Managerial ownership is defined as firm’s shares held by executive directors (Mitchell & Dharmawan, 2007). Consistent with previous studies, this study uses the number of shares held by the executive directors scaled by the total number of outstanding shares as a proxy to measure managerial ownership variable (MOWN) (Abdul Latif & Taufil Mohd, 2014; Alves, 2012; Amran & Che Ahmad, 2013; Hashim & Devi, 2008a;

Mitchell & Dharmawan, 2007; Mohd Ali et al., 2010; Mustapha & Ahmad, 2011; Saleh et al., 2005).

4.5.6 Foreign Ownership Measurement

Most foreign shareholdings in Malaysian market are either a foreign nominee or direct ownership held by foreign firms (Mohd Ali et al., 2010). Consistent with the existing literature, this study uses the number of all total firm's equity shares held by foreign investors scaled by the total outstanding shares of the firm as measurement for foreign ownership (FOWN) (Anum Mohd Ghazali, 2010; Ben-Nasr et al., 2015a; Guo et al., 2015; Mohd-Saleh & Omar, 2014; Mohd-Saleh, Rahman, & Ridhuan, 2009; Mohd Ali et al., 2010).

4.5.7 Employee Stock Options Measurement

Employee stock options (ESOS) are defined as a legal contract that grants the employees the right to purchase a particular number of a firm's shares at a specific price (Bickley, 2012; Katan et al., 2013). The primary aim of ESOS is to align the benefits of the management (executives and employees) and firm owners (Bickley, 2012). Existing literature focuses on stock options that are exercised during a fiscal year (Abdul Latif, 2010; Bens et al., 2003; Kahle, 2002; Lamba & Miranda, 2010). Consistent with previous studies, stock options exercise (ESOSEXR) is measured by the number of stock options exercised scaled by firm's outstanding shares.

4.5.8 Measurements and Definitions of Control Variables

Following prior literature in the field of shares buyback policy (Burnett et al., 2012; Chandren & Nadarajan, 2013; Dittmar, 2000; Farrell et al., 2013; Hribar et al., 2006),

this study controls for several firm characteristics, namely, firm size, leverage, growth and cash level, that might affect the likelihood of firms engaging in share buyback programs, especially those that cause considerable change in EPS. Consistent with the notion that investor expectations are being formed at the beginning of each year (Hribar et al., 2006), all measurement of control variables are calculated as of the end of the previous years (t-1).

4.5.8.1 Firm Size

Fenn and Liang (2001) and Vermaelen (1981) said that larger firms have lower information asymmetries and lower financing costs than smaller firms. However, small firms have less coverage from the media and analysts and, therefore, are more likely to be mispriced. Lower financing costs encourage firms to pay out more cash to their shareholders due to the costs of potential funds needed in the future will be comparatively inexpensive (Kahle, 2002). Previous studies document that firm with a small size is more likely to exercise shares buyback programs, more particularly accretive shares buyback, than a large firm (Bens et al., 2003; Chandren & Nadarajan, 2013; Dittmar, 2000; Hribar et al., 2006; Vermaelen, 1981). Prior studies, for example Warfield et al. (1995), Xie et al. (2003) and Abdul Rahman and Ali (2006), document a negative influence for firm size on earnings management practices. Therefore, this study employs prior year firm's natural logarithm of total assets at the beginning of a fiscal year to be a proxy for the size of firms ($FSIZE_{t-1}$) (Bens et al., 2003; Burnett et al., 2012; Hribar et al., 2006; Lamba & Miranda, 2010).

4.5.8.2 Leverage

When the firm's ratio of debt to equity (leverage) is lower than the optimal ratio, firms have more incentive to engage in shares buyback programs (Abdul Latif, 2010; Andriosopoulos & Hoque, 2013; Burnett et al., 2012; Dittmar, 2000; Dixon et al., 2008; Hribar et al., 2006). Bens et al. (2003) also support this notion that, under optimal capital structure, firms engage in share buybacks to reduce a firm's equity, ratio which leads to an increase in the debt ratio. Leverage is considered as an external monitoring mechanism, where bondholders may practice monitoring actions over managerial actions to protect their rights. Thus, the likelihood of earnings management through accretive share buyback is less in firms with a large percentage of leverage.

Previous study documents a negative association between leverage and accretive share buyback activities (Farrell et al., 2013; Farrell et al., 2014). Consistent with prior literature (Abdul Latif & Taufil Mohd, 2014; Sitraselvi Chandren & Nadarajan, 2013; Dittmar, 2000; Farrell et al., 2013; Farrell et al., 2014), the current study uses the proportion of current and long-term debt scaled by a firm's total assets at the beginning of a fiscal year as a measure for the variable of leverage (LEV_{t-1}).

4.5.8.3 Growth

A firm with large investment opportunities has the ability to improve its value by using cash flows to finance their investments rather than by distributing cash to shareholders (Jensen, 1986). Essentially, the foregone investment opportunities of fund used in share buyback programs are higher for firms with real growth than non-growth firms (Farrell et al., 2013). This is along the same line with the argument indicating that high growth firms have noteworthy investment opportunities and hold less free cash flows.

Additionally, previous empirical studies provide evidence that high level of growth opportunities are negatively connected to actions of earnings management (Abdul Rahman & Ali, 2006; Song & Windram, 2004a; Xie et al., 2003). Prior studies also suggest that high growth firms are less likely to exercise accretive share buyback (Farrell et al., 2013; Farrell et al., 2014). Consistent with existing literature, this study uses assets growth at the beginning of a fiscal year ($AGRWOTh_{t-1}$) as a proxy to measure firms' growth (Burnett et al., 2012; Farrell et al., 2013). $AGROWTH$ is calculated as following: assets growth equals total assets of the current year minus the prior year's total assets, scaled by the prior year's total assets (Farrell et al., 2013).

4.5.8.4 Cash Level

Previous studies document that the level of cash flows is more likely to positively influence firm share buyback activities (Abdul Latif et al., 2014; Dittmar, 2000; Grullon & Michaely, 2002; Jiang et al., 2013). Firms that hold a high amount of cash flows can reduce agency costs and avoid the risk of over-investing by distributing cash to shareholders (Lamba & Miranda, 2010). Prior studies suggest that high cash flow firms are more likely to exercise share buyback activities for the purposes of earnings management (Chandren et al., 2015; Chandren & Nadarajan, 2013; Farrell et al., 2013; Farrell et al., 2014).

Chandren and Nadarajan (2013) found that firms with a high cash level are more likely to involve in accretive share buybacks. However, Chandren et al. (2015) documented that a positive but not significant relationship exists between cash level and accretive share buyback. Burrent et al. (2012) also documented a negative relationship between the level of cash flow and real earnings management by accretive share buyback.

Following previous studies, for example, Dittmar (2000), Farrell et al. (2013), Kieschnick (1998) and Fenn and Liang (2001), state that the ratio of cash flows (CL_{t-1}) are measured by cash and cash equivalents scaled by total assets at the beginning of the fiscal year.

Table 4.3
Summary of the Study's Variable Measurements

Variable	Acronym	Measurement	Support
<u>Dependent Variable:</u>			
Accretive shares buyback	ABB	The natural logarithm of a number of accretive share buyback. The number of shares buyback represents the total volume of shares bought back by the firm's management over the current year.	(Chandren <i>et al.</i> , 2015)
<u>Independent Variables:</u>			
BOD independence	BDIND	The proportion of independent directors to a total number of directors on the BOD.	(Hashim & Devi, 2008b; Abidin et al., 2014; Saleh et al., 2005)
BOD size	BDSIZE	The total number of directors on the firm's BOD.	(Dimitropoulos, 2011; Epps & Ismail, 2009; Hashim & Devi, 2008a)
BOD meetings	BDMEET	The total number of meetings of the BOD in a fiscal year.	(Vafeas, 1999; Xie et al., 2003; Hashim & Devi, 2008b)
BOD financial expertise	BDEXPRT	The proportion of financial expert directors to a total number of directors on the BOD.	(Amran & Che Ahmad, 2011; Sun et al., 2014)
BOD effectiveness (score)	BDScore	(Independence, size, number of meetings and financial expertise)	(Bin-Ghanem & Ariff, 2016; Chobpichien et al., 2008; Goh, 2009; Johl et al., 2013)
AC independence	ACIND	The number of independent non-executive members of AC scaled by the size of the AC.	(Klein, 2002; Saleh et al., 2007; Xie et al., 2003)
AC size	ACSIZE	The total number of directors serving on the firm's AC.	(Ismail et al., 2010; Xie et al., 2003; Salihi & Jibril, 2015)

Table 4.3 (Continued)

Variable	Acronym	Measurement	Support
AC meetings	ACMEET	The number of meetings held by the AC in a fiscal year.	(Saleh et al., 2007; Abdul Rahman & Ali, 2006)
AC financial expertise	ACEXPRT	The percentage of financial expert members to total numbers of AC members.	(Saleh et al., 2007; Sun et al., 2014; Al-Rassas & Kamardin, 2015b)
AC Effectiveness (score)	ACSCORE	(Independence, size, number of meetings and financial expertise)	(Bin-Ghanem & Ariff, 2016; Chobpichien et al., 2008; Zaman et al., 2011)
Audit quality	BIG4	Dichotomous variable equals one if the firm is audited by Big 4 Auditors, and zero otherwise.	(Becker et al., 1998; Thoopsamut & Jaikengkit, 2009; Francis & Yu, 2009)
Family ownership	FAMD	Dichotomous variable equals one if the firm is controlled by the family group; and zero otherwise (Khan et al., 2015).	(Abdullah & Ismail, 2016; Khan et al., 2015)
Managerial ownership	MOWN	The percentage of shares held by the executive directors (direct and indirect) to the total number of outstanding shares at the end of current fiscal years.	(Amran & Che Ahmad, 2013; Mohd Ali et al., 2010; Saleh et al., 2005)
Foreign ownership	FOWN	The percentage of firm's shares held by foreign investors to the total ordinary shares at the end of current fiscal years outstanding.	(Ben-Nasr et al., 2015; Mohd-Saleh & Omar, 2014; Mohd Ali et al., 2010)
Employee stock options	ESOSEXR	The proportion of stock options exercised scaled by firm's outstanding shares at the end of fiscal year.	(Kahle, 2002; Bens et al., 2003; Lamba & Miranda, 2010)
<u>Control variables</u>			
Firm size	FSIZE _{t-1}	Natural log of total assets at the beginning of the year.	(Hribar et al., 2006; Burnett et al., 2012; Ismail et al., 2010; Rahman & Ali, 2006)
Growth	AGRWOTH _{t-1}	Assets growth at the beginning of the year, annual assets growth (current year assets – prior year's assets)/prior year's assets	(Farrell et al., 2013; Ismail et al., 2010; Klein, 2002; Xie et al., 2003)

Table 4.3 (Continued)

Variable	Acronym	Measurement	Support
Leverage	LEV _{t-1}	The ratio of current plus long-term debt to total assets at the beginning of the year.	(Dittmar, 2000; Burnett et al., 2012; Hribar et al., 2006; Rahman & Ali, 2006)
Cash level	CL _{t-1}	Cash and cash equivalent at the beginning of the year, deflated by total assets.	(Chandren & Nadarajan, 2013; Chandren et al., 2015)

4.6 Data Collection: Procedures and Sampling

4.6.1 Data Collection Procedures

This study examines the influence of corporate governance mechanisms and ESOS of firms on accretive shares buyback activities as a tool for real earnings management. The data used in this study is mainly collected from Thomson Financial DataStream and the annual reports of Malaysian firms listed on the Bursa Malaysia over the period from 2010 to 2015. From DataStream, the treasury shares are collected to identify the firms with shares buyback activities. Subsequently, the data related to the numbers of accretive share buybacks are collected from the firm's annual report that is available on the website of Bursa Malaysia (<http://www.bursamalaysia.com/market/>). In addition, the annual reports of the firms are used to collect data of BOD features, AC features, audit quality, ownership structure (family, managerial and foreign) and ESOS. Furthermore, the control variables data are gathered from DataStream.

4.6.2 Population and Sampling

Shares buyback programs of Malaysian listed firms were allowed during the Asian financial crisis. Their primary purpose was to stabilise the stock prices of listed firms (Isa et al., 2011). In the subsequent years, the number of firms with buybacks started to

gradually increase, especially during the global financial crisis (2008 and 2009). The population of this study is taken from the firms listed on the Bursa Malaysia (Main Market and ACE Market) from 2010 to 2015. This study focuses on these specific years to avoid the impact of the global financial crisis from 2008 to 2009. Additionally, this study covers the period around MCCG 2012 as suggested by Chandren et al. (2015). Thus, the sample covers from the years from 2010 until 2015 before the implementation of the new code of corporate governance MCGG 2017 that issued during the year 2016.

The sample of this study comprises all accretive shares buyback firms listed on the Bursa Malaysia. Accretive shares buybacks are identified based on the procedures discussed in Section 4.4, which are followed to focus only on accretive share buybacks that lead to a considerable change in reported EPS. Based on the Hribar model, 106 firms were involved in accretive share buyback activities during the sample period from years 2010 to 2015 as shown in Table 4.4. Following existing literature (Abdul Latif, 2010; Bens et al., 2003; Chandren & Nadarajan, 2013; Hribar et al., 2006; Lamba & Miranda, 2010), five financial firms with accretive share buybacks listed on Bursa Malaysia are excluded because they have different financial and regulatory requirements.

The final sample is 101 firms, which are nonfinancial listed firms that were involved in accretive share buyback activities during the sample period. These processes produce a sample comprising 606 observations of non-financial listed firms involved in accretive share buybacks over the period from 2010 to 2015 (101 firms * 6 years). However, two firm-observations in 2010 are excluded because of incomplete data. Additionally, three firm-observations in 2015 are excluded because their data are unavailable. Thus, the

final sample of this study is 601 firm-observations, which contain 235 accretive buybacks and 366 non-accretive buybacks observations, as presented in Table 4.4. This study focused on the 235 accretive buybacks observations to run the main analysis.

Table 4.4
Sample selection process for Accretive Share Buyback Firms

Calculation of 601 observations	Firms-year observations
Accretive share buyback firms 2010-2015	106
Less: Financial accretive share buyback	5
Non-financial accretive share buyback firms	101
Accretive share buyback firm's observations (101 firms *6 years)	606
Less: uncompleted firms' observations in 2010	2
Less: unavailable firms' observations in 2015	3
Total observations for accretive share buybacks firms	601
<ul style="list-style-type: none"> • Accretive buyback observations • Non-accretive buyback observations 	235 366

4.7 Data Analysis Techniques

This study uses panel data analysis to examine the effect of the independent and variables on real earnings management proxied by accretive share buybacks. Panel data analysis is widely used in accounting and finance studies. Panel data, also known as cross-sectional time series data or longitudinal data, typically refers to data of many individuals observed over a period. Thus, panel data observations usually include a minimum of two aspects: a time series dimension represented by “t”; and a cross-sectional dimension represented by “i” (Hsiao, 2014). Greene (2012) argues that panel data is suitable for studies that cover a long period and a large number of observations.

The influence of changes in corporate governance is one of these matters that is recommended to be studied using panel data analysis (Donker & Zahir, 2008). Thus, this study uses panel data analysis because it tests 601 firm-observations over a six-year period.

4.7.1 Panel Data Analysis

Using simple regression for panel data can lead to different results with misleading inference (Jager, 2008). Therefore, applying panel data regression techniques for longitudinal data is vital. Baddeley and Barrowclough (2009) and Wooldridge (2010) explained the importance of taking into consideration the unique individual factors of panel data observations, which remain constant over time and cannot be assumed as independently distributed across time. Thus, using pooled estimation might cause an incorrect inference and cannot continually be applied to panel data (Wooldridge, 2010). Firm-specific factors are not considered in pooled estimation when applied to panel data, which result in autocorrelation as there is no isolation of the years of the same firm. In addition, this could result in omitted variables bias and heterogeneity bias because observations might have similar characteristics that are not considered (Baddeley & Barrowclough, 2009). A fixed effects model or random effects model is used to control for heterogeneity effect in panel data regression. The major difference between the two methods is whether the unobserved effects (the error term) are correlated with the examined independent variables (Wooldridge, 2010).

The Hausman test is the accepted way to determine whether the fixed or the random effects method is appropriate for the examined data. Statistically, the fixed effects model always provides consistent results that many researchers think is the cognitive

model to run with panel data, but it might not be the most efficient. Whereas, the random effects model provides better p-values and can be a more effective estimator, which makes it more appropriate but only if it is statistically justifiable (Al-gamrh, 2015).

The fixed effects model examines the relationships between variables within an individual, whether it is a firm or country, etc. This means that the fixed effect model takes into consideration the differences between the individual and itself within the period and this could control for any unobserved unique characteristics or the time-invariant factors, which may bias the results (Al-gamrh, 2015). The error term in a fixed effects method is correlated with the independent variables. Therefore, a fixed effects method is believed to eliminate the impact of unobserved time-invariant characteristics of independent variables and make the estimation assessable. Thus, it is preferable to use a fixed effects estimate although it could be unproductive with time-variant factors (Wooldridge, 2010).

The fixed effects technique can be applied either through the mean deviation method or by creating dichotomous variables. The unobserved time-invariant factors can be detected by the estimates of the individual's dummies. The dummies method is criticised as being impractical for large data sets with many cross-sectional observations, which could impose calculation difficulties (Wooldridge, 2010).

On the other hand, the critical advantage of the random effects model is its ability to examine time-constant independent variables that are dropped in the fixed effects estimate. This is based on the assumption that the unobserved effect is not correlated

with the independent variables regardless of the variation over time (Schmidheiny, 2013). Thus, the random effects estimation could be superior if the primary concern of the research is time-constant variables. Random effects might be biased, however, if the suitable method is fixed effects.

4.7.2 Advantages of Panel Data

Baltagi (2008) and Hsiao (2014) explained several benefits of panel data over pure time-series and pure cross-sectional analysis summarised as follows:

1. Panel data is a more accurate inference of model parameters, where it usually provides a large number of data points for researchers. This leads to an increase in the degrees of freedom and declining the collinearity between explanatory variables, which, in turn, improves econometric estimates efficiency.
2. Panel data control the problem of omitted variables because of no observed items or mismeasurement. It can control the individual or time heterogeneity, which may produce biased findings (Moulton, 1986, 1987).
3. Unlike time-series data that is usually criticised over the multicollinearity issue, panel data can control the problem of multicollinearity, which is less in panel data. In cross-sectional data, the variability is generally increased. However, the variation in panel data is undoubtedly disintegrated among the time-series and cross-sectional dimensions. The variation in cross-sectional is usually so high that it may provide more information that can create reliable parameters estimates.
4. Panel data are better in measurement. Panel data can measure and identify effects that are not detectable in time-series or cross-sectional data. Panel data also can minimise measurement errors.

5. Panel data have the ability to test complicated models. More complex behavioural models can be better constructed and tested in panel data than in time-series or cross-sectional data. Panel data also can study the dynamics of adjustment.
6. In some complicated cases such as nonstationary time series, measurement error and Dynamic Tobit models, using panel data may simplify computation and statistical inference better than using cross-sectional or time series.

4.7.3 Multiple Regression Analysis

The study's objectives as mentioned in Chapter One are to examine the effect of corporate governance mechanisms and ESOS on accretive share buyback activities as a device for real earnings management. To achieve the objectives, this study needs to use the appropriate regression model. The Ordinary Least Squares (OLS) regression model has commonly been used as an estimation technique of regressions for predicting accretive share buyback activities (Chandren et al., 2015; Chandren & Nadarajan, 2013).

This study used unbalanced panel data methodology to examine the effect of the independent variables on accretive buyback activities because panel data regression models control for the heterogeneity effect in panel data by using either random effects or fixed effects models. Bell and Jones (2015) indicated that random effects models are more appropriate than fixed effects models because the latter has more problems in terms of unbalanced panel data. The Hausman test is the commonly accepted method to determine whether the fixed or random effects methods is appropriate for examining the data. Hausman and Taylor's (1981) test was employed to determine which panel

technique (the Fixed Effect Model or the Random Effect Model) was the most suitable for the observed sample data.

4.7.3.1 Research Model

This study used random effect estimation model to examine the influence of the independent variables, including the BOD effectiveness, ACs effectiveness, audit quality, family ownership, managerial ownership, foreign ownership and stock options on real earnings management through accretive shares buyback as the dependent variable. This study has employed the following model:

$$ABB = \beta_0 + \beta_1 \text{BODSCORE} + \beta_2 \text{ACSCORE} + \beta_3 \text{BIG4} + \beta_4 \text{FAMD} + \beta_5 \text{MOWN} + \beta_6 \text{FOWN} + \beta_7 \text{ESOSEXR} + \beta_8 \text{FSIZE}_{t-1} + \beta_9 \text{AGROWTH}_{t-1} + \beta_{10} \text{LEV}_{t-1} + \beta_{11} \text{CL}_{t-1} + e.$$

Where:

ABB = The accretive share buyback is the natural logarithm of accretive shares buyback numbers during the current fiscal year.

BODSCORE = BOD effectiveness.

ACSCORE = AC effectiveness.

BIG4 = Audit quality is a dichotomous variable that equals 1 if the firm is audited by Big 4 Auditors, and 0 if otherwise.

FAMD = Family ownership is a dichotomous variable that equals 1 if the firm is family controlled and 0 if otherwise.

MOWN = Managerial ownership is the percentage of shares held by the executive directors (direct and indirect) to the total number of outstanding shares at the end of current fiscal years.

FOWN = Foreign ownership is the percentage of firm's shares held by foreign investors to the total ordinary shares at the end of current fiscal years.

- ESOSEXR = Stock options exercise is the proportion of total stock options exercised scaled by firm's outstanding shares at the end of fiscal years.
- FSIZE_{t-1} = Firm size is the natural log of total assets at the beginning of the year.
- AGROWTH_{t-1} = Growth is the assets growth at the beginning of fiscal year, annual assets growth (current year assets – prior year's assets)/prior year's assets
- LEV_{t-1} = Leverage is the ratio of current plus long-term debt to total assets at the beginning of the year.
- CL_{t-1} = Cash level is the ratio of firm's beginning of the year cash and cash equivalents scaled by total assets.
- e = Error term.

4.8 Summary

This chapter discusses the theoretical framework and hypotheses development of the study. This chapter also explains the methodology utilised in this study and describes the research design, sample selection procedures of the study and the techniques of data analysis. This study adopts a quantitative research approach and uses secondary data to achieve its objectives. A sample of 101 non-financial firms listed on the Main Market and the ACE Market of Bursa Malaysia over the years from 2010 to 2015, involved in accretive buyback activities, is used to examine the study's objectives. Finally, this study uses the random effect OLS regression model to test its hypotheses.

CHAPTER FIVE

RESULTS AND DISCUSSION

5.0 Overview of the Chapter

This chapter presents the findings and analysis regarding the influence of corporate governance mechanisms and stock options on accretive share buyback. The debate in this chapter is separated into five sections. Section 5.1 discusses the descriptive analysis for a share buyback in the sample period of the study. The descriptive analysis of independent variables is discussed in Section 5.2. The chapter proceeds with t-test analysis between accretive and non-accretive firm-observations in Section 5.3. Diagnostic tests are reported as well as the model specification test in Section 5.4. Additionally, the results and discussions are explained by the regression among dependent variable and independent variables in Section 5.5. Finally, Section 5.6 and Section 5.7 display additional analyses and summary of this chapter respectively.

5.1 Descriptive Analysis of Dependent Variable

Table 5.1 shows the descriptive analysis of actual share buyback activities during the sample period from 2010 to 2015. It displays the number of firms involved in actual share buyback activities by Malaysian listed firms through the sample period. The table also presents the number and the Malaysian ringgit value of shares buyback activities as well as the percentage of shares bought backs to outstanding shares. As shown in Table 5.1, the percentages ages of shares bought back yearly was less than 1% of their outstanding shares and average 0.76% for 836 shares bought back firms. These actual buyback percentages were substantially less than 10% of outstanding shares permitted by the Bursa Malaysia as share buybacks activities. The percentage of share buyback

shown in Table 5.1 was slightly lower than those reported by Abdul Latif et al. (2016), which was 1.7% for the period from 1999 to 2010. The difference in the percentage of actual buybacks in this study compared to earlier studies (Abdul Latif et al., 2016) was because these earlier studies included only actual share buybacks in their samples that form 1% or more of the outstanding shares. Whereas, Table 5.1 of this study covers all the actual share buyback through the sample period from 2010 to 2015.

Table 5.1
Actual Share Buyback Activities from 2010 to 2015

Year	Buyback firms	Percentage of Share Buyback	Numbers of Shares Buyback (million)		RM Value of Shares Buybacks (million)	
		Mean	Mean	Sum	Mean	Sum
2010	142	0.91%	2.39	340	3.37	478
2011	139	0.64%	2.26	315	4.15	577
2012	153	0.75%	5.91	904	9.37	1,434
2013	154	0.66%	5.69	876	9.66	1,488
2014	123	0.87%	8.99	1,106	18.85	2,318
2015	125	0.73%	4.95	619	10.72	1,340
Total	836			4,160		7,635
Mean	139	0.76%	4.98		9.13	

Previous studies (Burrent et al., 2012; Farrell et al., 2013; Hribar et al., 2006) have argued that a share buyback is considered as an accretive share buyback if it caused a change in reported EPS by at least one cent. However, in this study, Table 5.1 shows the average percentage of shares bought back was 0.76% for the period 2010 to 2015, which is less than 1% of the outstanding shares. Consequently, the sample of this study

focused only on share buyback firms that engaged in accretive share buyback at least one time over the period from 2010 to 2015, which is consistent with the main objective of this study. This means that only listed firms with accretive share buyback were included in the sample of this study. After excluding financial firms and incomplete observations, the study's sample covers 101 accretive share buyback firms (235 observations) during the period from 2010 until 2015 as presented in Chapter Four, Section 4.6.2. In other words, the sample of this study includes all observations of nonfinancial firms that involve in accretive share buyback from 2010 to 2015.

Table 5.2 presents the descriptive analysis of accretive share buyback firms through the sample period from 2010 to 2015. It shows the number of firms engaged in an accretive share buyback during the sample period. Table 5.2 also presents the percentage of accretive share buyback numbers to outstanding shares, as well as the number and Malaysian ringgit value of accretive shares buyback.

As appears in Table 5.2, the percentages of accretive share buyback to outstanding Sshares were more than 1% for the entire sample period from 2010 to 2015. Accordingly, the average percentage of the number of accretive share buyback to outstanding shares for the entire period was 1.3% compare to 0.76% for actual share buybacks during the same period as mentioned in Table 5.1. These percentages mean that only accretive buybacks can significantly cause changes in EPS. This means that accretive buybacks mitigate the quality of financial reports which may mislead the investors' decisions. Therefore, this current study focuses only on accretive share buybacks that may be used by managers to manage EPS. This is consistent with the viewpoint of Burrent et al. (2012), Farrell et al. (2013), and Hribar et al. (2006) who

argued that, if the share buyback practice adjusts EPS by one cent or more, this would be recognised as an accretive share buyback. Further, Table 5.2 shows 601 observations of accretive buyback firms during the sample period of this study, which is shown in more detail below in Table 5.3.

