FORWARD-LOOKING INFORMATION DISCLOSURES, EARNINGS MANAGEMENT PRACTICES, AND "THE CEO's" PERSONAL CHARACTERISTICS: THE CASE OF JORDAN

By

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DECLARATION

I hereby declare that all material contained in this study has not been previously submitted in support of a degree in UCLan or any other university or other institute of learning. I further declare that this thesis is solely based on my own research.

Signature of Candidate

Type of Award **Doctor of Philosophy**

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ABSTRACT

The primary objective of this study is to examine the relationship between the level of Forward-Looking Information Disclosure (FLID) and Earnings Management (EM) practices among non-financial Jordanian companies listed on the Amman Stock Exchange (ASE) during the period 2008-2013. Content analysis was used to explore the items of FLID, and the level of FLID was measured using the disclosure index. Three models, Jones (1991), Modified Jones (1995) and performance-matched Kothari et al. (2005) models, were employed to estimate discretionary accruals as a proxy for EM. The panel regression results show a negative and significant relationship between the level of FLID and EM. The findings of the study are consistent with agency and signalling theory perspectives.

Secondly, the study seeks to investigate the effect of the CEO's personal characteristics (age, gender and overconfidence) on the level of FLID. Three measures of overconfidence were used: Net Buyer, Capital Expenditure, and Leverage ratio. The results indicate that the CEO's age has a negative and significant relationship with FLID. Conversely, the outcomes of the regression analysis show that the CEO's gender and male characteristics such as overconfidence' have a positive and a significant association with the level of FLID.

Finally, the study investigates the effect of CEOs' personal characteristics on EM practices. The empirical tests indicate that overconfidence has a positive and significant association with EM practices, which is consistent with signalling theory. However, there is no evidence to suggest that age and gender affect EM practices. Overall, the findings of the study confirm that a higher level of FLID improves the quality of financial reports. Furthermore, the results show that CEOs' characteristics affect managers' decisions. Thus, this study contributes to knowledge by shedding light on the relationship between the level of FLID and EM practices. It also provides new evidence on the impact of the CEO's characteristics on the level of FLID as a proxy for voluntary disclosures and EM practices, in the context of a developing country.

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ABBREVIATIONS

AFM	Amman Financial Market.
APL	Accountancy Profession Law.
ASE	Amman Stock Exchange.
BDUAL	Board Duality.
BINDEP	Board Independence.
BLOCKH	Blockholder Ownership.
BMEET	Board Meeting.
BSIZE	Board Size.
CAGE	CEO's Age.
CEO	Chief Executive Officer.
CFO	Chief Financial Officer.
CFO	Cash Flow from Operation activities.
CGEND	CEO's Gender.
COVER	CEO's Overconfidence.
CSR	Corporate Social Responsibility.
DA	Discretionary Accruals.
EBXA	Earnings before Abnormal and Extraordinary Items.
EM	Earnings Management.
ESA	Exchange Security Authorities.
FASB	Financial Accounting Standards Board.
FDIVID	Firm's Dividend.
FIFO	First-In-First-Out.
FISIN	International Securities Identification Number.
FLEVER	Firm's Leverage Ratio.
FLID	Forward-Looking Information Disclosures.
FOWNE	Family Ownership.
FPROF	Firm's Profitability.
FSIZE	Firm's Size.
FTSE 100	An index composed of the 100 largest firms listed on the London Stock Exchange.
FWD	Forward-looking Categories.
GAAP	Generally Accepted Accounting Principles.
GDP	Gross Domestic Product.
H	Hypothesis.
HCAA	High Council for Accounting and Auditing.
IAAS	International Auditing and Accounting Standards.
IAS	International Accounting Standards.
IASB	International Accounting Standards Board.
IFRS	International Financial Reporting Standards.
INSTITU	Institutional Ownership.
IV	Instrumental Variables.

JACPA	Jordanian Association of Certified Public Accountants.
JDM	Judgement and Decision Making.
JSC	Jordanian Securities Commission.
LIFO	Last-In-First-Out.
LSE	London Stock Exchange.
MIT	Minister of Industries and Trade.
MOWNE	Managerial Ownership.
NDA	Non-Discretionary Accruals.
NYSE	New York Stock Exchange.
OLS	Ordinary Least Squares.
PPE	Property, Plant and Equipment.
Q-Q plot	Quantile-Quantile Test.
R&D	Research and Development costs.
ROA	Return on Assets.
S&P	Standard and Poor's (American Stock Market Index).
SDC	Securities Depository Centre.
SEC	Securities and Exchange Commission.
SG&A	Selling, General and Administrative Expenses.
STATA	Statistical Analysis Package.
TA	Total Accruals.
Tit	Lagged Total Assets.
VIF	Variance Inflation Factor.
ΔREC	Change in Accounts Receivables.
ΔREV	Change in Sales Revenues.
2SLS	Two-Stage Regression.
ε	Residual Values.
α β	Regression Parameters.

CHAPTER ONE: INTRODUCTION

This chapter introduces and offers a rationale for this study. It begins with an overview in section 1.1. Section 1.2 addresses the background of the study. Section 1.3 explains the study motivations. Section 1.4 discusses the study's aim and objectives. Section 1.5 reports the research methodology. Section 1.6 provides the contribution of the research. Section 1.7 explains the study's scope, and the last section, 1.8, presents the structure of the study.

1.1. OVERVIEW

Disclosure is one of the monitoring tools used by internal and external users to develop an understanding of how managers manage resources, and to judge a company's decisions. Furthermore, corporate disclosure bridges the gap in the information between the manager (agent) and owner (principal) (Ahmed and Courtis 1999; Healy and Palepu 2001). Since investors are not able to monitor managers' behaviour and performance without confidential information from the firm, the disclosure of more than basic requirements such as accounting and other financial and non-financial information which are important to different stakeholders is defined as voluntary disclosure (Meek et al. 1995). Thus, voluntary disclosure such as Forward-Looking Information Disclosure (FLID) is considered as one of the monitoring tools that controls managers' opportunistic behaviour (Bushman and Smith 2000). FLID is a voluntary disclosure (Francis et al. 2008b) which allows investors to assess a firm's future performance and improve their ability to make rational investment decisions (Kieso et al. 2010). Celik et al. (2006, p. 200), define FLID as "any prediction or information that helps to make estimates about the future; it includes management's strategy, valuations of opportunities and risks, and forecasts data". Furthermore, Hussainey (2004) states that FLID captures current plans and future forecasts to enable financial statement users to understand future performance. Undeniably, the lack of FLID may end up in volatile stock prices and uncertainty in investments.

In summary, FLID is a mechanism to provide more information (financial or non-financial) to investors and other stakeholders through formal and informal channels, and is widely perceived as a feature of an efficient capital market.

On the other hand, Earnings Management (EM) is an accounting process that managers adopt to manipulate the earnings of the company through accounting choices and discretionary accruals. Over the last two decades, a considerable amount of literature has investigated the nuances of how managers manage earnings (Barua et al. 2010b; Chang and Sun 2010; Jackson and Liu 2010). In most cases, EM occurs when managers have the flexibility to choose accounting methods such as revenue recognition, depreciation expenses and employing discretion in financial reporting to estimate accruals and to alter financial reports (Healy and Wahlen 1999). EM behaviour can be classified as: (1) misreporting EM, involving the discretionary accounting of decisions and outcomes already realized; and (2) direct or real EM, which involves the strategic timing of investment, sales, expenditure and financing decisions (Degeorge et al. 1999).

Furthermore, EM involves several accounting transactions that are consistent with Generally Accepted Accounting Principles (GAAP) which could be either conservative or aggressive accounting procedures aimed at manipulation of financial information (Xiong 2006). Healy and Wahlen (1999, p. 7) state that, "EM takes place when management (executives) use their discretions in financial reporting and in structuring transactions, to change financial reports, in order to mislead some stakeholders about underlying economic performance of a firm or to affect contractual outcomes relying on reported accounting practices". In a similar vein, another definition suggested that EM is "the process of taking deliberate steps within the constraints of GAAP, to bring about the desired level of reported earnings" (Davidson III et al. 2007, p.369). Furthermore, Roychowdhury (2006) verified that EM practice is driven by standard daily business practices motivated by the desire of managers to misguide some

stakeholders into accepting certain financial reporting information. Previous literature suggests two contradictory theoretical viewpoints to explain the association between FLID and EM practices: managerial opportunism and long-term perspectives (Choi et al. 2013).