Table 5.2
Accretive Share Buyback Activities from 2010 to 2015

Year	Accretive Buyback Firms	Percentage of Accretive Buyback	Numbers of Accretive Buyback (million)		RM Value of Accretive Buybacks (million)	
		Mean	Mean	Sum	Mean	Sum
2010	99	1.6%	2.84	281.4	4.14	409.4
2011	101	1.0%	2.70	272.5	3.75	379.1
2012	101	1.3%	8.64	872.5	13.90	1,403.8
2013	101	1.1%	8.39	847	14.26	1,440.6
2014	101	1.6%	10.09	1018.8	21.02	2,123.3
2015	98	1.0%	5.50	538.8	11.86	1162
Total	601			3,931		7,218.2
Mean		1.3%	6.54		12.01	

Table 5.2 and Figure 5.1 show the Malaysian ringgit value and numbers of accretive shares buyback during the sample period of this study from 2010 to 2015. They show the number and value of accretive share buyback activities during the sample period, which reached a total of 3,931 million shares and RM 7,218.2 million in value. The Malaysian ringgit value of accretive buybacks gradually increased in the years from 2010 to 2013 and reached the highest point in 2014 at RM 2,123.3 million. Similarly, the number of accretive shares buybacks gradually rose through the sample period and

reached its peak in 2014 with 1018.8 million shares as shown in Table 5.2 and Figure 5.1.

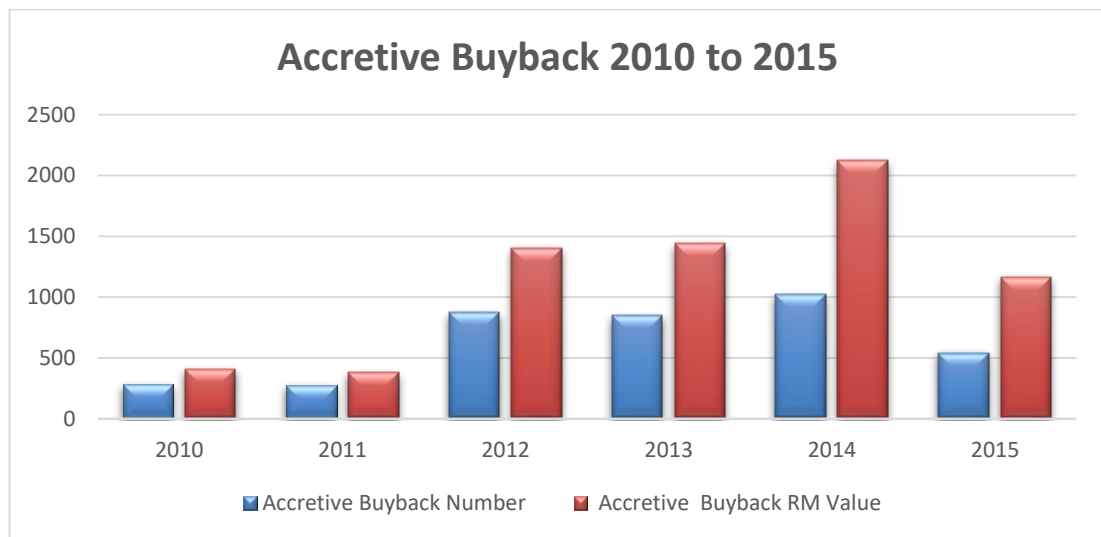


Figure 5.1
RM Value and Shares Number of Accretive Buyback from 2010 to 2015

Table 5.3 shows the details of the accretive share buyback firm observations over the sample period from 2010 to 2015. As it appears in the table, the total observations of accretive buyback firms were 601, which were classified as 235 (39.1%) accretive share buyback observations and 366 (60.9%) non-accretive share buyback observations. This study reports 235 accretive share buyback firm-observations. This magnitude of accretive buyback firms is slightly higher than the study of Chandren et al. (2015) that found 220 accretive buyback firm-observations from 2001 to 2008. Unlike the study of Chandren et al. (2015) that focused only on accretive buyback observations and omitted non-accretive buyback observations of their sampling firms, this study considers all the observations of listed firms that involved in accretive buybacks through the sample period from 2010 to 2015. In other words, this study covers all the observations of accretive share buyback firms to determine the efficacy of corporate governance

mechanisms in mitigating the use of accretive buyback as a tool for real earnings management.

Table 5.3
Details of Accretive Share Buyback Firm Observations from 2010 to 2015

Year	Total Observations	Accretive Share Buyback Observations		Non-Accretive Share Buyback Observations	
		Number	Percentage	Number	Percentage
2010	99	38	38.38%	61	61.62%
2011	101	44	43.56%	57	56.44%
2012	101	53	52.48%	48	47.52%
2013	101	43	42.57%	58	57.43%
2014	101	30	29.70%	71	70.30%
2015	98	27	27.55%	71	72.45%
Total	601	235		366	
Average		39.1%		60.9%	

5.2 Descriptive Analysis of Independent Variables

Table 5.4 presents the descriptive analysis for 235 observations of accretive buyback firms through the sample period of this study from 2010 to 2015. Table 5.4 in Panel A presents the descriptive statistics for the continuous variables included in the mean model of this study. The descriptive statistics of corporate governance mechanisms including; BOD effectiveness (BDIND, BDSIZE, BDMEET, BDEXPRT, and BDSCORE), AC effectiveness (ACIND, ACSIZE, ACMEET, ACEXPRT, and ACSCORE), family ownership (FAMOWN), managerial ownership (MOWN), and foreign ownership (FOWN) as well as the control variables (FSIZE, AGROWTH, LEV, and CL). The mean, median, standard deviation, minimum, maximum, skewness and kurtoses are presented for all continuous variables. In addition, the dichotomous

variables (BIG4 and FAMD) are presented in Table 5.4 Panel B based on the frequency and the percentage of the variables in the study sample.

Table 5.4
Descriptive Analysis of the Variables (n = 235)

<i>Panel A: Continuous Variables</i>							
Variable	Mean	Median	Std. Dev.	Min	Max	Skew.	Kurt.
BDIND	0.31	0.31	0.17	0	0.8	0.11	2.84
BDSIZE	7.78	7	2.19	4	14	0.85	3.33
BDMEET	5.65	5	1.69	3	13	1.50	5.63
BDEXPRT	0.31	0.3	0.12	0.1	0.8	0.91	4.49
BDSCORE	1.82	2	0.94	0	4	0.24	2.82
ACIND	0.68	0.67	0.31	0	1	-0.74	2.66
ACSIZE	3.20	3	0.41	2	4	1.34	3.40
ACMEET	5.04	5	1.10	3	11	2.04	9.01
ACEXPRT	0.46	0.33	0.20	0	1	0.60	2.70
ACSCORE	2.17	2	0.90	0	4	-0.20	1.83
MOWN	0.34	0.34	0.20	0	0.89	-0.05	2.17
FOWN	0.09	0.06	0.10	0	0.49	1.68	5.99
ESOSEX (m)	2.275	0	12.800	0	182	12.07	166.42
ESOSEXR	0.003	0	0.01	0	0.12	6.37	49.32
FSIZE(million)	3740	645	8720	26.6	53600	3.87	18.93
FSIZE _{t-1} (log)	20.42	20.28	1.81	17.10	24.71	0.33	2.44
AGROWTH _{t-1}	0.08	0.07	0.21	-0.36	2.00	4.12	36.23
LEV _{t-1}	0.19	0.18	0.15	0	0.63	0.58	2.97
CL _{t-1}	0.17	0.13	0.14	0	0.66	1.52	5.19
<i>Panel B: Dichotomous Variables</i>							
Variables	Frequency		Percentage		Skew.	Kurt.	
	1	0	1	0			
BIG4	115	120	49%	51%	0.03	1.00	
FAMD	164	71	70%	30%	-0.88	1.78	

Note: BDIND = BOD independence, BDSIZE = BOD size, BDMEET = BOD meetings, BDEXPERT = BOD financial expertise, BDSCORE = BOD effectiveness score, ACIND = AC independence, ACSIZE = AC size, ACMEET = AC meetings, ACEXPRT = AC financial expertise, ACSCORE = AC effectiveness score, MOWN = managerial ownership, FOWN = foreign ownership, ESOSEX = the number of stock options exercised during a fiscal year, ESOSEXR = the percentage of stock options exercised to outstanding shares, FSIZE = Logarithm of total assets, AGROWTH = assets growth, LEV = Leverage, CL = cash level. BIG4 = audit quality, and FAMD = dichotomous variable equal one if firm is family controlled and zero otherwise,

Regarding BOD effectiveness, Table 5.4 Panel A reports the mean of BOD independence (BDIND) reported in this study is 31%, which indicates that firms have complied with the recommendations of MCCG 2012 that at least one-third of the BOD comprises independent directors. The mean and median fractions of independent directors in this study are lower than those found in Abdul Latif et al. (2016), Abdullah et al. (2010), and Chandren et al. (2015). The Bursa Malaysia defines an independent director as “a director who is independent of management and free from any business or other relationship which could interfere with the exercise of independent judgment or the ability to act in the best interests of an applicant or a listed issuer” (BMLRs, 2013, p. 105). Therefore, this study excluded independent directors who have economic interests or relationships in a firm.

The mean of BOD size (BDSIZE) reported in this study was 7.78. This average is similar to prior studies conducted in Malaysia by Chandren et al. (2015), Ismail et al. (2010) and Saleh et al. (2005) reporting a BOD size mean within the range of seven to eight directors, which is consistent with the recommendation of Jensen (1993) for the BOD effectiveness.

The statistics in Table 5.4 also indicate that the average frequency of BOD meetings (BDMEET) was 5.65 for accretive buyback firms in Malaysia, suggesting that Malaysian accretive buyback firms follow the recommendation of MCCG 2012 (i.e., at least 4 meetings per year). In addition, the statistics reported that the average of BOD financial expertise (qualification or experience in accounting, finance and audit) (BDEXPERT) was 31%. This percentage is higher than Yunos (2011) who reported that 26.7% of BOD directors had financial expertise, which means that listed firms in

Malaysia are aware the importance of financial expertise in their BOD. This financial expertise may assist in practising effective monitoring in the process of information reporting and probably will lead to an increase in the quality of accounting numbers.

The score of the effectiveness of the BOD was a composite of independence, size, the frequency of meetings and financial expertise. The score as a composite measurement for the effectiveness of the BOD ranges from 0 to 4 with a higher score indicating higher effectiveness of the BOD. The mean (median) of the BOD score (BDScore) were 1.82 (2.00), and minimum and maximum were 0 and 4 respectively. This value of BOD score is higher than Alqadasi (2016) who reported a mean of BOD score of 1.51. Thus, this value is slightly low in relative to the value of BOD score in this current study.

Table 5.4 Panel A also presents descriptive statistics of AC attributes, which indicate that the mean and median of independent members serving in AC were 68% and 67%. This mean of independent directors is similar to that of Al-Rassas and Kamardin (2016) and Yunus et al. (2010) who reported that 66.7% and 70.0% of AC members respectively were independent. This proportion is consistent with the recommendation of MCCG 2012 to have non-executive directors in AC. The mean and median size of the AC was 3.20 and 3 members respectively. These percentages are consistent with the recommendation of BMLRs to have at least three directors serving as members of an AC, which is consistent with Al-Rassas and Kamardin (2015b) who found that the mean size of the AC was 3.24.

The statistics in Table 5.4 Panel A also show that the mean number of meetings for AC (ACMEET) in the buyback firms was 5.04. This number is consistent with the

recommendations of MCGG 2012 to meet least four times yearly. Regarding the financial expertise of the AC (ACEXPRT) (qualification or experience in accounting, finance and audit), the mean percentage of the financial expert member was 46% , which is consistent with Al-Rassas and Kamardin (2016) who found that 46% of the members serving on the AC were experts.

Regarding the scores of the effectiveness of AC, which is a composite of independence, size, the frequency of meetings and financial expertise. The score was a composite measurement for the effectiveness of the AC ranged from 0 to 4, with a higher score indicating a higher effectiveness of the AC. The mean (median) of the AC score (ACSCORE) was 2.17 (2.00), and the maximum value was 4. This result means that 54% (2.17/4) of the sample firms have effective AC, which is higher than Alqadasi (2016) who reported only 35% of the sample firms have effective AC.

Table 5.4 Panel A also reveals that the mean and median of managerial ownership (MOWN) were 34% and 34% respectively, which implies that equity held by managers was lower than reported before, as Abdul Latif (2010) found, on average, that directors owned about 41.69% of the equity of buyback firms for the years from 1999 to 2006. The descriptive statistic results for foreign ownership showed that, on average, 9% of ownership of the sampled firms was held by foreign investors (FOWN), which is higher than the results of Yatim et al. (2016) who found that foreign investors held 6.78% of firms shares.

Regarding the exercise of stock options (ESOSEX), the descriptive statistic indicates that, on mean, RM 2.275 million and 0.3% of stock options were exercised during the

sample period. This percentage of stock options exercised was similar to Abdul Latif (2010) who reported that 0.3% of the stock options were exercised from 1999 to 2006.

With respect to skewness and kurtosis, Kline (2011) suggested that the normal values of skewness should not exceed ± 3 and kurtosis should be less than ± 10 . As shown in Table 5.4, only ESOSEXR and AGROWTH had abnormal values of skewness (kurtosis), which were 6.37 (49.32) and 4.12 (36.23) respectively.

Regarding control variables, a descriptive statistic in Table 5.4 displays that the mean and median of firm size (FSIZE) were RM 3740 and 645 million respectively, with a minimum of RM 18.8 million and a maximum of RM 61042 million. The mean and median of FSIZE (log) were 20.42 and 20.28 respectively, which are similar to the statistics of Chandren et al. (2015) who reported 20.15 and 19.97 respectively.

Table 5.4 also presents the mean and median of assets growth (AGROWTH), which were 8% and 7% for Malaysian accretive buyback firms for years 2010 to 2015. The negative value of assets growth means that the total assets of some firms in the current year were less than the total assets of the previous year. Table 5.4 above also shows 19% and 18% as the mean and median of leverage (LEV) respectively. Finally, Table 5.4 shows that the mean and median of cash level (CL) were 17% and 13% respectively, which is higher than Chandren et al. (2015) who reported 11.1% and 9.8% as the mean and the median of cash level respectively.

Regarding the variable of Big 4 auditors (BIG4), which represents the external audit quality, Table 5.4 in Panel B shows that 49% were audited by Big 4 audit firms whereas

51% of firms were audited by non-Big 4 audit firms. This mean of BIG4 is less than Chandren et al. (2015) who found that 69.1% of accretive buyback firms were audited by Big 4 audit firms from 2001 to 2008, suggesting that accretive buyback firms in the last few years have started to depend on non-Big 4 auditors to conduct auditing services rather than depending on Big 4 auditors. Regarding the variable of family ownership, family-owned firms (FAMD) represented 70% of the sample of this study, and only 30% of the sample firms were non-family controlled firms. This is consistent with previous studies that document that about 70% of Malaysian firms are family-controlled firms (Amran & Che Ahmad, 2010b; Ibrahim & Samad, 2011).

5.3 Diagnostic Test

Before using diagnostic tests for the main model of this study, the most suitable regression must be chosen to avoid misleading results. As mentioned before, the hypotheses of this study are tested by using OLS random effect regression analysis. This study used data for the six years from 2010 to 2015. Therefore, this study performed Breusch and Pagan (1980) and Lagrange multiplier (LM) tests to identify the choice between the random effects model and the pooled regression.

Based on a significant p-value for LM test, there is evidence of significant differences across companies, and the null hypotheses are rejected (p-value, $\text{prob} < 0.05$). based on this test, the study concluded that the random effects model was more appropriate than the pooled regression model. Thus, the unbalanced panel data model was utilised consistently with econometric assumptions. Panel data allows for more powerful tests because it provides supplementary useful data, high degrees of freedom and greater

efficiency. It also provides more variability and less collinearity between variables (Baltagi, 2008; Hsiao, 2014).

Previous studies have commonly used the Hausman test to identify whether the random or the fixed effects method is more appropriate for the tested data. The Hausman test is appropriate test for OLS regression and other linear regressions because the fixed effects method maximum likelihood estimator is consistent under both the null and alternative hypotheses (Greene & Hensher, 2010). Therefore, this study employed the Hausman test to determine which panel technique (the Fixed Effect Model or the Random Effect Model) does appropriate for the observed sample data. Based on this test, the null hypothesis is supported, which means that the random effects regression is employed to examine the main model of this current study as presented in Table 5.5.

Table 5.5
Hausman Test for Choosing Random/Fixed Effect Models

	Chi2(9)	Prob > chi2	HO
Model	10.03	0.3484	supported

Diagnostic tests must be implemented to confirm that the assumptions of multiple regressions hold correct. Therefore, they are conducted to avoid misleading results. The diagnostic tests begin by checking outliers, normality, multicollinearity, heteroscedasticity and the autocorrelation test as follows.

5.3.1 Outliers Test

Outliers are observations that have unique or different characteristics compared to the whole population, which may cause measurement errors (Hair, Black, Babin & Tatham,

2010). Previous studies provide several ways to handle outliers such as Cook's distance, studentized residual, leverage, transformation, winsorizing and trimming. Following previous studies (Cohen et al., 2008; Farrell et al., 2013; Francis et al., 2004; Kraft, Lee & Lopatta, 2014; Saleh et al., 2005), this study winsorizes the variables of the main model of this study to eliminate possible outliers. The continuous variables, including MOWN, FOWN, ESOSEXR, AGROWTH, LEV, and CL were winsorized at the 1st and 99th % percentiles of their distributions to mitigate the influence of outliers. Their actual observations were transformed to the normal distributions by winsorizing at the 1st and 99th % percentiles, which is the minimum level of the top and bottom of their distributions to maintain the characteristics of the original data.

5.3.2 Normality

Normality refers to the distribution of the data and whether the shape of the data show a normal distribution. There are several ways to check the normality of the data. It can be checked using several tests, such as Shapiro-Francia, Shapiro-Wilk and Kamagorov Smiron tests by obtaining the values of skewness and kurtosis or by using residual graphs, such as normal probability plots, quartiles of a normal distribution plot and histograms. This study employs graphical method to check the normality assumption of the residuals. The graphical method includes drawing, probability- probability (P-P) plot. Based on Figure 5.2, the residual is slightly normally distributed for this study's main model.

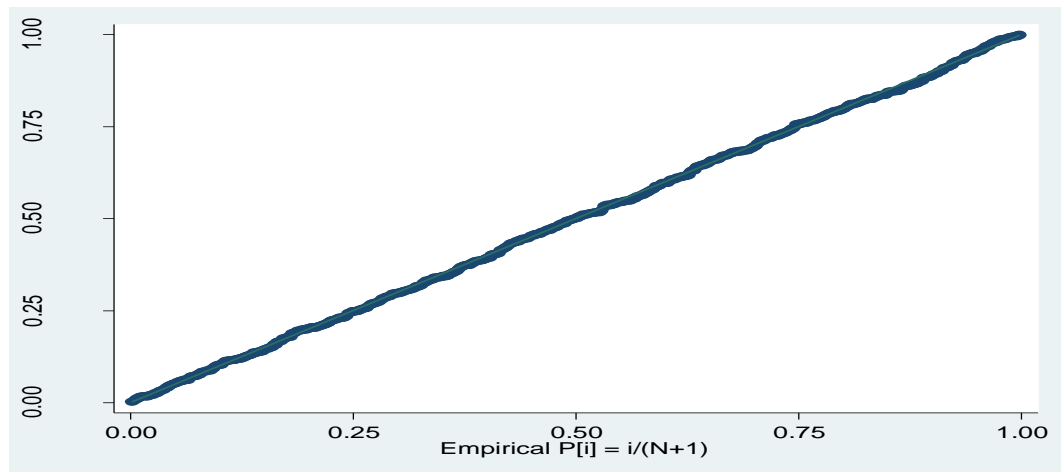


Figure 5.2
Normal P-P Plot of Regression Residuals.

Moreover, this study examined data from a large sample, 235 observations. Therefore, this condition may not distort the results as a significant departure from non-normality may be negligible for a sample size of 200 observations or more (Hair et al., 2010). Further, a normality test in panel data analysis is not a key concern because the standard least squares assumption is not appropriate for panel data (Gujarati & Porter, 2009).

5.3.3 Multicollinearity and Correlation

Multicollinearity is the intercorrelation of the independent variables. The main worry is that, when there is a rise in the level of multicollinearity, the estimated coefficients of the regression model tend to be unstable and the coefficients of the standard errors tend to get large. High correlations between independent variables may cause inflate the standard errors as well as the estimated coefficients of the regression model tends to be unstable (Hamilton, 2012). The Pearson correlation test is conducted to explore the correlations between the independent variables and to indicate the existence of multicollinearity.

The Pearson correlation coefficients were undertaken between the independent variables as showed in Table 5.6. All the correlations between the variables were not more than 0.56. The highest correlation of the variables was between total assets (FSIZE) and leverage (LEV) at 0.61, and the correlation between family ownership (FAMD) and managerial ownership (MOWN) was 0.43. Overall, these outcomes mean that the multicollinearity issue is not a concern in this study's model unless the percentages of correlation between variables exceed 0.70 as mentioned by prior studies (Hair et al., 2010; Gujarati, 2003).

Furthermore, some scholars have argued that the correlation matrix is not adequate to detect multicollinearity and, thus, it is important to perform the variance inflation factor (VIF) test to ensure no collinearity between variables (Hamilton, 2012). VIF is an indicator of the influence of the estimated coefficient because of collinearity. Previous studies indicate that a multicollinearity problem does not exist when the variance inflation factor (VIF) is less than 10 (Hair *et al.*, 2010). As it appears in Table 5.7, the mean of VIF score for the entire variables used in the study's model was 1.36, and each variable's score did not exceed 1.98. This provides evidence that multicollinearity problem does not exist in this study's model.

Table 5.6
Pearson Correlation Matrix of the Variables Used in the Main Model

Variable	ABB	BDScore	ACScore	BIG4	FAMD	MOWN	FOWN	ESOSEXR	FSIZE	AGROWTH	LEV	CL
ABB	1											
BDScore	0.26***	1										
ACScore	0.07**	0.41***	1									
BIG4	0.25***	0.00	0.14***	1								
FAMD	-0.09**	-0.15***	0.00	-0.05*	1							
MOWN	-0.13***	-0.07**	0.01	-0.15***	0.43***	1						
FOWN	0.26***	0.09**	0.00	0.19***	-0.15***	-0.19***	1					
ESOSEXR	0.02	-0.02	0.02	-0.12***	0.11***	0.11***	0.08**	1				
FSIZE	0.54***	0.26***	0.24***	0.32***	0.14***	-0.03	0.28***	-0.03	1			
AGROWTH	-0.12***	-0.01	0.11***	0.06*	0.25***	0.17***	0.03	0.07**	0.11***	1		
LEV	0.38***	0.18***	0.12***	0.14***	0.17***	0.07**	0.18***	0.01	0.61***	0.03	1	
CL	0.04	-0.02	-0.06*	-0.05*	-0.21***	-0.06*	0.05*	-0.04	-0.21***	-0.2	-0.30***	1

Notes: *, **, ***, indicate statistical significance at the 0.01, 0.05 and 0.10 levels respectively. ABB = natural logarithm of actual share buyback numbers, BDScore = BOD effectiveness, ACScore = AC effectiveness, BIG4 = audit quality, FAMD = family ownership, MOWN = managerial ownership, FOWN = foreign ownership, ESOSEXR = stock options exercised, FSIZE = natural logarithm of total assets, AGROWTH = assets growth, LEV = Leverage, and CL = cash level.

Table 5.7
Standard Tests on VIF Results

Variable	VIF	1/VIF
FSIZE	1.98	0.51
LEV	1.73	0.58
BDSCORE	1.43	0.70
MOWN	1.34	0.75
FAMD	1.3	0.77
ACSCORE	1.28	0.78
FOWN	1.21	0.83
BIG4	1.21	0.83
CL	1.18	0.85
AGROWTH	1.14	0.88
ESOSEXR	1.06	0.95
Mean VIF	1.35	

5.3.4 Heteroscedasticity Test

The homoscedasticity of variance refers to the constancy of the residual in that such residuals are randomly dispersed throughout the various estimations and the existence of unequal variance, which indicates the existence of heteroscedasticity (Baum, 2001; Gujarati, 2003). Prior literature reveals several approaches to test the presence of heteroscedasticity such as Breusch-Pagan/Cook-Weisberg test and White's General test (Greene, 2012). Thus, Breusch-Pagan/Cook-Weisberg test is used through a command in STATA packages called "hettest", which is commonly used to detect the problem of heteroscedasticity. The consistency of variance is the null hypothesis of this test. The null hypothesis will be accepted when there is a large probability. However, the null hypothesis is rejected when the p-value is less than 0.05.

STATA contains options for the estimation of robust standard errors. In this regard, heteroscedasticity leads to biased standard errors, and, while Ordinary Least Squares (OLS) expect errors to be independent and identically distributed, robust standard errors relax both or either of the above assumptions. The robust function also corrects the problem of bias in the standard errors and gives estimates that are more efficient. Regarding this study, the results of heteroscedasticity test are presented in Table 5.8. The test outcomes show that the heteroscedasticity problem is present in the main model of this study, hence, the p-value is less than 0.05 as presented in Table 5.8 below.

Table 5.8
Breusch-Pagan/Cook-Weisberg Test for Heteroscedasticity

	chi2(1)	Prob > chi2	HO
Model	23.33	0.000	Rejected

5.3.5 Autocorrelation

Autocorrelation is the issue of error components being correlated across time due to high similarities. The regression model assumes that the error term of units is not correlated and not influenced by other units. Although this is a violation of the ordinary assumption, this is a common issue in a panel or time-series analysis (Wooldridge, 2010). Thus, researchers should examine their models against such problem to derive correct results and appropriate conclusions. The Wooldridge test for autocorrelation is the appropriate test to detect autocorrelation in fixed and random effect models in panel data. The Wooldridge test was applied to this study's model.

This study conducted a user-written command, called 'xtserial' in STATA packages, written by Drukke (2003), to test for the existence of first-order correlation in panel data. If the F value in Wooldridge test value is below the 5% significance level, the null hypothesis can be rejected, which means there is no first-order correlation. The results in Table 5.9 show that autocorrelation issue exists in this study's data. The results suggest that the null hypothesis can be rejected for the model, implying that autocorrelation is a significant problem in this study's model. Following the econometric literature, this study used the Huber-White robust standard errors that are clustered at the firm level to control for heteroscedasticity and autocorrelation (Farrell et al., 2014).

Table 5.9
Wooldridge Test for Autocorrelation in Panel Data

	F (1, 24)	Prob > chi2	H0
Model	9.27	0.0056	Rejected

Note: H0: no first-order autocorrelation.

5.4 Multivariate Analysis

After the assumptions (diagnostic tests) for the main model were met, the OLS estimation model was conducted to examine the relationship between accretive share buybacks (ABB) as the dependent variable and the independent variables using the multiple regression techniques. The model includes BOD effectiveness (BDSCORE), AC effectiveness (ACSCORE), audit quality (BIG4), family ownership (FAMD), managerial ownership (MOWN), foreign ownership (FOWN) and stock options (ESOSEXR) as independent variables; it also contains the firm size (FSIZE), assets growth (AGROWTH), leverage (LEV) and cash level (CL) as control variables.

Unbalanced panel data analysis estimation is used to examine these relationships for the study's sample consisting of 235 firm-year observations over the period from 2010 and 2015.

Table 5.10
Regression Results for Random Effect OLS Estimation Model

$$ABB = \beta_0 + \beta_1 \text{BDSCORE} + \beta_2 \text{ACSCORE} + \beta_3 \text{BIG4} + \beta_4 \text{FAMD} + \beta_5 \text{MOWN} + \beta_6 \text{FOWN} + \beta_7 \text{ESOSEXR} + \beta_8 \text{FSIZE} + \beta_9 \text{AGROWTH} + \beta_{10} \text{LEV} + \beta_{11} \text{CL} + e.$$

Independent Variables	Predicted Signs	Coef.	z	P-value
Constant	?	9.07	9.79	0.000***
BDSCORE	-	0.21	2.66	0.008***
ACSCORE	-	-0.14	-1.83	0.069*
BIG4	?	0.30	2.20	0.029**
FAMD	?	-0.30	-2.00	0.047**
MOWN	?	0.17	0.37	0.712
FOWN	-	0.08	0.13	0.896
ESOSEXR	+	10.72	1.79	0.074*
FSIZE	-	0.31	6.18	0.000***
AGROWTH	-	-0.48	-2.18	0.031**
LEV	-	-1.03	-2.41	0.017**
CL	+	0.72	1.31	0.190
Years		Included		
R ²		0.41		
Sig		0.000		
N of observations		235		
No. of Firms		101		

Notes: ***, **, * indicates statistical significance at the 0.01, 0.05 and 0.10 levels respectively at two-tailed. ABB = natural logarithm of accretive share buyback numbers, BDSCORE = BOD effectiveness, ACSCORE = AC effectiveness, BIG4 = audit quality, FAMD = family ownership, MOWN = managerial ownership, FOWN = foreign ownership, ESOSEXR = stock options exercised, FSIZE = natural Logarithm of total assets, AGROWTH = assets growth, LEV= Leverage, and CL = cash level.

Table 5.10 reports the results of the random effect OLS estimation model examining the relationship between the number of shares bought back for accretive share buyback

firms and the independent variables. As shown in Table 5.10, the model is statistically significant at 1% level (Prob. (F) = 0.000), with $R^2 = 0.41$, meaning that R^2 value is better estimate of the true population value. Pallant (2007) indicated that a R^2 value equals or more than 0.30 is a better estimate of the true population value. Thus, the model explains 41% of the total variance in the accretive share buybacks, indicating that the overall model exhibited a good fit for the observed sample data. The following section explains the relationship between the independent and control variables with the dependent variables as tabulated in Table 5.10.

5.4.1 Board of Directors' (BOD) Effectiveness

Contrary to the expectations of this study, the findings showed that BOD effectiveness (BDSCORE) had significant and positive association with accretive share buyback (ABB) ($z = 2.66$, $p\text{-value} = 0.008$), indicating that the more effective BOD, the more likely firms to engage in earnings management through accretive share buyback activities. Therefore, H1 is rejected, where H1 assumes a negative relationship between the BOD effectiveness and accretive buyback practices.

This result does not support the arguments of agency theory and resource dependency theory, which predicted that the more effective of the BOD, the less is the practice of earnings management. However, this finding is consistent with Abdul Rahman and Ali (2006), Hashim and Devi (2008b), and Al-Rassas and Kamardin (2015a) who reported a significant and positive relationship between the BOD independence and accrual-based earnings management. They justified those unexpected findings by the impact of the ownership concentration in Malaysia market, as well as the weakness of the experience and skills of the independent directors.

Also, Aygun et al. (2010) and Ghosh et al. (2010) found that BOD size was positively associated with earnings management. Hashim and Devi (2008b) found a positive linkage between frequent meetings of the BOD and accruals quality, which support the findings of this study. Further, Al-Rassas and Kamardin (2016) and Haji-Abdullah and Wan-Hussin (2015) failed to find a significant effective role for financial expert directors in mitigating practices of earnings management, which is slightly consistent with the result of this study.

Two different explanations exist for the finding of BODSCORE with ABB. The first explanation is that the BODs of Malaysia firms are dominated by family and individual controlling shareholders, where the mean of family shareholdings is 30% as shown in Table 5.4. Thus, these controlling shareholders may use their power to utilise the firms' resources to achieve their interests at the expense of minority shareholders. Practically, from Table 5.10, the results show that family-owned firms are more aggressive in engaging in accretive buybacks compared to non-family firms, which supports the positive association between the BOD and accretive share buybacks. This is consistent with prior studies indicating that the BODs of Malaysian firms are dominated by family shareholdings (Claessens et al., 2000; Fan & Wong, 2002).

The second explanation for the result of the BOD and accretive buyback linkage is consistent with the argument that managers practice accruals-based earnings management and real earnings management in a reciprocal way. Managers in firms with high-quality governance mechanisms tend to practice earnings management through real activities rather than through accrual-based activities (Roychowdhury, 2006; Cohen et al., 2008; Zang, 2012). Furthermore, Burnnet et al. (2012) found

evidence that supports this notion, whereby managers engaged in accretive share buyback to manage reported EPS when the external audit is high quality rather than accruals-based earnings management. This argument supports the results of this study, which revealed that BDSCORE had a significant positive linkage with accretive share buybacks.

Moreover, Chandren et al. (2015) in Malaysian context provided empirical evidence that supports the results of this study in terms of the BOD effectiveness. They found a positive effect on the associations between the BOD independence, BOD size and CEO duality with the accretive share buyback. Consistently, Chandren et al. (2017) used data of the Bursa Malaysia for the period from 2001 to 2008 to examine the effect of accretive buybacks on firm performance. Chandren et al. (2017) documented a positive relationship between accretive share buyback and long-term performance in Malaysia. Their results revealed that accretive share buyback is an efficient earnings management that caused no adverse effect on firms and shareholders. Despite the positive effect of accretive share buyback on firm performance, earnings management is an activity that misleads investors' perceptions by hiding the true value of firms, which should be discouraged or mitigated. In conclusion, previous debates may help explain the significant positive association between BDSCORE and accretive share buybacks in the current study.

5.4.2 Audit Committee (AC) Effectiveness

This study predicts a negative association between the AC effectiveness (ACSCORE) and accretive buyback activities, which means the greater AC effectiveness, the less accretive share buyback is practised by Malaysian listed firms. Consistently, the result

in Table 5.10 reveals a significant and negative relationship between AC effectiveness and accretive buyback actions ($z = -1.83$, $p\text{-value} = 0.069$). Therefore, H2 is supported. This result supports the arguments of the agency theory and resource dependence theory, which claim that independent directors with relevant skills and experience significantly contribute to enhancing governance effectiveness, increase the quality of financial reporting and reduce the agency problem (Fama & Jensen, 1983; Pfeffer & Salancik, 2003).

This finding aligns with the results of Vafeas (2005) and Xie et al. (2003) who examined attributes of the AC, which included AC independence, AC size, AC financial expertise and the frequency of AC meetings, as indicators of AC effectiveness. The results support the effectiveness of AC in mitigating accruals-based earnings management.

In Malaysia, previous studies have explored several attributes of the AC including AC independent, AC size, AC meetings, and AC financial expertise. Their results have provided weak evidence about the effectiveness of AC features in mitigating accruals-based earnings management (Al-Rassas & Kamardin, 2016; Hussain Alkdai & Hanefah, 2012; Saleh et al., 2007; Yunos, 2011). Further, Haji-Abdullah and Wan-Hussin (2015) documented that AC independent, AC size, AC meetings, and AC financial expertise have negative but not significant relationships with real earnings management.

This current study provided a different result for the effectiveness of AC in mitigating real earnings management because this study used a composite score as a proxy for

AC effectiveness. Prior literature (Bin-Ghanem & Ariff, 2016; Habbash, 2013; Kent et al., 2010; Hunton et al., 2011; O'Sullivan et al., 2008; Zaman et al., 2011) argued that corporate governance is an interrelated system and becomes effective only in particular combinations rather than in isolated best practices. O'Sullivan et al. (2008) reported that examining the mechanisms of corporate governance as a package gives a stronger outcome than does examining them individually. Particularly, Sharma and Kuang (2014) as well as Woidtke and Yeh (2013) indicated that focusing on individual features of an AC such as the independence cannot be sufficient to restrict earnings management, as independent members need to possess some financial expertise to support their confidence in accounting and financial information, which assists in raising earnings quality.

The evidence of this study regarding ACSCORE with accretive buyback is consistent with MCCG 2012, which requires the BOD to create an effective AC to ensure that a financial statement is reliable and relevant for investors and other related parties and is prepared according to the applied financial reporting standards. MCCG 2012 also contains certain rules to reinforce the function of an AC in creating better quality financial reporting. Particularly, MCCG 2012 recommends strengthening the independence of independent directors through revised it yearly as well as limiting the tenure of independent directors to a maximum of 9 years.

5.4.3 Audit Quality

This study in H3 proposes that firms audited by Big 4 auditors (BIG4) will have a significant association with accretive share buyback. Consistently, the result in Table

5.10 shows a positive and significant association between BIG4 and accretive buyback activities ($z= 2.20$, $p\text{-value} = 0.029$). Therefore, H3 is supported.

This result is consistent with prior studies such as the study of Burnett et al. (2012) who provided evidence that firms with high audit quality are more likely to employ shares buyback for earnings management purposes and however less likely to use accruals-based earnings management. Similarly, Chandren et al. (2015) used data from 2001 to 2008 and found a positive and significant association between accretive share buybacks and BIG4. This means that Big 4 auditors were not aware of the use of accretive buyback as a tool for real earnings management. Consistently, Bryan and Mason (2016) examined whether earnings management by accretive share buybacks affected auditor perceptions of risk and found a significant and positive connection between the use of accretive share buybacks as an earnings management tool and audit fees.

The result of this study is also consistent with Chi et al. (2011) and Cohen and Zarowin (2010) who found that firms audited by Big 4 auditors are more likely to undertake real earnings management than accrual-based earnings management when involved in a seasoned equity offering. Lawrence et al. (2011) indicated that the effect of Big 4 audit firms may belong to the fundamental differences in client characteristics rather than in differential audit quality. This outcome is consistent with the argument predicts that even though Big 4 audit firms have more skills and expertise to perform auditing functions for their clients relative to non-Big 4 auditors, they still have limited understanding and awareness of the use of accretive buyback to manage earnings management, which is likely to change in the future. Further, this result is consistent

the principles of MCCG 2012 that cover the responsibility of AC to review and monitor independence and rationalization of an external audit.

5.4.4 Family Ownership

The assumption in this study is that family ownership (FAMD) may have a significant association with accretive share buyback activities. Consistently, the outcomes in Table 5.10 revealed that family ownership had a significant and negative relationship with accretive buyback activities as a tool for managing earnings ($z = -2.00$, $p\text{-value} = 0.047$), meaning that the family-controlled firms are more conservative in managing earnings by engaging in accretive share buyback activities. Therefore, H4 is supported.

The finding of this study is consistent with the argument indicating that family-controlled firms have more efficient monitoring functions as they are dominated management and have more relevant information with efficient monitoring functions, which, in turn, would provide a great opportunity to support the interests of minority shareholders (Alzoubi, 2016); Bhaumik & Gregoriou, 2010; Fama & Jensen, 1983; Li & Hung, 2013; Siregar & Utama, 2008). This is consistent with alignment hypothesis predicts that family shareholders could align the interest of management and shareholders, which, in turn, mitigate the practice of earnings management (Wang, 2006). This also is along the same line with agency theory (type I) that the notion assumes that insiders' shareholding assists in aligning the benefits of managers and shareholders (Claessens et al., 2000; Fan & Wong, 2002; Jensen & Meckling, 1976).

The findings of this study are consistent with Adiguzel (2013) who documented that the magnitude of accruals-based earnings management is less in family controlled

firms than in non-family controlled firms. Along the same line, Wang (2006) and Ali et al. (2007) provided evidence that family ownership has a significant and negative connection with abnormal accruals, which support the credibility of reported earnings. Consistent with this finding, Cascino et al. (2010) examined earnings quality between family controlled firms and non-family controlled firms and found that family firms generally reported high-quality earnings compared to non-family firms, which support the findings of this study. In Malaysia, the study of Haji-Abdullah and Wan-Hussin (2015) documented evidence that support this study findings, which revealed that family controlled firms restricted real earnings management through related party transactions, which also supports the alignment role of family ownership.

Moreover, Siregar and Utama (2008) revealed that firms with a high proportion of family ownership had more of a tendency to select efficient earnings management than non-family owned firms. Li and Hung (2013) found that family ownership indeed lessened the motivations for earnings management in family-controlled firms. Achleitner et al. (2014) provided evidence that family-controlled firms as compared to non-family firms were less involved in real earnings management as a substitute or complementary for accruals-based earnings management. These previous findings are support this study's outcomes which reveals the alignment role of family shareholding in mitigating real earnings management through accretive share buybacks.

5.4.5 Managerial Ownership

This study in H5 assumes a significant association between managerial ownership and accretive buybacks. However, this study in Table 5.10 shows a positive but insignificant relationship between managerial ownership (MOWN) and accretive

share buybacks ($z = 0.37$, $p\text{-value} = 0.712$), which means that the percentage of a firm's shares held by executive directors could not encourage or depress the magnitude of accretive share buybacks to manage reported EPS. Therefore, H5 is rejected.

A possible interpretation of this result is that in firms with high managerial ownership, such as family-owned firms, it is unnecessary to mitigate accretive share buybacks as a tool for managing earnings. They may use buyback to earn real wealth transfers from the outside shareholders to insider shareholders (Shayan-Nia et al., 2017). This result is consistent with Al-Dhamari and Ku Ismail (2013) who found no significant effect for managerial ownership on earnings management through earnings informativeness in the Malaysian context. Also, Al-Fayoumi et al. (2010) and Masmoudi and Boujelbène (2014) revealed that managerial ownership had a significant and positive influence on the practice of earnings management, which is consistent with the entrenchment viewpoint. Similarly, Oluku (2017) found that managers holding a high level of firm equity were more likely to practice earnings management.

Regarding accretive buyback decisions, the results of prior studies are not consistent with this study's findings. In a study of the United States, Farrell et al. (2013) found that firms with a high percentage of CEO ownership are less likely to exercise earnings management through accretive share buyback, indicating that managerial ownership assists in mitigating accretive share buyback as a proxy for real earnings management. Correspondingly, Chandren et al. (2015), in a Malaysian study, also reported a significant and negative linkage between direct shareholdings of executive directors and real earnings management by accretive share buybacks. This is consistent with

traditional agency theory, which assumes that managerial shareholdings are more probable to mitigate the agency problem between shareholders and managers.

The possible explanation for the different results from this study to Farrell et al. (2013) and Chandren et al. (2015) is that they used limited measurement for managerial ownership, wherein they used CEO ownership and direct shareholdings of executive directors respectively, as proxies for managerial ownership. Whereas, this current study used direct and indirect shareholdings of executive directors (indirect shares refer to the shares of an individual shareholder or firms through interests held in another related firm or by their family members) for the managerial ownership. Logically, the measurement of managerial ownership used by this study better represents managerial ownership as it considers both the direct and indirect shareholdings of all executive directors.

5.4.6 Foreign Ownership

This study assumes that firms with a high proportion of shares held by foreign investors (FOWN) are less likely to engage in accretive buyback activities because they have superior capabilities compared to the domestic investors, which is expected to improve the governance level of a firm. However, the finding shown in Table 5.10 reveals an insignificant association with accretive share buyback activities ($z = 0.13$, $p\text{-value} = 0.869$). Therefore, H6 is rejected. This result is inconsistent with the knowledge spillover hypothesis, which assumes that the superior knowledge of foreign investors is more likely to limit earnings management activities (Guo et al., 2015).

A possible explanation for this result is probably related to the level of corporate governance for a country, which substantially affects the relationship between foreign ownership and earnings management practices. Ben-Nasr et al. (2015) documented a significant and negative relationship between foreign ownership in countries with high governance stability and that experience lower government expropriation risk. whereas the relationships were positive with earnings management in countries with a poor corporate governance system. This may support the result of this study, which found a limited effect for foreign ownership in mitigating earnings management through accretive share buybacks. That is because previous study has reported that the corporate governance system in Malaysia is still under development, and the country experiences poor investor protection (Hasnan et al., 2013).

In addition, the size of foreign ownership in firms may play a considerable role in their ability to control and monitor management behaviours. Previous studies have indicated that only foreign investors, who hold a significant magnitude of a firm's equity, could perform monitoring for management actions (Chhibber & Majumdar, 1999). They found a positive effect of the spillover hypothesis only when foreign investors were given proper authority and controlled more than 50% of ownership, to display better performance. In the current study, only 7% of the firms had more than 50% of their shares held by foreign investors. Accordingly, this study found that the mean of percentage of foreign ownership was 7.5% as shown in Table 5.10, which is considered very low to make a substantial difference in management policy.

5.4.7 Employee Stock Options

Table 5.10 demonstrates that the stock options exercise (ESOSEXR) had significant and positive association with accretive buyback activities at the 10% level ($z = 1.79$, $p = 0.074$). This means that firms with a high exercise of stock options were more likely to engage in accretive share buyback to manage EPS. Thus, H7 is supported. This result is consistent with the stock options hypothesis which predicts that firms may be involved in share buyback programs to offset the dilution in EPS caused by the exercise of stock options (Bens et al., 2003; Dittmar, 2000; Kahle, 2002). Consistent with this result, Kadan and Yang (2016) found that newly granted stock options are significantly related to practices of earnings management to affect the stock price.

Similarly, Bedard et al. (2004), and Cheng and Warfield (2005) indicated that managers with a high amount of managerial ownership including stock options have more incentive to manipulate earnings to meet or beat forecasts of analysts, especially when the probability of negative earnings surprise is high. Also, Bartov and Mohanram (2004) provided an empirical result that managers manage earnings by discretionary accruals during the short time before the exercise of stock options. Furthermore, Lin et al. (2009) found that managerial options exercisable were positively related to the size of earnings management. These are in line with the finding of this current study in terms of using stock options schemes to manage the earnings threshold.

5.4.8 Control Variables

Regarding the control variables, the relationship between the natural logarithm of total assets (FSIZE) and accretive buyback actions was significant and positive at the 1% level ($z = 6.18$, $p < 0.000$). This finding is consistent with the argument that predicts that analysts usually track large firms more than they track small firms, which

presumes that large firms being under more pressure to meet EPS benchmarks (Bhushan, 1989). This finding is also consistent with Farrell et al. (2013) and Farrell et al. (2014) who reported a positive and significant association between firm size and accretive buyback behaviours. Further, Chandren et al. (2015) found a positive but insignificant relationship between firm size and accretive buyback actions.

Asset growth (AGROWTH) had a negative and significant association with accretive share buyback ($z = -2.18$, p value = 0.031). This result is consistent with the empirical evidence of previous studies (Farrell et al., 2013; Farrell et al., 2014) who documented that high growth firms are less likely to exercise accretive buyback activities for the purposes of earnings management. Jensen (1986) indicated that firms with high investment opportunities may use cash to improve their value by investments rather than use cash in share buyback programs.

Previous studies (Andriosopoulos & Hoque, 2013; Bens et al., 2003; Burnett et al., 2012; Dittmar, 2000; Hribar et al., 2006) have predicted that underleveraged firms engage in shares buyback to reduce a firm's equity fraction, which leads to an increase in the debt ratio (the percentage of total debts to total assets). Consistently, Table 5.10 shows that the variable of leverage (LEV) had a significant and negative association with accretive buyback actions at the 5% level ($z = -2.41$, p -value = 0.017), indicating that firms with low percentage of total debt to total assets (LEV) are more likely to undertake shares buyback to reach optimal leverage level. This is consistent with Farrell et al. (2013) who found that the leverage level was negatively related to accretive share buybacks.

Regarding the variable of cash level (CL), previous studies have predicted that firms with higher cash levels are more likely to spend funds in share buyback activities (Abdul Latif, 2010). Jensen (1986) reported that firms with free cash could spend more cash on non-profitable activities. However, the result of this study shows an insignificant relationship with accretive share buybacks ($z = 1.31$ $p\text{-value} = 0.190$), which is inconsistent with the cash flow hypothesis that predicts that firms use their cash in share buyback activities. This result is consistent with the finding of Chandren et al. (2015), which revealed a positive and insignificant association between the level of cash and accretive share buyback. Similarly, Chandren and Nadarajan (2013) reported a positive linkage between cash level and accretive share buyback at the 10% significance level, which is slightly in the same line with the result of this study.

5.5 Additional Analysis

This section displays a series of additional analysis conducted to investigate the robustness of the regression model. To improve the reliability of the findings, this study used alternative model specifications. First, the study used Tobit random effect regression to compare their results with the main analysis. Second, because the primary objective of this study focused on accretive share buyback decisions, the main model was re-examined by replacing the measurement of accretive share buyback by using a dichotomous variable equal to 1 if the shares buyback was an accretive share buyback and 0 if otherwise (Farrell *et al.*, 2013). Third, this study re-ran the main analysis excluding the variable of managerial ownership (MOWN) to avoid the correlation effect between MOWN and family ownership (FAMD). Finally, this study re-examined the main model by using the individual attributes of governance mechanisms

(the BOD and AC) rather than a composite measure. The outcomes of additional analyses emphasise the consistency of the earlier results.

5.5.1 Tobit Model's Regression Analysis

As mentioned before, this study in the main analysis used only the accretive share buyback observations (ABB) during the sample period of the study to test the hypotheses in order to achieve its objectives. Therefore, to test the robustness of the main analysis's findings, the analysis was repeated after including both accretive and non-accretive buyback observations to ensure the results are not affected by using different sample size. the Tobit estimation model was conducted to re-examine the main analysis of this current study. Tobin (1958) introduced the Tobit regression model to analyse the association between dependent variable with non-negative values.

The Tobit regression model can also be used to analyse variables whose actual values are not observed (censored dependent variables). Thus, unbalanced panel Tobit regression is used in this analysis to retest the study's hypotheses. The Tobit model is used because the dependent variable (accretive share buyback) is limited, where about 29% of sample observations are left censored at zero and the Tobit model is used to neutralize the effect of the non-buyback observations (censored values).

This section includes accretive and non-accretive buyback, 235 and 366 observations respectively, included in this section, and the diagnostic tests iare re-examined to confirm that the assumptions of multiple regressions hold correctly. The study used

Breusch and Pagan (1980) Lagrange multiplier (LM) test to inspect the hypothesis that there are no random effects. The study concluded that the random effects model was more appropriate than classical regression model based on a significant p-value for the (LM) test. Additionally, the Hausman test was employed to determine which panel technique (the Fixed Effect Model or the Random Effect Model) was more appropriate for the observed sample data. Based on this test, the random effects regression was employed to examine the sample of accretive and non-accretive observations.

To deal with heteroscedasticity and serial correlation (autocorrelation) in the panel data set, this study includes time fixed-effects and robust standard errors clustered at the firm level (Beltratti, Spear, & Szabo, 2013; Petersen, 2009). In order to ensure that the regression results are not driven by a few extreme observations, this study Winsorized all continuous variables at the 1st and 99th percentiles (Filip et al., 2015).

Table 5.11 reports the results of the Tobit estimation model examining the relationship between the number of shares bought back for accretive share buyback firms and the independent variables. As shown in Table 5.11, the model is statistically significant at a p-value of less than 0.01 ($\text{Prob} > \chi^2 = 0.0000$) with a Wald Chi-square of 67.69. The Wald-chi-square was significant at the 1% level, indicating that the overall model exhibited a good fit for the observed sample data. The following section explains the relationship between the independent and control variables with the dependent variables as tabulated in Table 5.11.

Contrary to the expectations of this study, the findings showed that BOD effectiveness (BDSCORE) had significant and positive association with accretive share buyback

(ABB) ($z = 3.22$, $p\text{-value} = 0.001$), indicating that the more effective BOD, the more likely firms are to engage in earnings management through accretive share buyback activities, which support the result in the main model. This result does not support the arguments of agency theory and resource dependency theory, which predicted that the more effective that the BOD is, the less is the practice of earnings management. This result is likely to be justified by the fact that the BODs of Malaysia firms are dominated by controlling shareholders, where the mean of family shareholdings is 30% as shown in Table 5.4. Thus, these controlling shareholders may use their power to utilise the firms' resources to achieve their interests at the expense of minority shareholders.

Table 5.11

Regression Results for Panel Tobit Estimation Model

$$ABB = \beta_0 + \beta_1 \text{BDSCORE} + \beta_2 \text{ACSCORE} + \beta_3 \text{BIG4} + \beta_4 \text{FAMD} + \beta_5 \text{MOWN} + \beta_6 \text{FOWN} + \beta_7 \text{ESOSEXR} + \beta_8 \text{FSIZE} + \beta_9 \text{AGROWTH} + \beta_{10} \text{LEV} + \beta_{11} \text{CL} + e.$$

Independent Variables	Predicted Signs	Coef.	z	P-value
Constant	?	-21.39	-2.95	0.003***
BDSCORE	-	1.650	3.22	0.001***
ACSCORE	-	-1.157	-2.48	0.013**
BIG4	-	-0.627	-0.62	0.538
FAMD	?	2.738	2.27	0.023**
MOWN	?	0.888	0.34	0.731
FOWN	-	1.929	0.38	0.704
ESOSEXR	+	175.96	2.64	0.008***
FSIZE	-	1.306	3.37	0.000***
AGROWTH	-	-3.350	-1.46	0.143
LEV	-	-7.424	-1.93	0.053*
CL	+	1.975	0.57	0.566
Years		Included		
Wald chi2(16)		67.69		
Prob > Chi2		0.000		
N of observations		601		
No. of Firms		101		

Notes: ***, **, * indicates statistical significance at the 0.01, 0.05 and 0.10 levels respectively at two-tailed. ABB = natural logarithm of accretive share buyback numbers, BDSCORE = BOD effectiveness, ACSCORE = AC effectiveness, BIG4 = audit quality, FAMD = family ownership, MOWN = managerial ownership, FOWN = foreign ownership, ESOSEXR = stock options exercised, FSIZE = natural Logarithm of total assets, AGROWTH = assets growth, LEV= Leverage, and CL = cash level.

This Tobit regression reveals a negative relationship between the AC effectiveness (ACSCORE) and accretive share buyback ($z = -2.48$, $p\text{-value} = 0.013$), which means the greater AC effectiveness, the less accretive share buyback is practised by Malaysian listed firms. Consistently, the result in the main model Table 5.10 reveals a significant and negative relationship between AC effectiveness and accretive buyback actions. This result supports the arguments of the agency theory and resource dependence theory, which claim that independent directors with relevant skills and experience significantly contribute to enhancing governance effectiveness, increase the quality of financial reporting and reduce the agency problem.