The managerial opportunism viewpoint suggests that companies might be strategically using FLID to cover their opportunistic EM actions. In such cases, FLID is used as an entrenchment instrument to hide this opportunistic performance and to defend companies' managers against shareholders' potential attention and reaction. In line with this view, Sun et al. (2010) suggest that managers are motivated to disclose more voluntary disclosure (corporate social and environmental disclosures) in order to divert stakeholders' attention from their EM practices. Several empirical studies reveal a positive relationship between voluntary disclosure and EM (e.g. Kasznik 1999; Jog and McConomy 2003; Prior et al. 2008).

On the other hand, the long-term perspective suggests that companies with a high level of voluntary disclosure are not only concerned about increasing current profits and managers' wealth but are also looking to create and improve a strong future relationship with shareholders. Therefore, such companies will act in an accountable way when reporting financial information. In line with this perspective, many studies show a negative relationship between voluntary disclosure and EM (e.g. Lobo and Zhou 2001; Jo and Kim 2007; Hribar and Yang 2010; Katmun 2012; Gray 2013). Previous studies found that managers in family companies are more likely to disclose more FLID than those managing non-family companies (Ali et al. 2007; Chau and Gray 2010). Similarly, the current study argues that non-financial Jordanian companies with more FLID are less likely to practices EM, since a large proportion of Jordanian companies are family controlled. There were 128 (64 percent) family companies and 73 (36 percent) non-family companies listed on the ASE over the period 2008-2013

(ASE 2015). Thus, this setting in Jordan provides an opportunity for managers to disclose more information and practices less EM.

In summary, the literature on corporate voluntary disclosure and EM practices (Kasznik 1999; Lobo and Zhou 2001; Patten and Trompeter 2003; Hunton et al. 2006; Prior et al. 2007; Sun et al. 2010; Katmun 2012; Yadollah et al. 2012; MeilaniPurwanti 2013; Kiattikulwattana 2014; Muttakin et al. 2015) broadly supports the argument that the relationship between corporate disclosure and EM is contradictory. While several studies find that EM and voluntary disclosure are negatively related (Lobo and Zhou 2001; Hunton et al. 2006; Katmun 2012; Yadollah et al. 2012), others find a positive relationship between them (Kasznik 1999; Patten and Trompeter 2003; Prior et al. 2008; Muttakin et al. 2015). Conversely, Sun et al. (2010) and MeilaniPurwanti (2013) find no relationship between EM and corporate environmental disclosure. Therefore, the central concern of this study is to provide empirical evidence for the potential association between FLID and EM practices and to attempt to shed more light on this area in accounting research. In addition, a review of the literature reveals that no single study has examined this field of accounting research in Jordan. This consideration provides the motivation for the present study, to bridge this gap in the literature by providing evidence on the nature of the relationship between FLID and EM in the context of Jordan.

However, it has been argued that financial reporting practices vary predictably with particular individual characteristics of the Chief Executive Officer (CEO), and that these characteristics have an effect on managers' decisions. In this regard, Bamber et al. (2010) and many other researchers have found evidence that CEOs' characteristics play a significant role in their decisions. Considering this, the current study has chosen three personal characteristics of CEOs (age, gender, and overconfidence) to examine the impact of these characteristics on the level of FLID and EM practices.

The related literature on voluntary disclosures and EM reports that economic conditions affect a company's economic performance, which in turn, may motivate executives to manipulate earnings. In this regard, Berndt and Dipl-Kfm (2011) provide empirical evidence that managers are more likely to exercise EM practices during periods of economic crisis. Therefore, it is expected that in the face of uncertainty, such as the global financial crisis of 2008, EM behaviour will not be uncommon (Pong et al. 2007; Habib et al. 2013). Additionally, Rolland and Dirige (2013) suggest that there may be a greater likelihood of EM practices during and after the period of financial crisis to enhance the confidence of the shareholders regarding a company's financial performance. Consequently, this study has adopted a 6-year period from 2008 to 2013, since the financial crisis started in 2008 and triggered different reforms and corporate governance practices in the same year in Jordan. The study period ended in 2013 due to unavailability of data for subsequent years.