With regards to audit quality, this study predicts that firms audited by Big 4 auditors (BIG4) are more likely to practice less accretive share buyback than those firms audited by non-Big 4 auditors. However, this result in Table 5.11 shows a negative and insignificant association between BIG4 and accretive buyback activities ($z = -62$, $p\text{-value} = 0.538$), which is consistent with the main result in Table 5.10. This result is consistent with prior studies such as Yusof (2010), Abdul Rahman and Ali (2006), Zang (2012) and Zeng (2014), which failed to find a significant relationship between Big 4 auditors and the practise of reality-based and accrual-based earnings management. Chandren et al. (2015) used data from 2001 to 2008 and found a positive and significant association between accretive share buybacks and BIG4. This means that Big 4 auditors were not aware of the use of accretive buyback as a tool for real earnings management. However, this study's result reveals a negative but insignificant relationship between BIG4 and accretive share buybacks. This possibly means that Big 4 auditors have begun to understand and realise the use of accretive share buyback as a mechanism for real earnings management.

Regarding the variable of family ownership (FAMD), the results of this model in Table 5.11 reveal a significant and positive association with accretive share buyback activities ($z = 2.27$, $p\text{-value} = 0.023$). The finding of this study is consistent with the argument indicating that family-controlled firms have less efficient monitoring functions as they are dominated by family members and have managers with less efficient monitoring functions, which, in turn, would provide a great opportunity to expropriate the interests of minority shareholders (Bhaumik & Gregoriou, 2010; Fama & Jensen, 1983; Omar & Mohd-Saleh, 2011). This is consistent with entrenchment hypothesis, which predicts that family shareholders could dominate management and lead to the practice of earnings management (Wang, 2006). This also is along the same line with agency theory (type II) problems that exist between majority and minority shareholders (Claessens et al., 2000; Fan & Wong, 2002).

The finding of this study is consistent with Faccio et al. (2001) and Fan and Wong (2002) who reported that family shareholding expropriates the rights of minority outside shareholders, which may limit the credibility of reported earnings. Consistent with this finding, Omar and Mohd-Saleh (2011) in Malaysia found that managers and controlling shareholders may use goodwill impairment as a tool to manage earnings. In addition, Setia-Atmaja et al. (2011) reported that family-controlled firms exercise earnings management to gain private interests of control. Recently, Abdullah and Ismail (2016) suggested no effective role for family ownership in interacting with women on the BOD to constrain earnings management. This possibly means that family members have an entrenchment effect rather than an alignment interest effect on family-controlled firms.

Another explanation for this finding is that family members may be involved in earnings management through accretive buybacks rather in accruals-based earnings management, which become under the lens of external auditors and other monitoring agencies. This interpretation is consistent with the findings of Wang (2006), Ali et al. (2007) and Li and Hung (2013) who found that accruals-based earnings management actions are better mitigated in family-controlled firms relative to non-family controlled firms. Tai (2017) examined both types of earnings management in family-controlled firms and found that they engaged in real earnings management more than accruals-based earnings management. Further, Razzaque et al. (2015) provided evidence that supports the results of this current study, suggesting that family firms practice real earnings management more than non-family firms in Bangladesh.

Consistent with the results of the main model in Table 5.10, this Tobit regression shows a positive but insignificant relationship between managerial ownership (MOWN) and accretive share buybacks ($z = 0.34$, $p\text{-value} = 0.731$). This means that the proportion of a firm's managerial ownership could not encourage or depress the managers to involve in accretive share buybacks as a tool for real earnings management.

With respect to foreign ownership (FOWN), the finding shown in Table 5.11 reveals an insignificant association with accretive share buyback activities ($z = 0.38$, $p\text{-value} = 0.704$). This result is consistent with the results of the main model in Table 5.10 that reveal an inactive role for foreign investors in mitigating accretive buyback activities. This result is inconsistent with the knowledge spillover hypothesis assumes that the

superior knowledge of foreign investors is more likely to limit earnings management activities (Guo et al., 2015).

The stock options exercise (ESOSEXR) had significant and positive association with accretive buyback activities at the 1% level ($z = 2.64, p < 0.008$). This result is consistent with the study's main model in Table 5.10. This result means that more exercise of stock options encourages managers to involve in accretive share buyback. This is along the same line with the stock options hypothesis assumes that firms may be involved in share buyback to avoid the dilution in EPS caused by the exercise of stock options (Dittmar, 2000; Kahle, 2002). Lin et al. (2009) found that managerial options exercisable were positively related to the size of earnings management. These are in line with the finding of this current study in terms of using stock options schemes to manage the earnings threshold. Similarly, Kadan and Yang (2016) found that newly granted stock options are significantly related to practices of earnings management to affect the stock price.

In terms of the control variables, this model in Table 5.11 reveals that total assets (FSIZE) has a significant and positive connection with accretive share buyback at the 1% level ($z = 3.37, p < 0.01$). This result is in line with the argument that predicts that analysts usually track large firms more than they track small firms, which presumes that large firms being under more pressure to meet EPS benchmarks (Bhushan, 1989). Asset growth (AGROWTH) had a negative and insignificant relationship with accretive share buyback ($z = -1.46, p = 0.143$). This result is consistent with the empirical evidence of previous studies (Farrell et al., 2013; Farrell et al., 2014),

indicating that firms with high investment opportunities may use cash to improve their value by investments rather than use cash in share buyback programs.

Table 5.11 presents a negative and significant association between leverage (LEV) and accretive share buyback ($z = -1.93$, $p\text{-value} = 0.053$), meaning that firms with low leverage (LEV) are more likely to practice shares buyback to reach optimal leverage level. Regards cash level (CL), The results of this study show an insignificant relationship with accretive buyback activities ($z = 0.57$ $p\text{-value} = 0.566$), which is inconsistent with the cash flow hypothesis that predicts that firms use their cash in share buyback activities. This result is consistent with the finding of the main model in Table 5.10, which revealed a positive and insignificant relationship between the level of cash and accretive share buyback.

In summary, the result of BDSCORE, ACSCORE, MOWN, FOWN and ESOSEXR had results that are slightly similar with the main model except for the BIG4 and FAMD variables. FAMD has a significant and positive association with ABB, which support the entrenchment role of family members over firms' management. Whereas, BIG4 in this section has insignificant connection with ABB, meaning that Big 4 auditors are not an active mechanism to detect and prevent earnings management through accretive share buybacks.

5.5.2 Logistic Regression Analysis: Dichotomous Measurement of ABB

This study in the main analysis used the logarithm of the number of shares bought back (ABB) during the years of study as a measure to accretive buyback in the main analysis because EPS is directly affected by the number of shares bought back rather than the

value of share buybacks. Thus, the main analysis is re-estimated in this section by using logistic regression for 601 (235 accretive buybacks & 366 non-accretive buybacks) observations of buyback firms over the period 2010 to 2015. Thus, the measurement of the dependent variable (ABB) is replaced with a dichotomous variable equal to 1 for an accretive share buyback observations and 0 if otherwise (ABBD) (Farrell et al., 2013; Farrell et al., 2014; Hribar et al., 2006).

Because the measurement of the dependent variable ABBD is not similar to the main analysis as mentioned above, the diagnostic tests were re-run for this logistic fixed effects model to test the regression assumptions. In terms of extreme outliers, normality, and multicollinearity, they are similar to the main analysis as discussed earlier. For the autocorrelation and heteroskedasticity, Breusch-Pagan/Cook-Weisberg and Wooldridge tests were performed respectively to examine the null hypothesis. As the p-value for both tests were above 5%, this means that homoscedasticity and serial correlation problems are absent in this model. This can be a sign that applying fixed effects model is the correct technique to be used as suggested by the Hausman test, which enabled the study to avoid any possible bias in the estimation.

As presented in Table 5.12, the results of this model are commonly consistent with the findings of the main analysis except for that BIG4, where these results show that BIG4 has a negative and significant effect on ABBD. This means that firms audited by Big 4 auditors experience less earnings management than non-Big 4 audit firms (Francis & Yu, 2009). As show in Table 5.12, the results revealed a significant and negative relationship between ABBD and AC effectiveness. Whereas, the variables of the BDSCORE, FAMD, and ESOSEXR had a significant and positive association with

ABBD. Regarding control variables, only AGROWTH had a significantly negative relationship with ABBD. The other control variables including FSIZE, LEV, and CL had a linkage with ABBD in the same directions as the mean model but not were significant.

Table 5.12

Regression Results for Panel Logistic Fixed Effect Estimation Model

$$ABBD = \beta_0 + \beta_1 BDSCORE + \beta_2 ACSCORE + \beta_3 BIG4 + \beta_4 FAMD + \beta_5 MOWN + \beta_6 FOWN + \beta_7 ESOSEXR + \beta_8 FSIZE + \beta_9 AGROWTH + \beta_{10} LEV + \beta_{11} CL + e.$$

Independent Variable	Predicted Signs	Coef.	z	P-value
BDSCORE	-	0.640	3.21	0.001***
ACSCORE	-	-0.367	-2.12	0.034**
BIG4	?	-2.625	-2.06	0.040**
FAMD	?	4.686	2.07	0.038**
MOWN	?	-2.006	-1.25	0.210
FOWN	-	1.254	0.6	0.546
ESOSEXR	+	74.279	3.14	0.002***
FSIZE	-	0.639	1.37	0.169
AGROWTH	-	-2.202	-2.9	0.004***
LEV	-	-1.346	-0.84	0.400
CL	+	1.517	0.43	0.316
Years		Included		
LR chi2 (16)			66.81	
Prob > Chi2			0.000	
N of observations.			601	
N of Firms			101	

Notes: ***, **, and * indicate statistical significance at the 0.01, 0.05 and 0.10 levels respectively at two-tailed. ABBD = dichotomous variable equal one if share buyback is accretive and zero otherwise, BDSCORE = BOD effectiveness, ACSCORE = AC effectiveness, BIG4 = audit quality, FAMD = dichotomous variable equal one if a firm is family controlled and zero otherwise, MOWN = managerial ownership (direct and indirect), FOWN = foreign ownership, ESOSEXR = stock options exercised, FSIZE = natural logarithm of total assets, AGROWTH = rate of assets growth, LEV = Leverage, and CL = cash level.

5.5.3 Excluding Managerial Ownership (MOWN)

To test the robustness of the findings, the analysis was repeated after excluding the variable of managerial ownership (MOWN) to ensure results were not influenced by the correlation between MOWN and FAMD. The results as presented in Table 5.13

are consistent with the main analysis except for that level of significance for FAMD was at the 10% level (p value = 0.051) while in the main analysis shown in Table 5.10, FAMD was significant at the 5% level (p value = 0.047). However, other variables like BDSCORE, ACSCORE, FAMD, and ESOSEXR, as well as control variable, remain unchanged (directions and level of significance) with ABB in comparison to the results of the main model in Table 5.10. This shows that the results of the main analysis were not affected by the correlation between MOWN and FAMD.

Table 5.13

Regression Results for Random Effect OLS Estimation Model with Excluding MOWN

$$ABBD = \beta_0 + \beta_1 \text{BDSCORE} + \beta_2 \text{ACSCORE} + \beta_3 \text{BIG4} + \beta_4 \text{FAMD} + \beta_5 \text{MOWN} + \beta_6 \text{FOWN} + \beta_7 \text{ESOSEXR} + \beta_8 \text{FSIZE} + \beta_9 \text{AGROWTH} + \beta_{10} \text{LEV} + \beta_{11} \text{CL} + e.$$

Independent Variable	Predicted Signs	Coef.	z	p-value
Constant		9.18	10.57	0.000***
BDSCORE	-	0.20	2.64	0.009***
ACSCORE	-	-0.14	-1.82	0.07*
BIG4	-	0.30	2.2	0.029**
FAMD	?	-0.29	-1.97	0.051*
FOWN	-	0.06	0.09	0.925
ESOSEXR	+	10.58	1.78	0.077*
FSIZE	-	0.30	6.31	0.000***
AGROWTH	-	-0.48	-2.16	0.032**
LEV	-	-1.06	-2.5	0.013**
CL	+	0.76	1.4	0.162
Years		Included		
R ²			0.41	
Sig			0.000	
N of observations			235	
N of Firms			101	

Notes: ***, **, and * indicate statistical significance at the 0.01, 0.05 and 0.10 levels respectively at two-tailed. ABBD = dichotomous variable equal one if buyback is accretive or zero otherwise, BDSCORE = BOD effectiveness, ACSCORE = AC effectiveness, BIG4 = audit quality, FAMD = dichotomous variable equal one if firms is family controlled and zero otherwise, MOWN = managerial ownership (direct and indirect), FOWN = foreign ownership, ESOSEXR = stock options exercised, FSIZE = natural logarithm of total assets, AGROWTH = rate of assets growth, LEV = Leverage, and CL = cash level.

5.5.4 Individual Attributes of Corporate Governance Mechanisms

Following prior studies (Bin-Ghanem and Ariff, 2016; Chobpichien et al., 2007; DeFond et al. 2005; Garcia Lara et al., 2007; Johl et al., 2013; Krishnan & Visvanathan, 2008; O'Sullivan et al., 2008), this study in the main analysis shown in Table 5.10 uses a composite score to measure the effectiveness of both BOD and AC. Prior empirical studies exhibited fair consensus regarding certain attributes including independence, size, meetings and financial experience for both BOD and AC, which supported their effectiveness in monitoring managers actions (e.g. Abdul Rahman & Ali, 2006; Bin-Ghanem & Ariff, 2016; Chobpichien et al., 2007; Hashim & Devi, 2008a; Hunton et al., 2011; Johl et al., 2013; Srinidhi et al., 2014; Sarkar et al., 2008; Vafeas, 1999; Xie et al., 2003). However, in this section, this study re-estimated the main analysis by replacing the scores of the BOD (BDSCORE) and AC (ACSCORE) with their individual features which composite the scores including BDIND, BSIZE, BDMEET, BDEXPRT, ACIND, ACSIZE, ACMEET, and ACEXPRT.

Table 5.14 below shows the results of the random effects Tobit regressions for the full sample, whereby four models are estimated. Model (1) estimated the entire variables of corporate governance mechanisms and ESOS with ABB. Model (2) estimated all variables of corporate governance but, however, excluded the AC features (ACIND, ACSIZE, ACMEET, and ACEXPRT). Model (3) estimated the impact of corporate governance mechanisms on ABB with excluding BOD features (BDIND, BDSIZE, BDMEET, and BDEXPRT). Finally, Model (4) estimated only BIG4, FAMD, MOWN, FOWN, and ESOSXR, but, excluded both the features of BOD and AC. Table 5.15 below shows that all models were fit and significant at the 1% level with $R^2 > 0.30$.

As shown in Table 5.14, the findings of the models are not totally similar to the findings of the main analysis reported in Table 5.10. In terms of the BOD features, Table 5.15 shows conflicting results of the relationship between the BOD features and ABB. BDIND had a negative relationship with ABB. However, BDMEET had a positive association with ABB. Regarding BDSIZE and BDEXPRT, this study failed to provide evidence to support their ability to constrain ABB. These results are consistent with previous studies (e.g., Abdul Rahman & Ali, 2006; Al-Rassas & Kamardin, 2015; Davidson et al., 2005; Hashim & Devi, 2008a; Klein, 2002; Peasnell et al., 2000; Peasnell et al., 2005; Shiri et al., 2012), which found conflicting findings for BOD features with earnings management. Similarly, Chandren et al. (2015) reported conflicting results for the BOD features with accretive share buybacks.

These conflicting results support using a composite score as a proxy for the effectiveness of the BOD (BDSCORE), which this study adopted rather than depending on individual features. Prior studies (e.g., Bin-Ghanem & Ariff, 2016; Kent et al., 2010; Hunton et al., 2011; O'Sullivan et al., 2008; Zaman et al., 2011) have indicated that corporate governance is an interrelated system and becomes effective only in particular combinations rather than isolated practices. Consistently, O'Sullivan et al. (2008) reported that the mechanisms of corporate governance as a bundle provide better results than investigating them individually.

Regarding AC features, Table 5.14 presents conflicting findings of the association between AC features and ABB. ACIND, ACSIZE and ACEXPRT had a negative relationship with ABB. However, ACMEET had a positive linkage with ABB. These

findings are not consistent with the result of the main analysis in Table 5.10, but they are like several prior studies, for example Adiguzel (2013), Chandrasegaram et al. (2013), Felo et al. (2003), García et al. (2012), which found conflicting and insignificant associations between AC features and earnings management practices. Similarly, Haji-Abdullah and Wan-Hussin (2015) reported that AC features, including ACIND, ACSIZE, ACMEET, and ACEXPRT had a negative but insignificant association with real earnings management, suggesting that AC is an ineffective mechanism to mitigate real earnings management activities. However, this study employed a composite score for AC (ACSCORE), as corporate governance mechanisms are an interrelated system and become effective when combined rather than used in isolated practices (O'Sullivan et al., 2008).

BIG4, FAMD, MOWN, and FOWN had results that are slightly similar with the main model except for the BIG4 was not significant in Model 2, but were significant at the 5% level in Model (1) Model (3), and Model (4), as shown in Table 5.14. However, ESOSEXR in the entire models had insignificant and positive linkages with ABB, which is not the same line with the main analysis shown in Table 5.10. Finally, the results of control variables, FSIZE, AGROWTH, LEV, and CL were slightly similar to the main analysis presented in Table 5.10, whereby they kept the same directions of relationships as well as the same level of significance.

Table 5.14

Panel OLS Regression of Accretive Buyback with Individual Attributes of Corporate Governance Mechanisms

Variable	Model 1		Model 2		Model 3		Model 4	
	Cof.	P value	Cof.	P value	Cof.	P value	Cof.	P value
Constant	9.03	0.000***	8.60	0.000***	9.09	0.000***	9.07	0.000***
B_IND	-0.66	0.513	-0.93	0.028**				
B_SIZE	0.04	0.461	0.02	0.553				
B_MEET	0.05	0.324	0.08	0.050**				
B_EXPERT	0.60	0.358	0.64	0.265				
ACIND	-0.18	0.743			-0.36	0.094*		
AC_SIZE	-0.11	0.58			-0.04	0.795		
AC_MEET	0.08	0.282			0.12	0.05**		
AC_EXPERT	-0.01	0.969			0.12	0.723		
BIG4	0.24	0.087*	0.22	0.117	0.24	0.085*	0.24	0.083*
FAMD	-0.43	0.008***	-0.41	0.008***	-0.44	0.005***	-0.39	0.011**
MOWN	0.02	0.969	0.05	0.905	-0.11	0.819	0.02	0.965
FOWN	0.06	0.928	0.13	0.844	0.10	0.879	0.24	0.705
ESOSEXR	8.61	0.162	8.73	0.153	8.15	0.183	9.91	0.103
FSIZE	0.30	0.000***	0.32	0.000***	0.30	0.000***	0.31	0.000***
AGROWTH	-0.47	0.041**	-0.47	0.041**	-0.46	0.043***	-0.54	0.016**
LEV	-0.94	0.047**	-0.95	0.038**	-0.81	0.065*	-0.85	0.049**
CL	0.80	0.162	0.68	0.224	1.03	0.069*	0.86	0.123
Years	included		included		included		included	
R ²		0.42		0.42		0.41		0.39
Sig		0.000		0.000		0.000		0.000
N of observations		235		235		235		235
N of Firms		101		101		101		101

Notes: ***, **, and * indicate statistical significance at the 0.01, 0.05 and 0.10 levels respectively at two-tailed. ABB = logarithm of number of accretive share buyback, BDIND = BOD independence, BDSIZE = BOD size, BDMEET = frequency of BOD meetings, BDEXPERT = BOD financial expertise, ACIND = AC independence, ACSIZE = AC size, ACMEET = frequency of AC meetings, ACEXPERT = AC's financial expertise, BIG4 = audit quality, FAMD = family controlled firms, MOWN = managerial ownership, FOWN = foreign ownership, ESOSEXR = stock options exercised, FSIZE = firm size, AGROWTH = rate of assets growth, LEV = Leverage, and CL = cash level

5.6 Summary

This study investigates the relationships between corporate governance mechanisms and stock options with accretive share buybacks in the Malaysian context. The governance mechanisms include the effectiveness of the BOD and AC, audit quality, family ownership, managerial ownership, and foreign ownership. The natural logarithm of accretive buyback numbers was used to proxy accretive buyback actions. The sample of this study focused on Malaysian listed firms practising accretive buyback activities from 2010 to 2015. Unbalanced panel regression was estimated for the study's model due to the control of uncensored observations as mentioned before.

Seven hypotheses were developed to achieve the study's objectives. H1 and H2 were utilised to investigate the association between the effectiveness of the BOD and AC and accretive share buyback actions respectively. The empirical findings support the second hypothesis H2 but they rejected H1. This could reflect the ineffective monitoring role of the BOD as a monitoring mechanism, whereas AC is effective governance mechanism to eliminate accretive buyback behaviours in the Malaysian context. Unlike a BOD, which is dominated by block shareholders, AC comprises non-executive members who are less controlled by those block shareholders. Furthermore, H3 was related to the relationship between audit quality proxied by Big4 and accretive buyback actions. The outcomes supported the hypothesis and revealed a significant and positive association between them.

Regarding examining the impact of ownership structure on accretive buyback actions, three hypotheses (H4, H5, and H6) were used. H4 for family shareholding and accretive buyback was supported. While managerial ownership H5 and foreign

ownership H6 were rejected. These findings reported that firms with concentrated family groups are more likely to engage in accretive buybacks to manage EPS. However, managerial and foreign shareholdings do not have sufficient evidence for their association with accretive buyback actions. Foreign ownership of the sample firms was on average only 7.5% of the outstanding shares, which is a small fraction to make a difference in the decisions of management, especially, in emerging market with highly concentrated ownership like Malaysia.

With respect to the influence of employee stock options on the accretive share buyback, H7 was supported. This means that firms with more stock options for employee and executives are more likely to engage in accretive buyback actions, which is consistent with the stock options hypothesis that predicted that the more stock options held by management, the more is the incentive to undertake earnings management. Further, additional analyses were discussed in Section 5.6, which provides supporting evidence for the findings of the main analysis.

CHAPTER SIX

SUMMARY AND CONCLUSION

6.0 Overview of the Chapter

This chapter reviews the findings of the study and discusses the main contributions and limitations of the research with some suggestions for future research. Section 6.1 provides an overview of the study and findings. The potential implications of the study are addressed in Section 6.2. This chapter also discusses the limitations that were encountered conducting this study in Section 6.3. The chapter then provides suggestions for future research in Section 6.4. Finally, Section 6.5 discusses the conclusion of this chapter.

6.1 Summary of the Study

The existing literature reveals that managers manipulate real activities of firms to manage earnings threshold (Cohen et al., 2008; Roychowdhury, 2006; Sun et al., 2014). Managers have started using share buyback programs as a mechanism for real earnings management (Burnett et al., 2012; Farrell et al., 2013; Hribar et al., 2006). Accretive share buybacks cause an increase in EPS by decreasing the number of outstanding shares, which represent the denominator of EPS calculation. Managers engage in earnings management through real economic activities to match specific earnings targets rather than to increase firm performance in the long term (Roychowdhury, 2006; Cohen et al., 2008). Earnings management actions hide economic and financial information of firms, which may negatively affect the quality of financial reporting and mislead current and potential investors.

From the viewpoints of agency theory and resource dependence theory, corporate governance mechanisms can mitigate the manipulative actions of firm managers (Dhaliwal et al., 2010; Hillman & Dalziel, 2003; Hillman et al., 2009). Effective corporate governance mechanisms are more likely to decrease agency conflicts in firms (Pergola & Joseph, 2011; Song & Windram, 2004). The existing literature provides evidence that effective corporate governance mechanisms mitigate earnings management practices (Al-rassas and Kamardin, 2016; Habbash, 2012; Klein, 2002; Soliman & Ragab, 2014). Corporate governance may protect investors' rights by providing precise and fair information on firm activities (Abdul Rahman & Ali, 2006). Hence, effective corporate governance mechanisms are more likely to mitigate practices of earnings management, which, in turn, protect investors from misleading financial information.

With respect to accretive share buybacks, Farrell et al. (2013) and Chandren et al. (2015) found a significant association between some mechanisms of corporate governance, including the BOD features and managerial ownership, with real earnings management through an accretive share buyback. This study also investigates the influence of BOD effectiveness, AC effectiveness, audit quality, family ownership, managerial ownership, foreign ownership and employee stock options on accretive share buybacks as a tool to manage earnings. The sample of this study was drawn from 101 (235 observations) non-financial firms listed on Bursa Malaysia over 6 years from 2010 to 2015. The quantitative method was used by this study to examine the seven hypotheses of this study. The statistical method employed was random effects OLS regression to examine the impacts of corporate governance mechanisms and ESOS on accretive share buybacks.

The findings of the influence of BOD effectiveness on accretive share buybacks were positively significant, which was not expected. This result is contrary to the views of agency theory and resource dependency theory, which argue that a BOD with more independent directors, a large size, more frequent meetings and more financial expert members will be an effective BOD in mitigating agency problem in firms, and then lessen the practice of earnings management. This result can be justified by the fact that a BOD is dominated by large shareholders such as family and individual majority shareholders because they hold a majority of rights and votes in firms. This means that majority shareholders may utilise the resources of a firm to become involved in accretive share buyback to achieve their interests at the expense of minority shareholders.

This finding is consistent with the argument assuming that weakness of BOD in mitigating earnings management is related to the domination of majority shareholders such as family members. Also, the lack of skills and experience by independent directors is another reason because they perform as a "rubber stamp" rather as enforcers. Generally, these findings suggest that the majority shareholders of firms listed on the Bursa Malaysia practice entrenchment actions through accretive share buybacks to achieve personal benefits. This means that the composition and competency of the BOD as suggested by the current MCGG in Malaysia is inadequate to monitor earnings management practices, which require more improvement and reinforcement via the independence and financial expertise of BOD.

These findings support the policies of the new code of corporate governance MCGG 2017, which tries to limit the powers of majority shareholders who hold more than

33% of a firm's equity. MCGG 2017 states that those controlling shareholders cannot decide on the appointment of independent directors alone. This new code identifies a two-tier voting system to assign independent directors, in which minority shareholders under this system will have the same power as the majority shareholders in the election of independent directors. With respect to the tenure of service of independent directors, MCGG 2017 recommends that the tenure of independent directors should not exceed nine years on the BOD. However, the annual two-tier voting process should be adapted so that the tenure could be extended to a maximum of twelve years. The two-tier voting process gives the same voting power to majority and minority shareholders, which may improve the monitoring role of independent directors.

With regards to AC effectiveness, this study hypothesizes a negative relationship between AC effectiveness and accretive share buybacks. The AC was found as expected to affect accretive share buybacks negatively. This means that an AC with more independent members, a larger size, more frequent meetings, and more financial expertise is considered to be an effective AC in mitigating the use of accretive share buybacks to manage earnings. This result shows that an effective AC can play a vital role in mitigating practices of earnings management, which may hide accurate financial information that misleads potential and current investors of firms. This result is consistent with the arguments of agency theory and resource dependency theory, which predict an effective role for an AC in restricting earnings management activities.

Furthermore, this result is along same line with the orientation of Malaysian regulators through MCGG 2012 and BMLRs to improve the monitoring functions of AC over financial reporting quality. These findings are along the same line with the new

policies of MCCG 2017 that support the strength of independence of the AC. MCCG 2017 recommends that firm ACs should contain only independent directors.

This study hypothesizes that audit quality (Big 4 auditors) are likely to engage in accretive share buyback activities. Similarly, the findings of this study show a significant and positive association between audit quality (BIG4) and accretive share buybacks. This result means that Big 4 auditors were competent enough to detect and prevent practices of accruals based earnings management thus managers tend to practice earnings management through accretive share buybacks, which may be less possibility to detect by external auditors. This argument is consistent with the findings of Chandren et al. (2015) who found a positive association between Big 4 auditors and real earnings management by accretive share buybacks. They justified the positive relationship between Big 4 audit firms and accretive share buyback as the real activities manipulation through accretive share buybacks was not easily detectable by auditors.

These findings are consistent with MCCG 2012, which states that an AC should have guidelines and ability to assess the independence and suitability of external auditors. This procedure promotes improving the role of external auditors in mitigating accretive buyback as a method to manage EPS. Consistently, the results support the procedures of MCCG 2017 that aim to enhance the independence and objectivity of external auditors. MCCG 2017 gives AC the responsibility to perform the processes for evaluating the objectivity, independence, and suitability of the external auditor. These policies may assist to enhance and reinforce the role of external auditors in mitigating earnings management actions, including accretive share buybacks.

Regarding ownership structure, this study examined three classifications of ownership, namely, family, managerial, and foreign ownership. The study predicts that firms with family-owned ownership would be significantly associated with undertaking accretive share buyback to manage EPS. Family members may use their power to align the interests of controlling shareholders and minority shareholders to protect their firm's reputation. Consistently, the findings of this study revealed a significant and negative association between family-owned firms and accretive share buyback. This result supports the alignment hypothesis, which proposed that when the ownership is concentrated by family groups, they might control the decisions of management decisions to employ firms' resources in line with the interests of firm's shareholders. This argument is consistent with agency theory that assumes that insiders' shareholding may assist in mitigating the agency problem between management and shareholders of firms.

The outcomes of this study suggest that family members practice alignment actions and save interests of outside shareholders, which indicates that the family ownership is an active mechanism of corporate governance that monitor or prevent managers from undertaking earnings management practices. Thus, the oversight bodies and regulations in Malaysia should be revised and reinforced to augment corporate governance regulations, particularly the BOD and its sub-committees to enhance their effectiveness in mitigating entrenchment actions of firm's managers.

Consistently, the new rules of MCGG 2017 may limit the effect of majority shareholders, family members and individuals who hold not less than 33% of a firm's

shares by recommending a two-tier voting system to assign independent directors as mentioned before. By means of this system, the majority shareholders do not have the ability to appoint independent directors exclusively because the voting authority is distributed between majority and minority correspondingly. These rules are more likely to provide more power to independent directors to be an effective monitoring mechanism, which may reduce the entrenchment behaviours of family managers and then mitigate earnings management practices, particularly accretive share buybacks.

With respect to managerial ownership, this study also relies on the two conflict views of agency theory (type I and type II) and predicts that firms with high managerial shareholdings are significantly related to accretive share buybacks as a tool for managing EPS. The results indicated a positive relationship but insignificant relationship between managerial ownership and accretive share buybacks. This result is slightly consistent with the views of agency theory (type II), which predicts entrenchment actions for managers who held a high level of the firm's equity. This finding means that managers who held a high percentage of firm shares slightly engage in accretive share buybacks to manage EPS.

Regarding foreign ownership, this study hypothesizes that the more firm's shares held by foreign investors, the less real earnings management through accretive share buybacks will occur. The results, however, revealed an insignificant relationship between foreign shareholdings and accretive share buyback. This finding is not consistent with the argument predicts that the superior knowledge and skills of foreign investors are likely to support the restriction of earnings management through real activities such as accretive share buybacks. This unexpected result can be justified by

that the percentage of foreign ownership is small of 7.5%, which is not enough to make a change in management decisions particularly in an emerging market with highly concentrated ownership like Malaysia.

Finally, this study proposes that the more stock options exercised by employees and executives the more likely a firm is to use accretive share buyback to manage earnings. Practically, this study's findings document a significant association between the percentage of stock options exercised by executives and employee and accretive share buyback activities. This result is consistent with the hypothesis of employee stock options that predicts firms may engage in share buyback activities to avoid a dilution in EPS caused by the exercise of stock options. Executives who hold a high percentage of stock options have more incentives to manage earnings to match earnings targets. This finding provides evidence that managers use accretive share buyback to enhance EPS and increasing share prices to gain benefits from the exercise of stock options. Table 6.1 summarizes the findings of the current study's hypotheses.

Table 6.1
Summary of the Study Main Model's Findings

No.	Hypothesis	Findings
H1	There is a negative association between the BOD effectiveness and accretive share buyback as a mechanism for real earnings management.	Rejected
H2	There is a negative relationship between of AC effectiveness and accretive share buyback as a mechanism for real earnings management.	Supported
H3	There is a significant relationship between audit quality and accretive share buyback as a mechanism for real earnings management.	Supported
H4	There is a significant association between family ownership and accretive share buyback as a mechanism for real earnings management.	Supported

Table 6.1 (continued)

H5	There is a significant association between managerial ownership and accretive share buyback as a mechanism for real earnings management.	Rejected
H6	There is a negative relationship between foreign ownership and accretive share buyback as a mechanism for real earnings management.	Rejected
H7	There is a positive relationship between employee stock options and accretive share buyback as a mechanism for real earnings management.	Supported

6.2 Implications of the Study

The current study has several theoretical, practical and academic implications, which are discussed in the following sub-sections.

6.2.1 Theoretical Implications

The existing literature investigates the relationship between corporate governance mechanisms and earnings management either by accruals or real earnings management. Most of the previous literature has applied to developed countries where the ownership is widespread, and there is real separation among shareholdings and management, which, in turn, creates traditional agency problem between them. With regards to accretive share buyback as a mechanism for real earnings management, this study contributes to the literature in the fields of corporate governance and earnings management in several important ways;

First, drawn from agency theory and resource dependence theory, this study extends studies of Farrell et al. (2013) and Chandren et al. (2015) by examining further corporate governance mechanisms including AC effectiveness, audit quality, family ownership, managerial ownership, and foreign ownership to identify their association

with accretive share buybacks. Second, this study is also different from those previous studies by examining BOD effectiveness as a composite score rather than as individual features to examine their effect on accretive share buybacks. Third, drawn from the stock option hypothesis, this study investigates the impact of employee stock options on accretive share buybacks.

With respect to the BOD effectiveness, the findings of this study show a positive association between the BOD effectiveness and accretive share buybacks. This study failed to find evidence that the BOD is a key internal mechanism of corporate governance that can mitigate real earnings management practices through accretive share buybacks. These findings may reflect the domination of controlling shareholders over the BOD to exploit some firm resources to achieve their benefits at the expense of minority shareholders. These outcomes reveal the negative role of concentrated ownership in the rationality of the BOD decisions. These findings highlight further understandings for the agency problem in an emerging market, which is generated between the majority and minority shareholders rather than the classic agency problem between management and shareholders.

With regard to AC effectiveness, the study's findings reveal a significant and negative relationship between the effectiveness of AC and accretive share buyback activities. These findings are consistent with the arguments of agency theory and resource dependency theory proposing that the more effective an AC, the less earnings management activities are practiced. Therefore, these outcomes highlight the MCCG 2012 recommendations, which state that the AC has the primary responsibility for the quality of financial reporting. Collectively, this study hopes that the empirical findings

contribute to improving the knowledge and skills of monitoring agents over managers' actions relating to accretive share buybacks and to clarify the role played by the AC as internal governance mechanism responsible for financial reporting quality.

Drawn from agency theory, this study predicts that audit quality (Big 4 auditors) may mitigate accretive share buybacks. However, the findings document an effective role for Big 4 auditors in alleviating the use of accretive share buybacks to manage earnings, which power managers to involve in earnings manipulations through real activities such as accretive buybacks. These findings highlight the argument that auditors need more understand on real earnings management techniques that not early detected compared to accruals based earnings management. In other words, Big 4 auditors still have weak awareness of the use of accretive buybacks to manage earnings management. MCCG 2012 stated that the AC has the responsibility to assess the independence and suitability of external auditors. This study hopes that external auditors become more knowledgeable and develop more skills to understand and detect the opportunistic actions of managers such as involving accretive buyback as a method to manage EPS.

For the relationship between ownership structure and accretive share buyback activities, the current study extends the existing literature using agency theory to examine the impact of family ownership on accretive share buyback as tools for the practice of real earnings management. The results of the main model show that family-owned firms are negatively associated with accretive share buyback. This finding supports the argument of the alignment hypothesis predicting that family members are less likely to exploit a firm's resources to achieve their own benefits at the expense of

minority shareholders. These findings highlight a positive role of family members in the rationality of management's decisions, which mitigate the agency problem that occurs in a situation between the management and shareholders in which managers may use their authority to expropriate the interests of shareholders.

In terms of managerial ownership, this study extends the literature by using agency theory to explain the role of managerial shareholdings in restricting accretive share buybacks. However, the result does not support the prediction of the agency theory. The result reveals that managerial ownership has an insignificant and positive association with accretive share buybacks. Furthermore, this study explores the impact of foreign ownership on limiting accretive share buybacks. The study relies on the knowledge spillover hypothesis that predicts the superior knowledge of foreign investors relative to local investors may lead to mitigating real earnings management through accretive share buybacks.

The results, however, reveal an insignificant association between foreign ownership and accretive share buyback. These outcomes highlight that foreign investors in themselves are not sufficient to accomplish the monitoring role in mitigating accretive share buybacks, as they do not have adequate voting power to make a substantial change in management decisions. Particularly, their monitoring functions become more difficult in firms with highly concentrated shareholdings.

Finally, influence of employee stock options on accretive share buyback activities is a new debate in the field of using accretive buyback to manage earnings. Drawn from the stock options hypothesis, this study reports a significant and positive association

between stock options exercised and accretive share buyback. This finding is consistent with the notion proposing that the more stock options exercised by a firm's executives and employee, the more accretive share buyback is used to manage reported EPS. Moreover, these results suggest a life cycle of earnings management wherein managers manage earnings upwards to increase the stock price and to pocket more benefits through the exercise of stock options.

With regards to the measurement implications, this study also contributes to the literature of corporate governance by using different measures for effectiveness of the BOD and the AC. Unlike prior studies that depend on the individual characteristics of the BOD and the AC to measure their effectiveness, this study uses a composite measurement (SCORE) to measure the effectiveness of the BOD and AC. Following previous studies (Bin-Ghanem and Ariff, 2016; Chobpichien et al., 2008; Goh 2009; Johl et al., 2013; O'Sullivan et al., 2008; Srinidhi et al., 2014), this study utilizes four features (independence, size, frequent meetings and financial expertise) added together as a score to measure the effectiveness of the BOD and the AC. The use of the score technic as a measure is more likely to reduce the measurement error that occurred in the use of individual characteristics to represent specific mechanisms like a BOD or AC (Srinidhi et al., 2014).

6.2.2 Practical and Policy Implications

The current study is useful to policymakers, regulators and market participants in many ways. First, the findings of this study imply that regulatory agencies and investors should pay more attention to monitoring share buybacks. Managers are more likely to use an accretive share buyback to manage reported EPS, especially when systems of

corporate governance and investor protections need to be upgraded. Accretive share buybacks as a mechanism for real earnings management have negative consequences on a firm's image. Furthermore, firms face substantial opportunity costs as they spend valuable resources in undertaking an accretive share buyback, which could be invested in profitable projects that increase firms value over the long-run.

Second, the outcomes of this study inform the policymakers and regulators regarding the effectiveness of corporate governance mechanisms. More precisely, the findings show that a substantial role of the AC is necessary for restricting managers from using accretive share buybacks to practice earnings management. These results can support policymakers and regulatory agencies in their drive to reinforce and enhance the independence of the BOD room and its sub-committees.

The results show an ineffective role for the BOD effectiveness in constraining earnings management through accretive share buyback activities. This result should draw the attention of the policymakers, regulators and investors to the negative impacts of controlling shareholders on the effectiveness of the BOD because they dominate the management decisions for their interests at the expense of minority shareholders. These highlight that regulatory bodies and policy makers should boost the ability of internal governance to provide a balance of power inside the BOD and on its committees. They should revise the composition of the BOD and focus on the quality of outside directors in terms of their skills in financial, auditing and legal fields.

Third, this study documents that family-owned firms are less likely to engage in real earnings management through accretive share buybacks. This study's findings

highlight valued implications for policymakers, regulators and investors regarding the monitoring role of family members. They are less involved in accretive share buybacks to manage reported EPS, which, in turn, leads to help current and potential external investors to make the right decisions. These results hence provide the need to enhance and reinforce corporate governance mechanisms, especially internal mechanisms, to confirm the integrity of financial reporting. These findings may offer informative indicators to regulators and policymakers developing a new code on corporate governance to limit the opportunistic influence of controlling shareholders and enhance the enforcement role of the BOD and the AC. These imply that the application of effective governance mechanisms is required to consider local peculiarities and business environment by regulatory bodies and policymakers.

Finally, the findings of this study provide evidence that accretive share buybacks as a tool to earnings management is positively associated with the stock options exercised. This result informs regulators, policymakers and investors that managers may engage in accretive share buybacks to substitute for decline in EPS caused by exercised stock options. These findings highlight the importance of updating regulations and roles related to exercised stock options as well as to enhancing corporate governance to prevent the use of accretive share buyback for earnings management purposes and then mislead investors.

6.2.3 Academic Implications

To academia and researchers, previous studies such as Cohen et al. (2008) and Roychowdhury (2006) documented a considerable decline in accruals based-earnings management activities, as managers instead focused on using real activities to manage

earnings. Previous studies have provided evidence that managers involve in accretive share buyback as a tool to EPS (Hribar et al., 2006; Burnett et al., 2012, Chandren & Nadarajan, 2013). This study also documents that firms listed on the Bursa Malaysia engage in accretive share buyback to manage EPS. The findings of this study could be useful to scholars who study corporate governance and accretive share buybacks as a mechanism for real earnings management in several ways;

First, the current study provides insights on how mechanisms of corporate governance could play a vital role in mitigating real earnings management through accretive share buybacks. Instead of focusing on the individual features of corporate governance mechanisms, this study provides evidence that corporate governance mechanisms, as a score (effectiveness of the BOD and AC), can influence several factors in the environment of firms, which, in turn, highlights the extended use of the agency theory. Thus, the results of this study could inspire scholars to explore other associations in other markets in the future.

Second, the Malaysian market has unique features such as highly concentrated ownership, family-controlled firms and government-linked firms. This study provides empirical evidence that shows how family-owned firms are significantly encouraged to be involved in accretive share buyback to manage EPS. Thus, further researchers could conduct studies focusing more on those characteristics of ownership structure and their association with accretive share buyback activities and other dependent variables in different environments.

Finally, this study also provides evidence related to the impact of exercised stock options on accretive buyback activities. However, academic researchers can focus more on other features of stock options such as stock options grants, exercisable and non-exercisable and outstanding shares either based on RM value or the number of shares.

6.3 Limitations of the Study

Similar to other studies, the current study has several limitations that should be mentioned to confirm that the study's results are reasonably interpreted;

1. One limitation of this study regards the features of the BOD and the AC. This study focusses only on specific features, namely, independence, size, meeting and financial expertise. However, other influential features of the BOD and the AC are omitted, like experience in law, serving tenure, ethnicity and so on.
2. Many dimensions such as audit fees, non-audit fees and auditors' speciality can be used to measure audit quality. Whereas, the current study uses only Big 4 audit firms to measure audit quality.
3. This study focuses only on family, managerial and foreign ownership. However, other relevant classifications for ownership structure exist such as institutional and government-related ownership as well as ownership concentration that were not considered this study.
4. Employee stock options schemes may focus on other aspects of stock options such as grants and outstanding (exercisable and non-exercisable), either based on RM value or a number of shares, to point their effects separately on accretive share buybacks.

5. This study covers only the six years from 2010 to 2015, which may not be generalizable for other periods.
6. Using a quantitative approach to achieve the objectives of this study may be considered another limitation. A qualitative approach could be used to investigate further features of directors serving on the BOD and its committees such as the personal-social relationship among the BODs' members.

6.4 Future Research

The above limitations highlight a platform for the enhancement of corporate governance regime and earnings management studies. Future studies could extend the current study in several areas as follows:

1. Although this study was conducted to provide an insight into the role of corporate governance mechanisms and employee stock options in constraining accretive share buyback activities among non-financial Malaysian firms, future researchers may further explore this role for financial firms. In addition, future studies could be extended by replicating this study by using other time periods and markets.
2. This study focuses on particular features of the BOD and the AC as mentioned before. Thus, future researchers could explore other features of the BOD, the AC and directors such as experience in auditing, law and ethnicity to examine their impacts on activities of accretive share buybacks. Additionally, they might examine the association between the internal audit function and accretive share buybacks.
3. Future studies may explore other proxies of audit quality such as audit speciality, audit fees and non-audit fees.

4. Future researchers could investigate further classifications of the ownership structure such as government-linked, institutional, ownership concentration on accretive share buyback activities.
5. Future studies may explore the influence of IFRS on accretive share buyback activities.
6. This study uses a quantitative approach to conduct its objectives. Therefore, future researchers could use a qualitative approach to investigate in depth the impact of further effective features of the BOD and its committees as well as other internal governance mechanisms, on accretive share buyback activities.

6.5 Summary

Previous studies have provided evidence related to using share buyback programs as a tool for real earnings management. This study examines the influence of the BOD effectiveness, AC effectiveness, audit quality and ownership structure, namely, family, managerial and foreign ownership on real earnings management through accretive share buybacks. In addition, this current study investigates the effect of employee stock options on accretive buyback activities. The study provides evidence that BOD effectiveness is positively related to accretive share buyback activities. Whereas, AC effectiveness has a negative association with accretive share buyback activities, which means that an AC is an effective mechanism to constrain earnings management activities through an accretive share buyback. In addition, family-owned firms are less aggressive in practising accretive share buybacks relative to non-family firms.

The MCCG 2000, 2007, 2012 and 2017 contributed to enhancing and reinforcing corporate governance mechanisms to protect the firms and investors. The findings of

this study contribute to an understanding that the effectiveness of the BOD and the AC as key internal governance mechanisms should be enhanced to provide a positive synergistic effect between the two groups to mitigate earnings management practices, particularly using accretive share buybacks to manage reported EPS. This may assist in improving the quality of financial reporting and then protecting potential and current investors of firms. Furthermore, exercised employee stock options are positively related to accretive share buybacks. Finally, this study hopes that these outcomes provide a reference point for various parties such as policymakers, standard setters, regulations bodies, and market participants, who have incentives to improve the applicable regulations and corporate governance schemes in Malaysia and elsewhere.



REFERENCES

- Abbott, L. J., Parker, S., & Peters, G. F. (2004). Audit committee characteristics and restatements. *Auditing: A Journal of Practice & Theory*, 33(1), 69–87.
- Abdul Latif, R. (2010). *Actual share buybacks: determinants and price effects*. Unpublished Doctoral dissertation, Universiti Utara Malaysia.
- Abdul Latif, R., Kamardin, H., Taufil Mohd, K., & Adam, N. (2013). Multiple directorships, board characteristics and firm performance in Malaysia. *Management*, 3(2), 105–111.
- Abdul Latif, R., & Taufil-Mohd, K. N. (2013). Signaling and substitution hypotheses in Malaysian share repurchases. *Management*, 3(2), 99–104.
- Abdul Latif, R., Taufil-Mohd, K. N., Wan Hussin, W. N., & Ku Ismail, K. N. I. (2014). The wealth effect of share repurchases in Malaysia. *IJMS*, 20(2), 105–127.
- Abdul Latif, R., & Taufil Mohd, K. N. (2014). Managerial entrenchment or opportunism in Malaysian payout policy. In *Malaysia Indonesia International Conference on Economic, Management and Accounting (MIICEMA 2014)* (pp. 98–113).
- Abdul Latif, R., NishamTaufil, K. M., & Kamardin, H. (2016). The influence of board size and ethnic diversity in share repurchases policy. *International Review of Management and Marketing*, 6(7), 29–32.
- Abdul Latiff, R., & Taib, F. M. (2011). *The effects of ownership structure and monitoring mechanisms on earnings quality and cost of equity*. Available at SSRN: <https://ssrn.com/abstract=1767655> or <http://dx.doi.org/10.2139/ssrn.1767655>.
- Abdul Rahman, R., & Ali, F. H. M. (2006). Board, audit committee, culture and earnings management: Malaysian evidence. *Managerial Auditing Journal*, 21(7), 783–804.
- Abdullah, N. A. H. (2007). Does price react to fixed price tender offer share buyback announcement? *International Journal of Management Studies*, 14(1), 39–59.
- Abdullah, S. N. (2004). Board composition, CEO duality and performance among Malaysian listed companies. *Corporate Governance*, 4(4), 47–61.
- Abdullah, S. N., & Ismail, K. N. I. K. (2016). Women directors, family ownership and earnings management in Malaysia. *Asian Review of Accounting*, 21(1), 74–95.
- Abdullah, S., & Nasir, N. (2004). Accrual management and the independence of the boards of directors and audit committees. *International Journal of Economics and Management*, 12(1), 1–31.

- Abidin, Z., Kamal, N., & Jusoff, K. (2014). Board structure and corporate performance in Malaysia. *International Journal of Economics and Finance*, 1(1), 150–164.
- Abor, J., & Fiador, V. (2013). Does corporate governance explain dividend policy in Sub-Saharan Africa? *International Journal of Law and Management*, 55(3), 201–225.
- Achleitner, A.-K., Günther, N., Kaserer, C., & Siciliano, G. (2014). Real earnings management and accrual-based earnings management in family firms. *European Accounting Review*, 23(3), 431–461.
- Adams, R. B. (2005). What do boards do? Evidence from board committee and director compensation data. *Evidence from Board Committee and Director Compensation Data (March 13, 2003)*. EFA.
- Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics*, 94(2), 291–309.
- Adams, R. B., & Ferreira, D. (2012). Regulatory pressure and bank directors' incentives to attend board meetings. *International Review of Finance*, 12, 227–248.
- Adiguzel, H. (2013). Corporate Governance, Family ownership and earnings management: Emerging market evidence. *Accounting and Finance Research*, 2(4), 17–33.
- Agrawal, A., & Chadha, S. (2005). Corporate governance and accounting scandals. *The Journal of Law and Economics*, 48(2), 371–406.
- Aguilera, R. V., Filatotchev, I., Gospel, H., & Jackson, G. (2008). An organizational approach to comparative corporate governance: Costs, contingencies, and complementarities. *Organization Science, JSTOR*, 19(3), 475–492.
- Ahmad-Zaluki, N. A., & Nordin Wan-Hussin, W. (2010). Corporate governance and earnings forecasts accuracy. *Asian Review of Accounting*, 18(1), 50–67.
- Ahmed, S. (2013). Board of director characteristics and earning management in Malaysia. In *3rd Annual International Conference on Accounting and Finance* (pp. 208–214).
- Al-Dhamari, R. A., & Ku Ismail, K. N. I. (2013). Governance structure, ownership structure and earnings predictability: Malaysian evidence. *Asian Academy of Management Journal of Accounting and Finance*, 9(1), 1–23.
- Al-Fayoumi, N., Abuyazed, B., & Alexander, D. (2010). Ownership structure and earning management in emerging markets: the case of Jordan. *International Research Journal of Finance and Economics*, 38, 28–47.
- Al-gamrh, B. A. (2015). *The moderating effect of governance on the relationship*

between investment opportunities , leverage and ownership identity with firm performance in the Uae. Unpublished dissertation, Universiti Utara Malaysia.

- Al-Jaaidi, K. S. (2013). *Corporate governance and auditor choice among companies in GCC countries.* Unpublished PhD Dissertation, Universiti Utara Malaysia, Kedah, Malaysia.
- Al-Matar, E. M., Al-Swidi, A. K., & Bt Fadzil, F. H. (2014). The effect of board of directors characteristics, audit committee characteristics and executive committee characteristics on firm performance in Oman: An Empirical Study. *Asian Social Science*, 10(11), 149–171.
- Al-Musali, M. A. K. (2013). *Determinants of intellectual capital performance of GCC listed banks.* Unpublished Doctoral dissertation, Universiti Utara Malaysia.
- Al-Najjar, B. (2011). The determinants of audit committee independence and activity: evidence from the UK. *International Journal of Auditing*, 15(2), 191–203.
- Al-Rassas, A. H., & Kamardin, H. (2015a). Directors' independence, internal audit function, ownership concentration and earnings quality in Malaysia. *Asian Social Science*, 11(15), 244–256.
- Al-Rassas, A. H., & Kamardin, H. (2015b). Internal and external audit attributes, audit committee characteristics, ownership concentration and earnings quality: Evidence from Malaysia. *Mediterranean Journal of Social Sciences*, 6(3), 458–470.
- Al-Rassas, A. H., & Kamardin, H. (2016). Earnings quality and audit attributes in high concentrated ownership market. *Corporate Governance: The International Journal of Business in Society*, 16(2), 377–399.
- Albaity, M., & Said, D. S. (2016). Impact of open-market share repurchases on long-term stock returns. *SAGE Open*, 6(4), 215824401667019.
- Aldamen, H., Duncan, K., Kelly, S., McNamara, R., & Nagel, S. (2012). Audit committee characteristics and firm performance during the global financial crisis. *Accounting & Finance*, 52(4), 971–1000.
- Ali, A., Chen, T. Y., & Radhakrishnan, S. (2007). Corporate disclosures by family firms. *Journal of Accounting and Economics*, 44(2), 238–286.
- Almeida, H., Fos, V., & Kronlund, M. (2016). The real effects of share repurchases. *Journal of Financial Economics*, 119(1), 168–185.
- Alquhaif, A. S., Abdul Latif, R., & Chandren, S. (2017a). Employee stock options and real earnings management through accretive share buyback in Malaysia. *Journal of Advanced Research in Business and Management Studies*, 1(1), 76–84.
- Alquhaif, A. S., Abdul Latif, R., & Chandren, S. (2017b). Women in board of directors

- and real earnings management: Accretive share buyback in Malaysia. *Asian Journal of Finance & Accounting*, 9(2), 48–59.
- Alves, S. (2012). Ownership structure and earnings management: Evidence from Portugal. *Australasian Accounting, Business and Finance Journal*, 7(15), p88.
- Alves, S. (2014). The effect of board independence on the earnings quality: evidence from Portuguese listed companies. *Australasian Accounting, Business and Finance Journal*, 8(3), 23–44.
- Alzoubi, E. S. S. (2016). Ownership structure and earnings management: Evidence from Jordan. *International Journal of Accounting and Information Management*, 24(2), 135–161.
- Amar, A. B. E. N. (2016). Audit quality and earnings management to avoid losses and earnings decreases: The French case. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 6(4), 20–27.
- Amran, N.A. and Ahmad, a. C. (2013). Effects of ownership structure on Malaysian companies performance. *Asian Journal of Accounting and Governance*, 60, 51–60.
- Amran, N. A., & Ahmad, A. C. (2009). Family business, board dynamics and firm value: Evidence from Malaysia. *Journal of Financial Reporting and Accounting*, 7, 53–74.
- Amran, N. A., & Ahmad, A. C. (2010a). Corporate governance mechanisms and performance: Analysis of Malaysian family and non-family controlled companies. *Journal of Modern Accounting and Auditing*, 6(2), 1–15.
- Amran, N. A., & Ahmad, A. C. (2010b). Family succession and firm performance among Malaysian companies. *International Journal of Business and Social Science*, 1(2), 193–203.
- Amran, N. A., & Ahmad, A. C. (2011). Board mechanisms and Malaysian family companies' performance. *Asian Journal of Accounting and Governance*, 2, 15–26.
- Anderson, R. C., Mansi, S. a., & Reeb, D. M. (2003). Founding family ownership and the agency cost of debt. *Journal of Financial Economics*, 68, 263–285.
- Andres, P. D., & Vallelado, E. (2008). Corporate governance in banking: The role of the board of directors. *Journal of Banking & Finance*, 32(12), 2570–2580.
- Andriosopoulos, D., & Hoque, H. (2013). The Determinants of share repurchases in Europe. *International Review of Financial Analysis*, 27, 65–76.
- Anum Mohd Ghazali, N. (2010). Ownership structure, corporate governance and corporate performance in Malaysia. *International Journal of Commerce and*

Management, 20(2), 109–119.

- Apadore, K., & Noor, M. M. (2013). Determinants of audit report lag and corporate governance in Malaysia. *International Journal of Business & Management*, 8(15), 151–163.
- Aygün, M., İç, S., & Arvas, M. A. (2010). corporate governance and earning management : an investigation on Turkish capital market. *In: 2nd International Symposium on Sustainable Development, June 8-9 2010, Sarajevo.*
- Babenko, I., Tserlukevich, Y., & Vedrashko, A. (2012). The credibility of open market share repurchase signaling. *Journal of Financial and Quantitative Analysis*, 47(5), 1059–1088.
- Baddeley, M., & Barrowclough, D. V. (2009). *Running regressions: A practical guide to quantitative research in economics, finance and development studies*. New York: Cambridge University Press.
- Badolato, P. G., Donelson, D. C., & Ege, M. (2013). Audit committee financial expertise and earnings management: The role of status. *Journal of Accounting and Economics*, 58(2), 208–230.
- Bagwell, L. (1991). Share repurchase and takeover deterrence. *The Rand Journal of Economics*, 72–88.
- Bagwell, L., & Shoven, J. (1989). Cash distributions to shareholders. *The Journal of Economic Perspectives*, 129–140.
- Balachandran, B., Chalmers, K., & Haman, J. (2008). On-market share buybacks , exercisable share options and earnings management. *Accounting and Finance*, 48(1), 25–49.
- Ball, R., Robin, A., & Wu, J. S. (2003). Incentives versus standards: Properties of accounting income in four East Asian countries. *Journal of Accounting and Economics*, 36(1–3 SPEC. ISS.), 235–270.
- Balsam, S., Krishnan, J., & Yang, J. (2003). Auditor industry specialization and earnings quality. *Auditing: A Journal of Practice & Theory*, 22(2), 71–97.
- Baltagi, B. H. 2008. *Econometric analysis of panel data*. 4th ed. New York: Wiley.
- Bamahros, H. M., & Bhasin, M. L. (2016). Audit committee characteristics and unexpected accruals : An empirical study of Malaysia. *Wulfenia*, 23, 181–199.
- Barclay, M. J., & Smith Jr, C. W. (1988). Corporate payout policy: Cash dividends versus open-market repurchases. *Journal of Financial Economics*, 22(1), 61–82.
- Bargeron, L., Kulchania, M., & Thomas, S. (2011). Accelerated share repurchases. *Journal of Financial Economics*, 101(1), 69–89.

- Bartov, E., & Mohanram, P. (2004). Private information , earnings manipulations , exercises stock-option. *The Accounting Review*, 79(4), 889–920.
- Baum, C. F. (2001). Residual diagnostics for cross-section time series regression models. *The Stata Journal*, 1(1), 101–104.
- Baxter, P., & Cotter, J. (2009). Audit committees and earnings quality. *Accounting & Finance*, 49(2), 267–290.
- Bayrakdaroglu, A., Ersoy, E., & Citak, L. (2012). Is there a relationship between corporate governance and value-based financial performance measures? A study of Turkey as an emerging market. *Asia-Pacific Journal of Financial Studies*, 41(2), 224–239.
- Baysinger, B., & Butler, H. (1985). Corporate governance and the board of directors: Performance effects of changes in board composition. *Journal of Law, Economics, & Organization*, 1(1), 101–124.
- Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review*, 443–465.
- Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Neal, T. L. (2009). The audit committee oversight process. *Contemporary Accounting Research*, 26(1), 65–122.
- Beck, N. (2001). Time-series–cross-section data: What have we learned in the past few years? *Annual Review of Political Science*, 4(1), 271–293.
- Becker, C. L., Defond, M. L., Jiambalvo, J., & Subramanyam, K. R. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research*, 15(1), 1–24.
- Bedard, J. C., & Biggs, S. F. (1991). Pattern recognition , generation , and hypotheses auditor performance in analytical task. *The Accounting Review*, 66(3), 622–642.
- Bedard, J., Chtourou, S. M., & Courteau, L. (2004). The effect of audit committee expertise, independence, and activity on aggressive earnings management. *A JOURNAL OF PRACTICE & THEORY*, 23(2), 13–35.
- Bédard, J., Chtourou, S. M., & Courteau, L. (2004). The effect of audit committee expertise, independence, and activity on aggressive earnings management. *Auditing*, 23(2), 13–35.
- Bédard, J., & Gendron, Y. (2010). Strengthening the financial reporting system: Can audit committees deliver? *International Journal of Auditing*, 14, 174–210.
- Bell, A., & Jones, K. (2015). Explaining fixed effects: Random effects modeling of time-series cross-sectional and panel data. *Political Science Research and Methods*, 3(1), 133–153.

- Ben-Nasr, H., Boubakri, N., & Cosset, J.-C. (2015a). Earnings quality in privatized firms: The role of state and foreign owners. *Journal of Accounting and Public Policy*, 34(4), 392–416.
- Ben-Nasr, H., Boubakri, N., & Cosset, J. C. (2015b). Earnings quality in privatized firms: The role of state and foreign owners. *Journal of Accounting and Public Policy*, 34(4), 392–416.
- Ben-Rephael, A., Oded, J., & Wohl, A. (2011). Do firms buy their stock at bargain prices? Evidence from actual stock repurchase disclosure. *Review of Finance*, rft028.
- Benhamouda, Z., & Watson, R. (2010). A research note on the determinants of UK corporate share repurchase decisions. *Applied Financial Economics*, 20(7), 529–541.
- Bens, D. A., Nagar, V., & Wong, M. F. (2002). Real investment implications of employee stock option exercises. *Journal of Accounting Research*, 40(2), 359–393.
- Bens, D. A., Nagar, V., Skinner, D. J., & Wong, M. H. (2003). Employee stock options, EPS dilution, and stock repurchases. *Journal of Accounting and Economics*, 36(1–3), 51–90.
- Bergstresser, D., & Philippon, T. (2006). CEO incentives and earnings management. *Journal of Financial Economics*, 80(3), 511–529.
- Bhaumik, S., & Gregoriou, A. (2010). Family ownership, tunneling and earnings management: a review of the literature. *Journal of Economic Surveys*, 24(4), 705–729.
- Bhushan, R. (1989). Firm characteristics and analyst following. *Journal of Accounting and Economics*, 11(2), 255-274
- Bickley, J. M. (2012). *Employee Stock Options : Tax Treatment and Tax Issues*. Congress Research Service. Washington, CD.
- Billett, M. T., & Xue, H. U. I. (2007). The takeover deterrent effect of open market share repurchases. *The Journal of Finance*, 62(4), 1827–1850.
- Bin-Ghanem, H., & Ariff, A. M. (2016). The effect of board of directors and audit committee effectiveness on internet financial reporting. *Journal of Accounting in Emerging Economies*, 6(4), 429–448.
- Bin-Muhamed, A. (2013). *The impact of government-linked investment companies in Malaysia on the performance and earnings-management of their portfolio companies*. (Doctoral dissertation, Durham University).
- Brav, A., Graham, J. R., Harvey, C. R., & Michaely, R. (2005). Payout policy in the

21st century. *Journal of Financial Economics*, 77(3), 483–527.

- Brockman, P., & Chung, D. Y. (2001). Managerial timing and corporate liquidity: evidence from actual share repurchases. *Journal of Financial Economics*, 61(3), 417–448.
- Brown, C., Handley, J., & O'Day, J. (2015). The dividend substitution hypothesis: Australian evidence. *Abacus*, 51(1), 37–62.
- Brown, L. D., & Caylor, M. L. (2005). A temporal analysis of quarterly earnings thresholds: Propensities and valuation consequences. *Accounting Review*, 80(2), 423–440.
- Brown, P., Beekes, W., & Verhoeven, P. (2011). Corporate governance, accounting and finance: A review. *Accounting & Finance*, 51(September 2010), 96–172.
- Brunswick, N., & Columbia, B. (1998). Management and ownership effects: Evidence from five countries. *Strategic Management Journal*, 19, 533–553.
- Bujaki, M., & McConomy, B. J. (2002). Corporate governance: Factors influencing voluntary disclosure by publicly traded Canadian firms. *Canadian Accounting Perspectives*, 1(2), 105–139.
- Bukit, R. B., & Iskandar, T. M. (2009). Surplus free cash flow, earnings management and audit committee. *Journal of Economics and Management*, 3(1), 204–223.
- Burak Güner, A., Malmendier, U., & Tate, G. (2008). Financial expertise of directors. *Journal of Financial Economics*, 88(2), 323–354.
- Burgstahler, D., & Dichev, I. (1997). Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economics*, 24(1), 99–126.
- Burkart, M., Panunzi, F., & Shleifer, A. (2003). Family firms. *Journal of Finance*, 58, 2167–2201.
- Burnett, B. M., Cripe, B. M., Martin, G. W., & McAllister, B. P. (2012). Audit quality and the trade-off between accretive stock repurchases and accrual-based earnings management. *Accounting Review*, 87(6), 1861–1884.
- Bryan, D. B., & Mason, T. W. (2016). The influence of earnings management conducted through the use of accretive stock repurchases on audit fees. *Advances in Accounting*, 34, 99–109.
- Carcello, J. V., Hermanson, D. R., Neal, T. L., & Riley Jr., R. a. (2002). Board characteristics and audit fees. *Contemporary Accounting Research*, 19(3), 365–384.
- Carlin, T. M., Finch, N., & Laili, N. H. (2009). Investigating audit quality among big 4 Malaysian firms. *Asian Review of Accounting*, 17(2), 96–114.

- Cascino, S., Pugliese, A., Mussolino, D., & Sansone, C. (2010). The influence of family ownership on the quality of accounting information. *Family Business Review*, 23(3), 246–265.
- Chahine, S., Zeidan, M. J., & Dairy, H. (2011). Corporate governance and the market reaction to stock repurchase announcement. *Journal of Management & Governance*, 16(4), 707–726.
- Chan, K., Ikenberry, D. L., Lee, I., & Wang, Y. (2006). *Share repurchases as a tool to mislead investors: Evidence from earnings quality and stock performance*. AFA 2006 Boston Meetings Paper. Available at SSRN: <https://ssrn.com/abstract=686567> or <http://dx.doi.org/10.2139/ssrn.686567>.
- Chan, K., Ikenberry, D. L., Lee, I., & Wang, Y. (2010). Share repurchases as a potential tool to mislead investors. *Journal of Corporate Finance*, 16(2), 137–158.
- Chan, K., Ikenberry, D., & Lee, I. (2004). Economic sources of gain in stock repurchases. *Journal of Financial and Quantitative Analysis*, 39(3), 461.
- Chandrasegaram, R. H., Rahimansa, M. R., Rahman, S. K. a, Abdullah, S., & Nik, N. M. (2013). Impact of audit committee characteristics on earnings management in Malaysian public listed companies. *International Journal of Finance and Accounting*, 2(2), 114–119.
- Chandren, S. (2016). Review on the double side of earnings management. *Pertanika Journal of Social Sciences & Humanities*, 24(4), 1253–1265.
- Chandren, S., Ahmad, Z., & Ali, R. (2015). Earnings management through accretive share buyback and share price return. *International Journal of Advances in Management and Economics*, 4(2), 68–73.
- Chandren, S. (2016). Review on the double side of earnings management. *Pertanika Journal of Social Sciences & Humanities*, 24(4), 1253–1265.
- Chandren, S., & Nadarajan, S. (2013). Relationship between accretive share buyback , EP forecast and prospect theory. *INTERNATIONAL JOURNAL of ACADEMIC RESEARCH*, 5(5), 318–324.
- Che Ahmad, A., Houghton, K. A., & Yusof, N. Z. M. (2006). The Malaysian market for audit services: ethnicity, multinational companies and auditor choice. *Managerial Auditing Journal*, 21(7), 702–723.
- Chekili, S. (2012). Impact of some governance mechanisms on earnings management: An empirical validation within the Tunisian market. *Journal of Business Studies Quarterly*, 3(3), 95–104.
- Chemmanur, T., Cheng, Y., & Zhang, T. (2010). *Why do firms undertake accelerated share repurchase programs?* Available at SSRN: 268

<https://ssrn.com/abstract=1570842> or <http://dx.doi.org/10.2139/ssrn.1570842>.

- Chen, H.-L., & Hsu, W.-T. (2009). Family ownership, board independence, and R&D investment. *Family Business Review*, 22(4), 347–362.
- Chen, T. (2006). *Payout policy , signalling , and firm value*. (Doctoral dissertation, Durham University).
- Chen, V. (2013). The evolution of Malaysian shareholder protection: A legal origins analysis. *Singapore Journal of Legal Studies*, 1(1998), 100–124.
- Cheng, Q., & Warfield, T. D. (2005). Equity incentives and earnings management. *The Accounting Review*, 80(2), 441–476.
- Cheng, Y., Harford, J., & Zhang, T. T. (2015). Bonus-driven repurchases. *Journal of Financial and Quantitative Analysis*, 50(3), 447-475.
- Chi, C. W., Hung, K., Cheng, H. W., & Tien Lieu, P. (2014). Family firms and earnings management in Taiwan: Influence of corporate governance. *International Review of Economics & Finance*, 36, 88–98.
- Chi, W., Lisic, L. L., & Pevzner, M. (2011). Is enhanced audit quality associated with greater real earnings management? *Accounting Horizons*, 25(2), 315–335.
- Chiang, S.-L., Huang, L.-H., & Hsiao, H.-C. (2011). Study of earnings management and audit quality. *African Journal of Business Management*, 5(7), 2686–2699.
- Choe, H., Kho, B. C., & Stulz, R. M. (2005). Do domestic investors have an edge? The trading experience of foreign investors in Korea. *Review of Financial Studies*, 18(3), 795–829.
- Choi, S. B., Park, B. II, & Hong, P. (2012). Does ownership structure matter for firm technological innovation performance? The case of Korean firms. *Corporate Governance*, 20(3), 267–288.
- Claessens, S., Djankov, S., & Lang, L. H. . (2000). The separation of ownership and control in East Asian Corporations. *Journal of Financial Economics*, 58(1), 81–112.
- Cohen, D. A., Dey, A., & Lys, T. Z. (2008). Real and accrual-based earnings management in the pre- and post-sarbanes-oxley periods. *Accounting Review*, 83(3), 757–787.
- Cohen, D., & Zarowin, P. (2010). Accrual-based and real earnings management activities around seasoned equity offerings. *Journal of Accounting and Economics*, 50(1), 2–19.
- Cohen, J. R., Krishnamoorthy, G., & Wright, A. (2004). The corporate governance mosaic and financial reporting quality. *Journal of Accounting Literature*, 87–152.

- Comment, R., & Jarrell, G. (1991). The relative signalling power of Dutch-auction and fixed-price self-tender offers and open-market share repurchases. *The Journal of Finance*, 46(4), 1243–1271.
- Conger, J. A., Finegold, D., & Lawler, E. E. (1998). Appraising boardroom performance. *Harvard Business Review*, 76, 136–164.
- Cook, D., Krigman, L., & Leach, J. (2003). An analysis of SEC guidelines for executing open market repurchases*. *The Journal of Business*, 76(2), 289–315.
- Core, J., Holthausen, R., & Larcker, D. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics*, 51(3), 371–406.
- Cremers, K. J., & Nair, V. B. (2005). Governance mechanisms and equity prices. *The Journal of Finance*, 60(6), 2859–2894.
- Custódio, C., & Metzger, D. (2014). Financial expert CEOs: CEO' s work experience and firm' s financial policies. *Journal of Financial Economics*, 114(1), 125-154.
- Dahlquist, M., & Robertsson, G. (2001). Direct foreign ownership, institutional investors, and firm characteristics. *Journal of Financial Economics*, 59(3), 413–440.
- Dalton, D. R., Daily, C. M., Ellstrand, E. A., & Johnson, J. (1998). Meta-analytic reviews of board composition, leadership structure and Financial Performance. *Strategic Management Journal*, 19(3), 269–290.
- Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal*, 42(6), 674–686.
- Dandago, K. I., & Binti Zamro, N. D. (2012). Effects of rotation on auditor independence and quality of audit service in Malaysian banking industry. *Issues in Social & Environmental Accounting*, 6(3), 95–110.
- David, P., Yoshikawa, T., Chari, M. D. R., & Rasheed, A. a. (2006). Strategic investments in Japanese corporations: Do foreign portfolio owners foster underinvestment or appropriate investment? *Strategic Management Journal*, 27(6), 591–600.
- Davidson, R., Goodwin-Stewart, J., & Kent, P. (2005). Internal governance structures and earnings management. *Accounting and Finance*, 45(2), 241–267.
- Davidson, W. N., Xie, B., & Xu, W. (2004). Market reaction to voluntary announcements of audit committee appointments: The effect of financial expertise. *Journal of Accounting and Public Policy*, 23(4), 279–293.
- De Andres, P., Azofra, V., & Lopez, F. (2005). Corporate boards in OECD countries:

- Size, composition, functioning and effectiveness. *Corporate Governance*, 13(2), 197–210.
- De Cesari, A., Espenlaub, S., Khurshed, A., & Simkovic, M. (2012). The effects of ownership and stock liquidity on the timing of repurchase transactions. *Journal of Corporate Finance*, 18(5), 1023–1050.
- De Cesari, A., & Ozkan, N. (2015). Executive incentives and payout policy: empirical evidence from Europe. *Journal of Banking & Finance*, 55, 70–91.
- DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics*, 3(3), 183–199.
- Defond, M. L., Hann, R. N., Xuesong, H. U., & Engel, E. (2005). Does the market value financial expertise on audit committees of boards of directors? *Journal of Accounting Research*, 43(2), 153–204.
- DeZoort, F. T., Hermanson, D. R., & Houston, R. W. (2003). Audit committee support for auditors: The effects of materiality justification and accounting precision. *Journal of Accounting and Public Policy*, 22(2), 175–199.
- Dhaliwal, D., Naiker, V., & Navissi, F. (2010). The association between accruals quality and the characteristics of accounting experts and mix of expertise on audit committees. *Contemporary Accounting Research*, 27(3), 787–827.
- Dimitropoulos, P. (2011). Corporate governance and earnings management in the European football industry. *European Sport Management Quarterly*, 11(5), 495–523.
- Dittmar, A. (2000). Why do firms repurchase stock. *The Journal of Business*, 73(3), 331–355.
- Dittmar, A., & Dittmar, R. (2008). The timing of financing decisions: An examination of the correlation in financing waves. *Journal of Financial Economics*, 90, 59–83.
- Dixon, R., Palmer, G., Stradling, B., & Woodhead, A. (2008). An empirical survey of the motivation for share repurchases in the UK. *Managerial Finance*, 34(12), 886–906.
- Dol, A. H., & Wahid, A. (2013). Measuring the motivating factors for share buyback: evidence from Malaysian companies. *Online Journal of Social Sciences Research*, 2(2), 35–50.
- Dominguez, A. E. (2010). *Employee stock options and share repurchases: an empirical study of the Swedish market*. Working Paper. available at <https://upcommons.upc.edu/bitstream/handle/2099.1/14642/Report%20F.pdf>.
- Donker, H., & Zahir, S. (2008). Towards an impartial and effective corporate

- governance rating system. *Corporate Governance: The International Journal of Business in Society*, 8(1), 83–93.
- Drukker, D. M. (2003). Testing for serial correlation in linear panel-data models. *Stata Journal*, 3(2), 168–177.
- Dunn, K. a., & Mayhew, B. W. (2004). Audit firm industry specialization and client disclosure quality. *Review of Accounting Studies*, 9(1), 35–58.
- Du, X., Jian, W., & Lai, S. (2017). Do foreign directors mitigate earnings management? Evidence from China. *International Journal of Accounting*, 52(2), 142–177.
- Dvorak, T. (2005). Do domestic investors have an information advantage? Evidence from Indonesia. *The Journal of Finance*, 60(2), 817–839.
- Easterbrook, F. (1984). Two agency-cost explanations of dividends. *The American Economic Review*, 74(4), 650–659.
- Efendi, J., Srivastava, A., & Swanson, E. P. (2007). Why do corporate managers misstate financial statements? The role of option compensation and other factors. *Journal of Financial Economics*, 85(3), 667–708.
- Elshafie, E., & Nyadroh, E. (2014). Are discretionary accruals a good Measure of audit quality? *Journal of Management*, 15(7), 43–59.
- Emmerich, A. O., Racz, G. N., & Unger, J. (2005). Composition of the audit committee: Ensuring members meet the new independence and financial literacy rules. *International Journal of Disclosure and Governance*, 2(1), 67–80.
- Epps, R. W., & Ismail, T. H. (2009). Board of directors' governance challenges and earnings management. *Journal of Accounting & Organizational Change*, 5(3), 390–416.
- Evans, J. P., Evans, R. T., & Gentry, J. A. (2003). The decision to repurchase shares: a cash flow story. *Journal of Business and Management*, 9(2), 99–123.
- Faccio, M., & Lang, L. H. (2002). The ultimate ownership of Western European corporations. *Journal of Financial Economics*, 65(3), 365–395.
- Faccio, M., Lang, L. H. P., & Young, L. (2001). Dividends and expropriation. *American Economic Review*, 91(1), 54–78.
- Fama, E. F. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88(2), 288.
- Fama, E., & French, K. (2001). Disappearing dividends: changing firm characteristics or lower propensity to pay? *Journal of Financial Economics*, 60(1), 3–43.

- Fama, E., & Jensen, M. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26, 301–325.
- Fan, J. P., & Wong, T. J. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of Accounting and Economics*, 33(3), 401–425.
- Farrell, K. a., Yu, J., & Zhang, Y. (2013). What are the characteristics of firms that engage in earnings per share management through share repurchases? *Corporate Governance: An International Review*, 21(4), 334–350.
- Farrell, K., Unlu, E., & Yu, J. (2014). Stock repurchases as an earnings management mechanism: The impact of financing constraints. *Journal of Corporate Finance*, 25, 1–15.
- Felo, A., Krishnamurthy, S., & Solieri, S. (2003). *Audit committee characteristics and the perceived quality of financial reporting: an empirical analysis*. Working Paper. Pennsylvania State University – Great Valley, SUNY at Binghamton, and University of Scranton.
- Fenn, G., & Liang, N. (2001). Corporate payout policy and managerial stock incentives. *Journal of Financial Economics*, 60(1), 45–72.
- Fernández, Z., & Nieto, M. J. (2006). Impact of ownership on the international involvement of SMEs. *Journal of International Business Studies*, 37(3), 340–351.
- Filatovchev, I., Yung, C. L., & Piesse, J. (2005). Corporate governance and performance in publicly listed, family- controlled firms : Evidence from Taiwan. *Asia Pacific Journal of Management*, 22(3), 257–283.
- Fooladi, M. (2012). Board characteristics and firm performance. *Journal of Modern Accounting and Auditing*, 8(5), 688–694.
- Francis, J. R., Maydew, E. L., & Sparks, H. C. (1999). The role of Big 6 auditors in the credible reporting of accruals. *Auditing: A Journal of Practice & Theory*, 18(2), 17–34.
- Francis, J. R., & Yu, M. D. (2009). Big 4 office size and audit quality. *The Accounting Review*, 84(5), 1521–1552.
- Franks, J., Mayer, C., Miyajima, H., and Ogawa, R. (2017). *Share repurchases and control of the corporation: The evidence from Japan*. In: Waseda University WIAS (Waseda Institute for Advanced Study), Waseda Organizational and Financial Economics Seminar. Tokyo, Japan, 15 May 2017. Edmonton: University of Alberta.
- Fried, J. M. (2005). Informed trading and false signaling with open market repurchases. *California Law Review*, 93(5), 1323–1386.

- Gan, C., Bian, C., Wu, D., & Cohen, D. A. (2017). Determinants of share returns following repurchase announcements in China. *Investment Management and Financial Innovations*, 14(2), 4–18.
- García, L. S., Barbadillo, E. R., & Pérez, M. O. (2012). Audit committee and internal audit and the quality of earnings: empirical evidence from Spanish companies. *Journal of Management & Governance*, 16(2), 305–331.
- García-Meca, E., & Sánchez-Ballesta, J. P. (2009). Corporate governance and earnings management: A meta-analysis. *Corporate Governance*, 17(5), 594–610.
- Germain, L., Galy, N., & Lee, W. (2012). The determinants of corporate board size and independence: Evidence from Malaysia. In *29th International Conference of the French Finance Association (AFFI)*.
- Ghafran, C., & O’Sullivan, N. (2013). The governance role of audit committees: Reviewing a decade of evidence. *International Journal of Management Reviews*, 15(4), 381–407.
- Ghazali, Z. (2012). An effective interest alignment mechanism or a tool to expropriate: A review of Malaysian ESOS adoption. *Malaysian Management Journal*, 16, 59–74.
- Ghazali, Z., & Manab, N. (2013). The effect of Malaysian code of corporate governance (MCCG) implementation to companies’ performances. *Journal of Accounting, Finance and Economics*, 3(2), 43–52.
- Ghosh, A., Marra, A., & Moon, D. (2010). Corporate boards, audit committees, and earnings management: Pre- and post-SOX evidence. *Journal of Business Finance & Accounting*, 37(9–10), 1145–1176.
- Ginglinger, E., & Hamon, J. (2007). Actual share repurchases, timing and liquidity. *Journal of Banking & Finance*, 31(3), 915–938.
- Ginglinger, E., & Hamon, J. (2009). Share repurchase regulations: Do firms play by the rules? *International Review of Law and Economics*, 29(2), 81–96.
- Goh, B. W. (2009). Audit committees, boards of directors, and remediation of material weaknesses in internal control. *Contemporary Accounting Research*, 26(2), 549–579.
- Goh, C. F., Rasli, A., & Khan, S.-U.-R. (2014). CEO duality, board independence, corporate governance and firm performance in family firms: Evidence from the manufacturing industry in Malaysia. *Asian Business & Management*, 13(4), 333–357.
- Golbe, D. L., & Nyman, I. (2017). *Share repurchases and CEO ownership*. Retrieved from <http://econ.hunter.cuny.edu/wpcontent/uploads/sites/6/RePEc/papers/HunterEco>

nWP448.pdf.

- González, V. M., & González, F. (2004). Stock repurchases with legal restrictions. Evidence from Spain. *The European Journal of Finance*, 10(6), 526–541.
- Goodwin-Stewart, J., & Kent, P. (2006). Relation between external audit fees, audit committee characteristics and internal audit. *Accounting and Finance*, 46(3), 387–404.
- Gopalan, R., & Jayaraman, S. (2012). Private control benefits and earnings management: Evidence from insider controlled firms. *Journal of Accounting Research*, 50(1), 117–157.
- Graham, J. C., Harvey, C., & Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economic*, 40(1), 3–73.
- Greene, W. (2004). Fixed effects and bias due to the incidental parameters problem in the Tobit model. *Econometric Reviews*, 23(2), 125–147.
- Greene, W. H. . (2012). *Econometric analysis* (7th ed). Boston: Pearson.
- Greene, W., & Hensher, D. (2010). *Modeling ordered choices* (1st ed.). Cambridge University Press.
- Grullon, G., & Ikenberry, D. L. (2000). What do we know about stock repurchases? *Journal of Applied Corporate Finance*, 13(1), 31–51.
- Grullon, G., & Michaely, R. (2002). Dividends, share repurchases, and the substitution hypothesis. *The Journal of Finance*, 57(4), 1649–1684.
- Grullon, G., & Michaely, R. (2004). The information content of share repurchase programs. *The Journal of Finance*, 59(2), 651–680.
- Gujarati, D. (2003), *Basic econometrics: international edition*, McGraw-Hill, New York.
- Gujarati, D. N., & Porter, D. C. (2009). *Basic econometrics*. (5, Ed.). McGraw-Hill International. New York.
- Gulzar, M. A., & Zongjun, W. (2011). Corporate governance characteristics and earnings management: Empirical evidence from Chinese listed firms. *International Journal of Accounting and Financial Reporting*, 1(1), 133-151.
- Gunny, K. a. (2010). The relation between earnings management using real activities manipulation and future performance: Evidence from meeting earnings benchmarks. *Contemporary Accounting Research*, 27(3), 855–888.
- Guo, J., Huang, P., Zhang, Y., & Zhou, N. (2015). Foreign ownership and real earnings management: Evidence from Japan. *Journal of International Accounting*

Research, 14(2), 185–213.

- Habbash, M. (2012). Earnings management, audit committee effectiveness and the role of blockholders ownership: Evidence from UK large firms. *Journal of Governance and Regulation*, 1(4), 97–188.
- Habbash, M., & Alghamdi, S. (2017). Audit quality and earnings management in less developed economies: the case of Saudi Arabia. *Journal of Management and Governance*, 21(2), 351–373.
- Hafsi, T., & Turgut, G. (2013). Boardroom diversity and its effect on social performance: Conceptualization and empirical evidence. *Journal of Business Ethics*, 112(3), 463–479.
- Hai, D., & Doan, T. (2012). Takeover deterrent effect of open-market share buyback in Australia. *Australasian Accounting Business and Finance Journal*, 5(4), 65–84.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective* (7th ed). New Jersey: Pearson.
- Haji-Abdullah, N. M., & Wan-Hussin, W. N. (2015). Related party transactions, audit committees and real earnings management: The moderating impact of family ownership. *Advanced Science Letters*, 21(6), 2033–2037.
- Haji, A. A. (2014). The relationship between corporate governance attributes and firm performance before and after the revised code some Malaysian evidence. *International Journal of Commerce and Management*, 24(2), 134–151.
- Halioui, K., & Jerbi, A. (2012). The effect of blockholders on earnings-management: the case of Tunisian listed firms. *International Journal of Multidisciplinary Research*, 2(2), 37–49.
- Hamilton, L. C. (2012). *Statistics with STATA* (12th ed). Boston: Cengage Learning.
- Hamouda, F., & Ben Arab, M. (2013). Board of directors and insider trading with share repurchase programs. *Journal of Management & Governance*, 17(2), 405–418.
- Haniffa, R., & Hudaib, M. (2006). Corporate governance structure and performance of Malaysian listed companies. *Journal of Business Finance & Accounting*, 33(7–8), 1034–1062.
- Haniffa, R. M., & Cooke, T. . E. (2002). Culture, corporate governance and disclosure in Malaysian corporations. *Abacus*, 38(3), 317–349.
- Hashim, H. A., & Devi, S. S. (2008a). Board characteristics, ownership structure and earningsquality: Malaysian evidence. *Research in Accounting in Emerging Economies*, 8(8), 97–123.

- Hashim, H. A., & Devi, S. S. (2008b). Board independence , CEO duality and accrual management : Malaysian evidence. *Asian Journal of Business and Accounting*, 1(1), 27–46.
- Haslindar Ibrahim, M. Fazilah Abdul Samad, & Afizar Amir. (2008). Board structure and corporate performance: Evidence from public-listed family-ownership in Malaysia. Retrieved 12 December, 2008, from [Http://ssrn.com=1292182](http://ssrn.com=1292182).
- Hasnan, S., Rahman, R. A., & Mahenthiran, S. (2013). Management motive, weak governance, earnings management, and fraudulent financial reporting: Malaysian evidence. *Journal of International Accounting Research*, 12(1), 1–27.
- Hassan, S. U., & Ibrahim, G. (2014). Governance attributes and real activities manipulation of listed manufacturing firms in Nigeria. *International Journal of Accounting and Taxation*, 2(1), 37–62.
- Hatakeda, T., & Isagawa, N. (2004). Stock price behavior surrounding stock repurchase announcements: Evidence from Japan. *Pacific-Basin Finance Journal*, 12(3), 271–290.
- Haw, I.-M., Ho, S. S. M., Hu, B., & Zhang, X. (2011). The contribution of stock repurchases to the value of the firm and cash holdings around the world. *Journal of Corporate Finance*, 17(1), 152–166.
- Healy, P. M. (1985). The effects of bonus scheme on accounting decisions. *Journal of Accounting & Economics*, 7, 85–107.
- Healy, P., & Wahlen, J. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, 13(4), 365–383.
- He, E., & Sommer, D. W. (2010). Separation of ownership and control: Implications for board composition. *Journal of Risk and Insurance*, 77(2), 265–295.
- Hillert, A., Maug, E., & Obernberger, S. (2012). *Stock repurchases and market liquidity*. Working Paper, University of Mannheim.
- Hillman, A., Cannella, A. J., & Paetzold, R. (2000). The resource dependence role of corporate directors: strategic adaptation of board composition in response to environmental change. *Journal of Management* ..., 37(March), 235–256.
- Hillman, A. J., & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *The Academy of Management Review*, 28(3), 383–396.
- Hillman, a. J., Withers, M. C., & Collins, B. J. (2009). Resource dependence theory: A review. *Journal of Management*, 35(6), 1404–1427.
- Ho, C. A., & Williams, S. M. (2003). International comparative analysis of the association between board structure and the efficiency of value added by a firm

- from its physical capital and intellectual capital resources. *International Journal of Accounting*, 38(4), 465–491.
- Horan, M. (2012). Are buybacks increasing EPS? *Accounting & Taxation*, 4(1), 11–23.
- Houqe, M. N., Ahmed, K., & van Zijl, T. (2017). Audit quality, earnings management, and cost of equity capital: Evidence from india. *International Journal of Auditing*, 21(2), 177–189.
- Houmes, R. E., & Skantz, T. R. (2010). Highly valued equity and discretionary accruals. *Journal of Business Finance and Accounting*, 37(1–2), 60–92.
- Hovakimian, A. (2004). The role of target leverage in security issues and repurchases. *Journal of Business*, 77(4), 1041–1071.
- Hribar, P., Jenkins, N. T., & Johnson, W. B. (2006). Stock repurchases as an earnings management device. *Journal of Accounting and Economics*, 41(1–2), 3–27.
- Hsiao, C. (2014). *Analysis of panel data*. Cambridge university press (3rd ed). London: Cambridge University Press.
- Huang, H., Wang, C., Lin, K., & Jhao, W. (2010). Does corporate governance affect institutional ownership and share repurchase decisions? *GLOBAL JOURNAL OF BUSINESS RESEARCH*, 4(4), 35–40.
- Huang, R. (2016). *Are open market share repurchase programs really flexible?* available at file:///C:/Users/HP%20Pavilion/Downloads/Kutterer-T.-335833-.pdf.
- Huang, Y., Chen, A., & Kao, L. (2012). Corporate governance in Taiwan: The nonmonotonic relationship between family ownership and dividend policy. *Asia Pacific Journal of Management*, 29(1), 39–58.
- Hurt, D. N., Kreuze, J. G., & Langsam, S. a. (2008). Stock buybacks and their association with stock options exercised in the IT industry. *American Journal of Business*, 23(1), 13–22.
- Hussain, A. R. M., Hasnan, S., Sanusi, Z., & Mahenthiran, S. (2016). Accounting misstatements and monitoring mechanisms : A literature review. *Asia Pacific Journal of Accounting and Finance*, 3(1), 32–44.
- Ibrahim, H., & Samad, F. (2011). Corporate governance mechanisms and performance of public-listed family-ownership in Malaysia. *International Journal of Economics and Finance*, 3(1), 105–115.
- Ikenberry, D., Lakonishok, J., & Vermaelen, T. (2000). Stock repurchases in Canada: Performance and strategic trading. *The Journal of Finance*, 55(5), 2373–2397.

- Inaam, Z., Khmoussi, H., & Fatma, Z. (2012). The effect of audit committee characteristics on real activities manipulation in the tunisian context. *International Journal of Multidisciplinary Research*, 2(2), 1–15.
- Isa, M., Ghani, Z., & Lee, S. P. (2011). Market reaction to actual share repurchase in Malaysia. *Asian Journal of Business and ...*, 4(2), 27–46.
- Isa, M., & Lee, S. (2014). Market reactions to share repurchase. *Asian Academy of Management Journal of Accounting and Finance*, 10(1), 45–73.
- Ishak, Z., & Manaf, N. A. A. (2013). Board of directors and corporate diversification in Malaysia. *International Journal of Critical Accounting*, 5(2), 123–142.
- Jacob, M., & Jacob, M. (2013a). Taxation, dividends, and share repurchases: Taking evidence global. *Journal of Financial And Quantitative Analysis*, 48(4), 1241–1269.
- Jacob, M., & Jacob, M. (2013b). Taxation, dividends, and share repurchases: Taking evidence global. *Journal of Financial and Quantitative Analysis*, 48(4), 1241–1269.
- Jagannathan, M., & Stephens, C. (2003). Motives for multiple open-market repurchase programs. *Financial Management*, 32, 71–91.
- Jagannathan, M., Stephens, C. P., & Weisbach, M. S. (2000). Financial flexibility and the choice between dividends and stock repurchases. *Journal of Financial Economics*, 57(3), 355–384.
- Jager, P. De. (2008). Panel data techniques and accounting research. *Meditari Accountancy Research*, 16(2), 53–68.
- Jaggi, B., & Leung, S. (2007). Impact of family dominance on monitoring of earnings management by audit committees: Evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation*, 16(1), 27–50.
- Jansson, A., & Larsson-Olaison, U. (2010). The effect of corporate governance on stock repurchases: Evidence from Sweden. *Corporate Governance: An International Review*, 18(5), 457–472.
- Jaskiewicz, P., & Klein, S. (2007). The impact of goal alignment on board composition and board size in family businesses. *Journal of Business Research*, 60, 1080–1089.
- Jensen, M. C. (1986). Agency costs of free cash flow , corporate finance , and takeovers. *The American Economic Review*, 76(2), 323–329.
- Jensen, M. C. (1993). The modern industrial revolution , exit , and the failure of internal control systems. *The Journal of Finance*, 48(April 1997), 831–880.

- Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Jeon, J. Q., Lee, C., & Moffett, C. M. (2011). Effects of foreign ownership on payout policy: Evidence from the Korean market. *Journal of Financial Markets*, 14(2), 344–375.
- Jiang, L., & Kim, J. B. (2004). Foreign equity ownership and information asymmetry: Evidence from Japan. *Journal of International Financial Management and Accounting*, 15, 185–211.
- Jiang, Z., Kim, K., Lie, E., & Yang, S. (2013). Share repurchases, catering, and dividend substitution. *Journal of Corporate Finance*, 21, 36–50.
- Jiraporn, P. (2006). Share repurchases, shareholder rights, and corporate governance provisions. *North American Journal of Economics and Finance*, 17(1), 35–47.
- Jiraporn, P., Kim, J. C., & Kim, Y. S. (2011). Dividend payouts and corporate governance quality: An empirical investigation. *Financial Review*, 46(2), 251–279.
- Jiraporn, P., & Ning, Y. (2006). Dividend policy, shareholder rights, and corporate governance. *Journal of Applied Finance*, 16(2), 24.
- Johari, N. H., Saleh, N. M., Jaffar, R., & Hassan, M. S. (2009). The influence of board independence, competency and ownership on earnings management in Malaysia. *International Journal of Economics and Management*, 2(2), 281–306.
- Johl, S., Jubb, C. a., & Houghton, K. a. (2007). Earnings management and the audit opinion: evidence from Malaysia. *Managerial Auditing Journal*, 22(7), 688–715.
- Kadan, O., & Yang, J. (2016). Executive stock options and earnings management : A theoretical and empirical analysis. *Quarterly Journal of Finance*, 6(2), 1650003.
- Kahle, K. M. (2002). When a buyback isn't a buyback: open market repurchases and employee options. *Journal of Financial Economics*, 63(2), 235–261.
- Kamardin, H., & Haron, H. (2011). Internal corporate governance and board performance in monitoring roles. *Journal of Financial Reporting and Accounting*, 9(2), 119–140.
- Karamanou, I., & Vafeas, N. (2005). The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis. *Journal of Accounting Research*, 43(3), 453–486.
- Kassim, A. A. B. M. (2013). Board governance characteristics , capital structure decisions and company performance in Malaysia. *Doctoral Dissertation, Universiti Utara Malaysia*.

- Kassim, A. A. M., Ishak, Z., & Manaf, N. A. A. (2013). Board effectiveness and company performance: Assessing the mediating role capital structure decisions. *International Journal of Business and Society*, 14(2), 319–338.
- Katan, M., Ariff, M., Chowdhury, T. H., & Mohamad, S. (2013). Effect of Malaysian employee stock option scheme (ESOS) on stock liquidity of listed firms. In *Manuscript for 20-th Global Finance Conference 2013 Monterey, CA, 20-22 May, 2013* (pp. 1–30).
- Kawano, L. (2014). The Dividend Clientele Hypothesis: Evidence from the 2003 Tax Act. *American Economic Journal: Economic Policy*, 6(1), 114–136.
- Khalifa, H. A. H., & Hanefah, M. M. (2012). Audit committee characteristics and earnings management in Malaysian Shariah-compliant companies. *Business & Management Review*, 2(2), 52–61.
- Khalil, M., & Ozkan, A. (2016). Board independence, audit quality and earnings management: Evidence from Egypt. *Journal of Emerging Market Finance*, 15(1), 84–118.
- Khan, A., Muttakin, M. B., & Siddiqui, J. (2015). Audit fees, auditor choice and stakeholder influence: Evidence from a family-firm dominated economy. *British Accounting Review*, 47(3), 304–320.
- Khin, E., Tee, L. K., & Ying, C. W. (2011). Cumulative abnormal returns on share buy back: Malaysian perspectives. *Australian Journal of Basic & Applied Sciences*, 5(12), 2168–2175.
- Kieschnick, R. L. (1998). Free cash flow and stockholder gains in going private transactions revisited. *Journal of Business Finance & Accounting*, 25(1–2), 187–202.
- Kim, J.-B., & Yi, C. H. (2006). Ownership structure , business group affiliation , listing status , and earnings management : Evidence from Korea. *Contemporary Accounting Research*, 23(2), 427–465.
- Klein, A. (1998). *Economic determinants of audit committee composition and activity*. Working Paper No. 98– 011. New York University Center for Law and Business.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed). New York: uilford publications.
- Korkeamaki, T., Liljeblom, E., & Pasternack, D. (2010). Tax reform and payout policy: Do shareholder clienteles or payout policy adjust? *Journal of Corporate Finance*, 16(4), 572–587.
- Kraft, A., Lee, B., & Lopatta, K. (2014). Management earnings forecasts, insider trading, and information asymmetry. *Journal of Corporate Finance*, 26, 96–123.

- Krishnan, J., & Lee, J. E. (2009). Audit committee financial expertise, litigation risk, and corporate governance. *Auditing: A Journal of Practice & Theory*, 28(1), 241–261.
- Krishnan, J., Wen, Y., & Zhao, W. (2011). Legal expertise on corporate audit committees and financial reporting quality. *Accounting Review*, 86(6), 2099–2130.
- Krishnan, G. V. (2003). Does big 6 auditor industry expertise constrain earnings management? *Accounting Horizons*, 17(SUPPL.), 1–16.
- Kumari, P., & Pattanayak, J. K. (2014). The role of board characteristics as a control mechanism of earnings management: A study of select Indian service sector companies. *IUP Journal of Corporate Governance*, 13(1), 58–70.
- La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The Journal of Finance*, 54(2), 471–517.
- Lamba, A. S., & Miranda, V. M. (2010). The role of executive stock options in on-market share buybacks. *International Review of Finance*, 10(3), 339–363.
- Lanfranconi, C., & Robertson, D. (2002). Corporate financial reporting: The role of the board of directors. *Ivey Business Journal*, 67(1), 1–3.
- Lawrence, A., Minutti-Meza, M., & Zhang, P. (2011). Can Big 4 versus non-Big 4 differences in audit-quality proxies be attributed to client characteristics? *Accounting Review*, 86(1), 259–286.
- Leedy, P. D., & Ormrod, J. E. (2010). *Practical research: Planning and design (11th ed.)*. *Practical Research - Planning & Design*. New Jersey: Pearson Educational International and Prentice Hall.
- Lefort, F., & Urzúa, F. (2008). Board independence, firm performance and ownership concentration: Evidence from Chile. *Journal of Business Research*, 61(6), 615–622.
- Lei, A. C. H., & Song, F. M. (2004). *Corporate governance and firm valuation in Hong Kong*. Unpublished research, Faculty of Business and Economics, The University of Hong Kong, Hong Kong.
- Leng, A. C. A. (2004). The impact of corporate governance practices on firms' financial performance: Evidence from Malaysian companies. *ASEAN Economic Bulletin*, 21(3), 308–318.
- Lennox, C. S. (1999). Non-audit fees, disclosure and audit quality. *European Accounting Review*, 8(2), 239–252.
- Leuz, C., Lins, K. V, Warnock, F. E., Lemmon, M., Miller, D., Isidro, H., & Henderson, D. (2010). Do foreigners invest less in poorly governed firms? *The*

Review of Financial Studies, 22(8), 3245–3285.

- Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: An international comparison. *Journal of Financial Economics*, 69(3), 505–527.
- Li, I. C., & Hung, J.-H. (2013). The moderating effects of family control on the relation between managerial overconfidence and earnings Management. *Review of Pacific Basin Financial Markets & Policies*, 16(2), 1.
- Li, J. J. (1994). Ownership structure and board composition: A multi-country test of agency theory predictions. *Managerial and Decision Economics*, 15(4), 359–368.
- Li, J., Mangena, M., & Pike, R. (2012). The effect of audit committee characteristics on intellectual capital disclosure. *The British Accounting Review*, 44(2), 98–110.
- Lie, E., & Lie, H. J. (1999). The role of personal taxes in corporate decisions: An empirical analysis of share repurchases and dividends. *The Journal of Financial and Quantitative Analysis*, 34(4), 533–552.
- Lie, E. (2005). Operating performance following open market share repurchase announcements. *Journal of Accounting and Economics*, 39(3), 411–436.
- Liew, P. K. (2007). Corporate governance reforms in Malaysia: The key leading players' perspectives. *Corporate Governance: An International Review*, 15(5), 724–740.
- Lin, C., & Shiu, C. (2003). Foreign ownership in the Taiwan stock market—an empirical analysis. *Journal of Multinational Financial Management*, 13, 19–41.
- Lin, J. W., & Hwang, M. I. (2010). Audit quality, corporate governance, and earnings management: A meta-analysis. *International Journal of Auditing*, 14(1), 57–77.
- Lin, Y., Chen, Y., You, S., & Chang, R. (2009). Stock repurchases, stock options, and earnings management: An empirical analysis of US firms. *Asia Pacific Management Review*, 14(3), 349–362.
- Long, S., Gondyah, M., & Musibau, A. A. (2013). Can employee share option scheme improve firm's performance; A Malaysian case. *Information Management and Business Review*, 5(3), 119–128.
- Louis, H., & White, H. (2007). Do managers intentionally use repurchase tender offers to signal private information? Evidence from firm financial reporting behavior. *Journal of Financial Economics*, 85(1), 205–233.
- Madi, H. K., Ishak, Z., & Manaf, N. A. A. (2014). The impact of audit committee characteristics on corporate voluntary disclosure. *Procedia - Social and Behavioral Sciences*, 164, 486–492.

- Makasi, L., & Kruger, J. (2013). Share repurchases announcement effect on earnings: Evidence from South Africa. *Accounting & Taxation*, 5(1), 41–47.
- Martínez-Ferrero, J., García-Meca, E., & García-Meca, E. (2017). Gender diversity, financial expertise and its effects on accounting quality. *Management Decision*, 55(2), 347–382.
- Masmoudi Ayadi, W., & Boujelbène, Y. (2014). The relationship between ownership structure and earnings quality in the French context. *International Journal of Accounting and Economics Studies*, 2(2), 80–87.
- Massa, M., Rehman, Z., & Vermaelen, T. (2007). Mimicking repurchases☆. *Journal of Financial Economics*, 84(3), 624–666.
- McKnight, P. J., & Weir, C. (2009). Agency costs, corporate governance mechanisms and ownership structure in large UK publicly quoted companies: A panel data analysis. *Quarterly Review of Economics and Finance*, 49(2), 139–158.
- McNally, W. J., & Smith, B. F. (2007). Long-run returns following open market share repurchases. *Journal of Banking & Finance*, 31(3), 703–717.
- McNally, W., & Smith, B. (2011). A microstructure analysis of the liquidity impact of open market repurchases. *Journal of Financial Research*, 34(3), 481–501.
- Miller, M., & Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares. *The Journal of Business*, 34(4), 411–433.
- Miller, M., & Prondzinski, D. (2017). Stock repurchases: Do they add to shareholder value over time? *Journal of Accounting and Finance*, 17(4), 48–62.
- Mitchell, J. D., & Dharmawan, G. V. (2007). Incentives for on-market buy-backs: Evidence from a transparent buy-back regime. *Journal of Corporate Finance*, 13(1), 146–169.
- Mohamad, M., Abdul Rashid, H., & Shawtari, F. A. (2012). Corporate governance and earnings management in Malaysian government linked companies: The impact of GLCs' transformation policy. *Asian Review of Accounting*, 20(3), 241–258.
- Mohammed Al Matari, E., Kaid Al Swidi, A., & Hanim Bt Fadzil, F. (2014). The moderating effect of board diversity on the relationship between executive committee characteristics and firm performance in Oman: Empirical Study. *Asian Social Science*, 10(12), 6–20.
- Mohd-Saleh, N., & Omar, N. (2014). CEO duality, family-control and goodwill impairment. *Asian Journal of Business and Accounting*, 7(1), 143.
- Mohd-Saleh, N., Rahman, C. A., & Ridhuan, M. (2009). Ownership structure and intellectual capital performance in Malaysian. *Asian Academy of Management*

Journal of Accounting and Finance, 5(1), 1–29.

- Mohd Ali, S., Mohd Salleh, N., & Hassan, M. S. (2010). Ownership structure and earnings management in Malaysian listed companies: The size effect. *Asian Journal of Business and Accounting*, 1(2), 89–116.
- Moore, D. (2017). *Managerial self-interest and strategic repurchases : Evidence from equity vesting schedules*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3014462.
- Moradi, N. S., Aldin, M. M., Heyrani, F., & Iranmahd, M. (2012). The effect of corporate governance, corporate financing decision and ownership structure on firm performance: a panel data approach from Tehran Stock Exchange. *International Journal of Economics and Finance*.
- Moser, W. J. (2009). The Effect of shareholder taxes on corporate payout choice. *Journal of Financial and Quantitative Analysis*, 42(4), 991.
- Moulton, B. R. (1986). Random group effects and the precision of estimates. *Journal of Econometrics*, 32, 385–397.
- Moulton, B. R. (1987). Diagnostics for group effects in regression analysis. *Journal of Business {&} Economic Statistics*, 5(2), 275–282.
- Mudipalli, H. K., & Ramana, D. V. (2014). Market reaction to ‘share buy-back’ of reliance industries limited. *International Journal of Emerging Trends in Science and Technology*, 1(8), 1327–1334.
- Muhamad Sori, Z., & Karbhari, Y. (2005). *The impact of selected corporate governance programmes to auditor independence: Some evidence from Malaysia*. Available at SSRN: <https://ssrn.com/abstract=871139> or <http://dx.doi.org/10.2139/ssrn.871139>.
- Mustapha, M., & Ahmad, A. C. (2011). Agency theory and managerial ownership: evidence from Malaysia. *Managerial Auditing Journal*, 26(5), 419–436.
- Muttakin, M. B., Muttakin, M. B., Khan, A., Khan, A., Mihret, D. G., & Mihret, D. G. (2017). Business group affiliation, earnings management and audit quality: Evidence from Bangladesh. *Managerial Auditing Journal*, 32(4/5), 427–444.
- Myers, J. N., Myers, L. a., & Skinner, D. J. (2007). Earnings momentum and earnings management. *Journal of Accounting, Auditing & Finance*, 22(2), 249–284.
- Nakano, M., & Nguyen, P. (2012). Board size and corporate risk taking: further evidence from Japan. *Corporate Governance: An International Review*, 20(4), 369–387.
- Nam, S. W., & Nam, I. C. (2004). Corporate governance in Asia: Recent evidence from Indonesia, Republic of Korea, Malaysia, and Thailand. *Unpublished*

- Nelson, S. P., & Devi, S. (2013). Audit committee experts and earnings quality. *Corporate Governance, 13*(4), 335–351.
- Nelson, S. P., & Jamil., N. N. (2011). An investigation on the audit committee's effectiveness: The case for GLCs in Malaysia. *Gadjah Mada International Journal of Business, 13*(3).
- Norwani, N. M., Mohamad, Z. Z., & Chek, I. T. (2011). Corporate governance failure and its impact on financial reporting within selected companies. *International Journal of Business and Social Science, 2*(21), 205–213.
- Okon Akpan, E., & Amran, N. A. (2014). Board characteristics and company performance: Evidence from Nigeria. *Journal of Finance and Accounting, 2*(3), 81.
- Omar, N., & Mohd-Saleh, N. (2011). Family and government influence on goodwill impairment: Evidence from Malaysia. *International Conference on Financial Management and Economics, IPCSIT 11, IACSIT Press, Singapore.*
- Ong, T. S., & Gan, S. S. (2013). Do family-owned banks perform better? A study of Malaysian Banking Industry. *Asian Social Science, 9*(7), 124–135.
- Oswald, D., & Young, S. (2004). What role taxes and regulation? A second look at open market share repurchase activity in the United Kingdom. *Journal of Business Finance & Accounting, 31*(1), 257–292.
- Oluku, M. D. (2017). Ownership structure and earnings management practices of Nigerian companies. *Journal of Internet Banking and Commerce, 22*(1), 1–18.
- Park, Y., & Jung, K. (2005). Stock repurchase in Korea: Market reactions and operating performance. *Review of Pacific Basin Financial Markets and Policies, 8*(1), 81–112.
- Pathan, S., & Faff, R. (2011). Does board structure in banks really affect their performance? *Journal of Banking & Finance, 37*(5), 1573–1589.
- Peasnell, K. V., Pope, P. F., & Young, S. (2000). Accrual management to meet earnings targets: Uk evidence pre- and post-Cadbury. *The British Accounting Review, 32*(4), 415–445.
- Peasnell, K. V., Pope, P. F., & Young, S. (2005). Board monitoring and earnings management: Do outside directors influence abnormal accruals? *Journal of Business Finance and Accounting, 32*(7–8), 1311–1346.
- Pergola, T. M., & Joseph, G. W. (2011). Corporate governance and board effectiveness. *Corporate Governance, 11*(2), 200–213.

- Perry, T., & Shivdasani, A. (2005). Do boards affect performance? Evidence from corporate restructuring. *The Journal of Business*, 78(4), 1403–1432.
- Persakis, A., & Iatridis, G. E. (2016). Audit quality, investor protection and earnings management during the financial crisis of 2008: An international perspective. *Journal of International Financial Markets, Institutions and Money*, 41, 73–101.
- Peyer, U. C., & Vermaelen, T. (2005). The many facets of privately negotiated stock repurchases. *Journal of Financial Economics*, 75(2), 361–395.
- Peyer, U., & Vermaelen, T. (2009). The nature and persistence of buyback anomalies. *Review of Financial Studies*, 22(4), 1693–1745.
- Pfeffer, J. (1972). Size and composition of corporate boards of directors: The organisation and its environment. *Administrative Science Quarterly*, 17(2), 218–228.
- Pfeffer, J., & Salancik, G. R. (1978). *The external control of organisations: a resource dependence perspective*. New York: Harper & Row. New York.
- Poli, S. (2015). Do ownership structure characteristics affect Italian private companies' propensity to engage in the Practices of 'earnings minimization' and 'earnings change minimization'? *International Journal of Economics and Finance*, 7(6), 193–207.
- Pomeroy, B., & Thornton, D. B. (2008). Meta-analysis and the accounting literature: The case of audit committee independence and financial reporting quality. *European Accounting Review*, 17(2), 305–330.
- Pradhan, S. K., & Kasilingam, R. (2016). Impact of buyback announcement on share price: A company and industry wise analysis. *International Journal of Management and Business Research*, 6(1), 13–21.
- Raghuandan, K., & Rama, D. V. (2007). Determinants of audit committee diligence. *Accounting Horizons*, 21(3), 265–279.
- Ramadan, I. Z. (2016). Does ownership structure affect Jordanian companies' tendency to practice earnings management? *Asian Journal of Finance & Accounting*, 7(2), 281.
- Ramakrishnan, S., Ravindran, R., & Ganesan. (2007). Share buyback signaling tool: Malaysian perspective. In *Proceedings of the 1st International Colloquium on Business & Management (ICBM), 19th-22nd November 2007, Bangkok, Thailand* (pp. 1–18).
- Rau, P. R., & Vermaelen, T. (2002). Regulation, taxes, and share repurchases in the United Kingdom*. *The Journal of Business*, 75(2), 245–282.
- Razzaque, R. M. R., Ali, M. J., & Mather, P. R. (2015). Real earnings management in

- family firms: Evidence from an emerging economy. *Pacific-Basin Finance Journal*, 40, 237–250.
- Romanus, R. N., Maher, J. J., & Fleming, D. M. (2008). Auditor industry specialization, auditor changes, and accounting restatements. *Accounting Horizons*, 22(4), 389–413.
- Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, 42, 335–370.
- Saleh, N. M., Iskandar, T. M., & Rahmat, M. M. (2005). Earnings management and board characteristics: Evidence from Malaysia. *Jurnal Pengurusan*, 24(4), 77–103.
- Saleh, N. M., Iskandar, T. M., & Rahmat, M. M. (2007). Audit committee characteristics and earnings management: evidence from Malaysia. *Asian Review of Accounting*, 15(2), 147–163.
- Salleh, N. M. Z. N., & Che Haat, M. H. (2013). Audit committee diversity - Malaysian evidence after the revision of MCCG. *Malaysian Accounting Review*, 12(2), 91–113.
- Salleh, N. M. Z. N., & Che Haat, M. H. (2014). Audit committee and earnings management: Pre and post MCCG. *International Review of Management and Business Research*, 3(1), 307–318.
- Salihi, A. A., & Jibril, R. S. (2015). The effect of board the size and audit committee the size on earnings management in Nigerian consumer industries companies. *International Journal of Innovative Research and Development*, 4(3), 84–91.
- Sarkar, J., Sarkar, S., & Sen, K. (2008). Board of directors and opportunistic earnings management: evidence from India. *Journal of Accounting, Auditing & Finance*, 23(4), 517–551.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). England, UK.
- Sawicki, J. (2009). Corporate governance and dividend policy in Southeast Asia pre- and post-crisis. *The European Journal of Finance*, 15(2), 211–230.
- Schmidheiny, K. (2013). Panel data: fixed and random effects. *Short Guides to Microeconometrics: Universit" at Basel*, (2–17), doi:<http://kurt.schmidheiny.name/teaching/>.
- Securities Commission. (2011). Five-Year Corporate Governance Blueprint Launched. (08/2011). Retrieved from https://www.sc.com.my/wp-content/uploads/eng/html/cg/cg2011/pdf/cg_blueprint2011.pdf.
- Securities Commission. (2000). Malaysian Code on Corporate Governance. Retrieved

from http://www.ecgi.org/codes/documents/mccg_mar2000.pdf

Securities Commission. (2007). Malaysian Code on Corporate Governance (Revised 2007). Retrieved from http://www.ecgi.org/codes/documents/cg_code_malaysia_2007_en.pdf

Securities Commission. (2011). Corporate Governance Blueprint 2011: Towards Excellence in Corporate Governance. Retrieved from http://www.sc.com.my/wp-content/uploads/eng/html/cg/cg2011/pdf/cg_blueprint2011.pdf

Securities Commission. (2012). Malaysian Code on Corporate Governance 2012. Retrieved from <http://www.sc.com.my/malaysian-code-on-corporate-governance-2012/>

Securities Commission. (2016). Proposed Draft of the Malaysian Code on Corporate Governance 2016. Retrieved from https://www.sc.com.my/wp-content/uploads/eng/html/consultation/160418_PublicConsultation_2.pdf.

Securities Commission. (2017). Malaysian Code on Corporate Governance 2017. Retrieved from <https://www.sc.com.my/wp-content/uploads/eng/html/cg/mccg2017.pdf>.

Setia-Atmaja, L., Haman, J., & Tanewski, G. (2011). The role of board independence in mitigating agency problem II in Australian family firms. *British Accounting Review*, 43(3), 230–246.

Sharma, V. D., & Kuang, C. (2014). Voluntary audit committee characteristics, incentives, and aggressive earnings management: Evidence from New Zealand. *International Journal of Auditing*, 18(1), 76–89.

Shayan-Nia, M., Sinnadurai, P., Mohd-Sanusi, Z., & Hermawan, A. Ni. A. (2017). How efficient ownership structure monitors income manipulation? Evidence of real earnings management among Malaysian firms. *Research in International Business and Finance*, 41, 54–66.

Shiri, M. M., Vaghfi, S. H., Soltani, J., & Esmaeli, M. (2012). Corporate governance and earning quality: Evidence from Iran. *Middle-East Journal of Scientific Research*, 11(6), 702–708.

Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *Journal of Political Economy*, 94(3), 461.

Siagian, F. T., & Tresnaningsih, E. (2011). The impact of independent directors and independent audit committees on earnings quality reported by Indonesian firms. *Asian Review of Accounting*, 19(3), 192–207.

Siregar, S. V., & Utama, S. (2008). Type of earnings management and the effect of ownership structure, firm size, and corporate-governance practices: Evidence from Indonesia. *The International Journal of Accounting*, 43(1), 1–27.

- Skinner, D. J. (2008). The evolving relation between earnings, dividends, and stock repurchases. *Journal of Financial Economics*, 87(3), 582–609.
- Skinner, D. J., & Sloan, R. G. (2002). Earnings surprises, growth expectations, and stock returns or don't let an earnings torpedo sink your portfolio. *Review of Accounting Studies*, 7(2–3), 289–312.
- Soliman, M. M., & Ragab, A. a. (2014). Audit committee effectiveness , audit quality and earnings management : An empirical study of the listed companies in Egypt. *Research Journal of Finance and Accounting*, 5(2), 155–166.
- Song, J., & Windram, B. (2004a). Benchmarking audit committee effectiveness in financial reporting. *International Journal of Auditing*, 8(3), 195–205.
- Song, J., & Windram, B. (2004b). Benchmarking audit committee effectiveness in financial reporting. *International Journal of Auditing*, 8(3), 195.
- Sori, Z. M., Hamid, M. A. A., & Nassir, A. M. (2006). *Attributes of an effective audit committee: Evidence from an emerging capital market*. Retrieved from www.ssrn.com. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=924101.
- Srinidhi, B. N., He, S., & Firth, M. (2014). The effect of governance on specialist auditor choice and audit fees in U.S. family firms. *Accounting Review*, 89(6), 2297–2329.
- Standard Trade Portal (2017). *Malaysia: foreign investment*. Available at <https://en.portal.santandertrade.com/establish-overseas/malaysia/foreign-investment>.
- Stephens, C. P., & Weisbach, M. S. (1998). Actual share reacquisitions in open-market repurchase programs. *The Journal of Finance*, 53(1), 313–333.
- Stulz, R. M. (1999). Globalization, corporate finance, and the cost of capital. *Journal of Applied Corporate Finance*, 12(3), 8–25.
- Su, N.-H., & Lin, C.-J. (2012). The impact of open-market share repurchases on long-term stock returns: Evidence from the Taiwanese market. *Emerging Markets Finance and Trade*, 48(s2), 200–229.
- Sukeecheep, S., Yarram, S. R., & Al Farooque, O. (2013). Earnings management and board characteristics in Thai listed companies. In *The IBEA-International conference on Business, Economics and Accounting* (pp. 1–14). Bangkok, Thailand.
- Sulong, Z., & Nor, F. M. (2008). Malaysian accounting governance on firm value: Empirical evidence from Malaysian listed firms. *Malaysian Accounting Review*, 7(2), 55–94.
- Sultana, N., Singh, H., Der Zahn, V., & Mitchell, J. L. (2015). Audit committee

- characteristics and audit report lag. *International Journal of Auditing*, 19(2), 72–87.
- Sun, J., Lan, G., & Liu, G. (2014). Independent audit committee characteristics and real earnings management. *Managerial Auditing Journal*, 29(2), 153–172.
- Tai, Y. (2017). Earnings management in family firms : The role of inside directors. *Corporate Management Review*, 37(1), 77–114.
- Teoh, S. H., Welch, I., & Wong, T. J. (1998a). Earnings management and the long-run market performance of initial public offerings. *The Journal of Finance*, 53(6), 1935–1974.
- Teoh, S., Welch, I., & Wong, T. (1998b). Earnings management and the underperformance of seasoned equity offerings. *Journal of Financial Economics*, 50(1), 63–99.
- Thoopsamut, W., & Jaikengkit, A. (2009). Audit committee characteristics, audit firm size and quarterly earnings management in Thailand. *Oxford Journal*, 8(1), 3–12.
- Tobin, J. (1958). Estimation of relationship for limited dependent variables. *Econometrica*.
- Tsetsekos, G. P., Liu, F. Y., & Floros, N. (1996). An examination of open market stock repurchases : cash flow signalling , investments , and Tobin Q. *Applied Financial Economics*, 6(1), 9–18.
- Turley, S., & Zaman, M. (2007). Audit committee effectiveness: informal processes and behavioural effects. *Accounting, Auditing & Accountability Journal*, 20(5), 765–788.
- Vafeas, N. (1999). Board meeting frequency and firm performance. *Journal of Financial Economics*, 53(1), 113–142.
- Vafeas, N. (2005). Audit committees, boards, and the quality of reported earnings. *Contemporary Accounting Research*, 22(4), 1093–1122.
- Van Tendeloo, B., & Vanstraelen, A. (2008). Earnings management and audit quality in Europe: Evidence from the private client segment market. *European Accounting Review*, 17(3), 447–469.
- Vermaelen, T. (1981). Common stock repurchases and market signalling: An empirical study. *Journal of Financial Economics*, 9(2), 139–183.
- Vermaelen, T. (2005). Share Repurchases. *Foundations and Trends in Finance*, 1(3), 171–268.
- Walsh, J. P., & Seward, J. K. (1990). The internal of efficiency external and control mechanisms corporate. *Academy of Management Review*, 15(3), 421–458.

- Wan-Hussin, W. N. (2009). The impact of family-firm structure and board composition on corporate transparency: Evidence based on segment disclosures in Malaysia. *The International Journal of Accounting*, 44(4), 313–333.
- Wan Abdullah, W. Z., Shahnaz, I., & Nurasyikin, J. (2008). The impact of board composition, ownership and CEO duality on audit quality: The Malaysian evidence. *Malaysian Accounting Review*, 7(2), 17–29.
- Wan Ismail, W. A., Dunstan, K. L., & Van Zijl, T. (2019). *Earnings quality and corporate governance following the implementation of Malaysian code of corporate governance*. Available at SSRN 1543524.
- Wang, D. (2006). Founding family ownership and earnings quality. *Journal of Accounting Research*, 44(3), 619–656.
- Wang, L.-H., Lin, C.-H., Fung, H.-G., & Chen, H.-M. (2013). An analysis of stock repurchase in Taiwan. *International Review of Economics & Finance*, 27(1), 497–513.
- Ward, A. J., Brown, J. A., & Rodriguez, D. (2009). Governance bundles, firm performance, and the substitutability and complementarity of governance mechanisms. *Corporate Governance*, 17(5), 646–660.
- Warfield, T. D., Wild, J. J., & Wild, K. L. (1995). Managerial ownership, accounting choices, and informativeness of earnings. *Journal of Accounting and Economics*, 20(1), 61–91.
- Washer, K. M., & Casey, K. M. (2011). A note on the determinants of equity payouts. *Journal of Applied Business Research*, 20(2), 83–91.
- Watts, R., & Zimmerman, J. (1981). *The markets for independence and independent auditors*. Working Paper. University of Rochester, Rochester, NY.
- Webb, E. (2008). Bank stock repurchase extent and measures of corporate governance. *International Journal of Managerial Finance*, 4(3), 180–199.
- Weisbenner, S. (2000). *Corporate share repurchases in the 1990s: What role do stock options play?* AFA 2002 Atlanta Meetings.
- Wincent, J., Anokhin, S., & Örtqvist, D. (2010). Does network board capital matter? A study of innovative performance in strategic SME networks. *Journal of Business Research*, 63(3), 265–275.
- Woidtke, T., & Yeh, Y. H. (2013). The role of the audit committee and the informativeness of accounting earnings in East Asia. *Pacific Basin Finance Journal*, 23, 1–24.
- Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. Cambridge, Massachusetts London, England: MIT Press.

- Wu, C. (2009). The relationship between managerial optimism and stock repurchases in Taiwanese family businesses.
- Wu, M.-W., Shen, C.-H., & Lu, C.-H. (2015). Do more foreign strategic investors and more directors improve the earnings smoothing? The case of China. *International Review of Economics & Finance*, 36, 3–16.
- Wu, M. C., Kao, E. H. C., & Fung, H. G. (2008). Impact of dividend-protected employee stock options on payout policies: Evidence from Taiwan. *Pacific Economic Review*, 13(4), 431–452.
- Wu, R. (2011). Managerial entrenchment and open-market share repurchases : The case of Taiwan. In *the sixth international conference on Asia-Pacific Financial Markets, Seoul, Korea*. Seoul, Korea.
- Wu, R.-S. (2012a). Agency theory and open-market share repurchases: Evidence from Taiwan. *Emerging Markets Finance and Trade*, 48(2), 6–23.
- Wu, R.-S. (2012b). Does corporate governance quality lend credibility to open-market share repurchase announcements? *Corporate Governance: An International Review*, 20(5), 490–508.
- Wu, R.-S., & Wang, C.-S. (2015). Does minority shareholder protection matter? Evidence from open-market share repurchases. *Asia-Pacific Journal of Accounting & Economics*, 22(3), 311–330.
- Xie, B., Davidson, W. N., & Dadalt, P. J. (2003). Earnings management and corporate governance: The role of the board and the audit committee. *Journal of Corporate Finance*, 9(3), 295–316.
- Yarram, S. R. (2013). Corporate governance and share buybacks in Australia. *International Journal of Humanities and Management Sciences (IJHMS)*, 1(1), 2320–4044.
- Yasser, Q. R., Mamun, A. A., & Ahmed, I. (2016). Quality of financial reporting in the Asia-Pacific region: The influence of ownership composition. *Review of International Business and Strategy*, 26(4), 543–560.
- Yatim, P., Iskandar, T. M., & Nga, E. (2016). Board attributes and foreign shareholdings in Malaysian listed firms. *Journal of Management and Governance*, 20(1), 147–178.
- Yeh, Y., & Chou, H. (2014). Control-ownership structure , audit committee and earnings management: Evidence from East Asia. *Journal of Business Administration and Management Sciences Research*, 3(8), 163–183.
- Yeo, G. H. H., Tan, P. M. S., Ho, K. W., & Chen, S. S. (2002). Corporate ownership structure and the informativeness of earnings. *Journal of Business Finance and Accounting*, 29(7–8), 1023–1046.

- Yin, R. K. (2009). *Case study research ; Design and methods (Vol. 4th)*. California: SAGE Publications, Inc.
- Yook, K. C. (2010). Long-run stock performance following stock repurchases. *The Quarterly Review of Economics and Finance*, 50(3), 323–331.
- Yunos, R. (2011). *The effect of ownership concentration, board of directors, audit committee and ethnicity on conservative accounting: Malaysian evidence*. Edith Cowan University, Perth Western Australia.
- Yunos, R., Ahmad, S., & Sulaiman, N. (2014). The influence of internal governance mechanisms on accounting conservatism. In *International Conference on Accounting Studies (ICAS)* (pp. 1–7).
- Yunos, R. M., Smith, M., & Ismail, Z. (2010). Accounting conservatism and ownership concentration : Evidence from Malaysia. *Journal of Business and Policy Research*, 5(2), 1–15.
- Yunos, R., Smith, G., & Ismail, Z. (2012). The relationship between board skills and conservatism: Malaysian evidence. *Journal of Modern Accounting and Auditing*, 8(8), 1173–1184.
- Zahra, S. a., & Pearce, J. A. (1989). Boards of directors and corporate financial performance: A review and integrative model. *Journal of Management*, 15(2), 291–334.
- Zakaria, Z., Zulkafli, A. H., & Muhammad, J. (2013). Ownership concentration and share repurchase: Evidence from Malaysia. *International Journal of Advances in Management and Economics*, 2(6), 154–159.
- Zaman, M., Hudaib, M., & Haniffa, R. (2011). Corporate governance quality, audit fees and non-audit services fees. *Journal of Business Finance and Accounting*, 38(2–1), 165–197.
- Zang, A. Y. (2012). Evidence on the trade-off between real activities manipulation and accrual-based earnings management. *Accounting Review*, 87(2), 675–703.
- Zgarni, I., Halioui, K., & Zehri, F. (2014). Do the characteristics of board of directors constrain real earnings management in emerging markets? Evidence from the Tunisian context. *Journal of Accounting Research & Audit Practices*, 13(1), 46–61.
- Zhang, G. (2008). *Investor irrationality and open market share repurchases : Theory and evidence*. Unpublished Doctoral dissertation. University of Bath, UK.
- Zhang, H. (2005). Share price performance following actual share repurchases. *Journal of Banking & Finance*, 29(7), 1887–1901.
- Zikmund, W., Babin, B., Carr, J., & Griffin, M. (2013). *Business research methods*

(9th ed.). USA: Cengage Learning.



APPENDIX

List of Accretive Share Buyback Firms

Firm Name	Sector
ACME HOLDINGS	INDUSTRIAL PRODUCTS
ADV PACKAGING TECH	INDUSTRIAL PRODUCTS
ADVANCE INF MKTG	TRADING/SERVICES
ANALABS	TRADING/SERVICES
ASIAMET EDUCATION	TRADING/SERVICES
ASTINO BERHAD	INDUSTRIAL PRODUCTS
ATLAN HOLDINGS BHD	INDUSTRIAL PRODUCTS
ATTA GLOBAL	INDUSTRIAL PRODUCTS
BATU KAWAN BERHAD	PLANTATION
BENALEC HOLDINGS BHD	CONSTRUCTION
BERJAYA CORP	TRADING/SERVICES
BERJAYA SPORTS TOTO	TRADING/SERVICES
BREM HOLDING BERHAD	CONSTRUCTION
BSL CORP BHD	INDUSTRIAL PRODUCTS
CAHYA MATA SARAWAK	INDUSTRIAL PRODUCTS
CAM RESOURCES BHD	CONSUMER PRODUCTS
CB IND PRODUCT HLDGS	INDUSTRIAL PRODUCTS
CCK CONSOL	CONSUMER PRODUCTS
CENTURY LOGISTICS	TRADING/SERVICES
CEPATWAWASAN GRP	PLANTATION
CHEETAH HOLDINGS BHD	TRADING/SERVICES
CYMAO HOLDINGS BHD	INDUSTRIAL PRODUCTS
DAIBOCHI PLASTIC	INDUSTRIAL PRODUCTS
DAIMAN DEVELOPMENT	PROPERTIES
DAYA MATERIALS BHD	TRADING/SERVICES
DELLOYD VENTURES BHD	INDUSTRIAL PRODUCTS
DIGISTAR CORP BHD	TECHNOLOGY
EASTERN & ORIENTAL	PROPERTIES
ENGTEX GROUP BHD	TRADING/SERVICES
EONMETALL GRP BHD	INDUSTRIAL PRODUCTS
EP MANUFACTURING	INDUSTRIAL PRODUCTS
FAJARBARU BUILD	CONSTRUCTION
FITTERS DIVERSIFIED	TRADING/SERVICES
GLOMAC BHD	PROPERTIES
GOLDEN LAND BERHAD	PLANTATION
GOLDIS BHD	CONSUMER PRODUCTS
GRAND-FLO BHD	TECHNOLOGY

Firm Name	Sector
ACME HOLDINGS	INDUSTRIAL PRODUCTS
ADV PACKAGING TECH	INDUSTRIAL PRODUCTS
ADVANCE INF MKTG	TRADING/SERVICES
GUH HOLDINGS BHD	INDUSTRIAL PRODUCTS
HAI-O ENTERPRISE BHD	TRADING/SERVICES
HAP SENG CONSOLIDATE	TRADING/SERVICES
HUAT LAI RESOURCES	CONSUMER PRODUCTS
HUNZA PROPERTIES BHD	PROPERTIES
IGB CORPORATION BHD	PROPERTIES
INCH KENNETH KAJANG	PLANTATION
INTEGRATED LOGISTICS	TRADING/SERVICES
IOI CORPORATION BHD	PLANTATION
JAYCORP BHD	CONSUMER PRODUCTS
JOBSTREET CORP BHD	TRADING/SERVICES
KEN HOLDINGS BERHAD	CONSTRUCTION
KNM GROUP BHD	INDUSTRIAL PRODUCTS
KPJ HEALTHCARE BHD	TRADING/SERVICES
KULIM (MALAYSIA) BHD	PLANTATION
KUMPULAN H & L	INDUSTRIAL PRODUCTS
LBI CAPITAL BHD	PROPERTIES
LBS BINA GROUP BHD	PROPERTIES
LIEN HOE CORPORATION	PROPERTIES
M3 TECH	TECHNOLOGY
MEDA INCORPORATED	PROPERTIES
MEGA FIRST CORP	TRADING/SERVICES
MQ TECHNOLOGY BHD	INDUSTRIAL PRODUCTS
MTOUCHE TECH BHD	TECHNOLOGY
MUDAJAYA GROUP BHD	CONSTRUCTION
MULPHA INTERNATIONAL	TRADING/SERVICES
N2N CONNECT BERHAD	TECHNOLOGY
NOTION VTEC BERHAD	INDUSTRIAL PRODUCTS
NTPM HOLDINGS BHD	CONSUMER PRODUCTS
ORNAPAPER BHD	INDUSTRIAL PRODUCTS
OSK PROPERTY HLDGS	PROPERTIES
PARKSON HOLDINGS	TRADING/SERVICES
PELANGI PUBLISHING	INDUSTRIAL PRODUCTS
PELIKAN INT'L CORP	CONSUMER PRODUCTS
PERMAJU INDUSTRIES	INDUSTRIAL PRODUCTS
PJ DEVELOPMENT HLDGS	PROPERTIES
POH HUAT RES HLDGS	CONSUMER PRODUCTS

Firm Name	Sector
ACME HOLDINGS	INDUSTRIAL PRODUCTS
ADV PACKAGING TECH	INDUSTRIAL PRODUCTS
ADVANCE INF MKTG	TRADING/SERVICES
PROTASCO BHD	CONSTRUCTION
PW CONSOLIDATED BHD	CONSUMER PRODUCTS
RALCO CORP BHD	INDUSTRIAL PRODUCTS
REXIT BERHAD	TECHNOLOGY
SCANWOLF CORP	INDUSTRIAL PRODUCTS
SEG INTERNATIONAL	TRADING/SERVICES
SMRT HOLDINGS BHD	TECHNOLOGY
SUCCESS TRANSFORMER	INDUSTRIAL PRODUCTS
SUNWAY BHD	PROPERTIES
SUPERLON HOLDINGS	INDUSTRIAL PRODUCTS
SYMPHONY LIFE BHD	PROPERTIES
TAS OFFSHORE	INDUSTRIAL PRODUCTS
TASEK CORPORATION	INDUSTRIAL PRODUCTS
TEKALA CORP BHD	INDUSTRIAL PRODUCTS
TONG HERR RES	INDUSTRIAL PRODUCTS
TROPICANA CORP	PROPERTIES
UMS-NEIKEN GROUP BHD	INDUSTRIAL PRODUCTS
UNIMECH GROUP BHD	TRADING/SERVICES
UPA CORP BHD	CONSUMER PRODUCTS
WAH SEONG CORP	INDUSTRIAL PRODUCTS
WCT HOLDINGS BHD	CONSTRUCTION
WILLOWGLEN MSC BHD	TECHNOLOGY
YI-LAI BHD	INDUSTRIAL PRODUCTS
YNH PROPERTY BHD	PROPERTIES
YOKOHAMA INDUSTRIES	INDUSTRIAL PRODUCTS
YTL CORPORATION BERHAD	CONSTRUCTION
YTL POWER INT'L BHD	IPC