1.2. BACKGROUND OF THE STUDY

Jordan is a developing Arab country located in the Middle East. It has an open economic environment, is politically and economically stable and benefits from a stock market that has witnessed relatively gradual development. The economy, however, does not have a high ownership state, and in recent years a series of privatization schemes have been put in place to lower the proportion of government influence on the Jordanian economy (Al-khabash and Al-Thuneibat 2008).

Within Jordan, it is the responsibility of all registered firms to have their financial reports published, to help users from being misled (El-Rajabi and Gunasekaran 2006). Furthermore, this helps to increase the quality of the financial information and has a significant effect on enhancing investors' confidence (Noronha et al. 2008). Since 1987, the responsibility for undertaking the examination of professional standards and monitoring financial report quality has laid with the Jordanian Association of Certified Public Accountants (JACPA). In the

preparation of financial reports, JACPA uses the International Accounting Standards (IAS). Following the introduction of the Securities Law 23/1997 and the establishment of the Amman Financial Market (AFM) in 1978, the Jordanian capital market began to be transformed from a public to a private market. Three key institutions then evolved to facilitate the financial system in Jordan: the Securities Depository Centre (SDC), the Amman Stock Exchange (ASE), and the Jordanian Securities Commission (JSC). The ASE has become the biggest stock market within the region due to large foreign investment. For example, In 2008, the market capitalization to Gross Domestic Product (GDP) was recorded at a level of 226.3 % (Al-Fayoumi et al. 2010). In addition, in the ASE the listed securities are traded electronically. The JSC Law (23/1997), the Directives of Disclosures and Auditing and Accounting Standards (1/1998) specified the information that a listed company needed to disclose and file the required information with the Commission for Enhancing Transparency; in so doing, reporting would accord with International Financial Reporting Standards (IFRSs). There is also a requirement for listed companies to apply the International Auditing and Accounting Standards (IAAS) under the supervision of the JSC.

With the issuing of a new Securities Law, number 76/2002, the Amman Financial Market (AFM) was established. In addition, the Law required the formation of an independent investor protection fund, more stringent observance of the rule of law, and stricter professional and ethical codes (ASE 2015). Also, with the issuing of the Accountancy Profession Law (APL) 73/2003, the High Council for Accounting and Auditing (HCAA) was established under the Minister of Industries and Trade (MIT). At the same time the enhanced version of the JACPA was established. This evolution of the law has shown Jordan to be a country where investment decisions can be based upon robust accounting information. So, to avoid misleading investors, it is crucial that EM is given consideration (Al-Fayoumi et al. 2010).

The government of Jordan has introduced numerous reforms of accounting regulations, securities exchange laws and corporate disclosure practices. These reforms contribute to more transparent markets and have resulted in the listed companies enhancing their voluntary disclosure (Al-Fayoumi et al. 2010; Al-Akra and Ali 2012; JSC 2015). Jordan therefore provides a unique national context in which to investigate the link between the narrative disclosure of FLID, EM practices and CEOs' traits. Furthermore, Forward-Looking Statements in Jordan allow for a fuller and more powerful approach to analysis because of their unique nature.

1.3. MOTIVATION

The current study is motivated by several considerations. First, agency theory provides an explanation that managers are responsible for making decisions on behalf of the owners, and they must practice their duties in such a way as to increase the owners' wealth and to fulfil their expectations (Jensen and Meckling 1976). However, the separation between ownership and management, together with the incidence of information asymmetry, increases the possibility of managers'opportunistic behaviour, against the interest of the owners, hence pursuing self-interest objectives (Prior et al. 2008). This means that managers may engage in EM practices either to maximize their benefits to the disadvantage of other stakeholders or to offer them misleading information concerning the firm's financial position (Healy and Wahlen 1999). It has been acknowledged that EM is considered as a type of agency cost, because managers look after their own interests by releasing financial reports that do not reflect an accurate economic picture of the company (Prior et al. 2008). Therefore, over recent decades, EM practices have been seriously considered by practitioners, investors, regulators and academics, following the collapse of many large firms. This increased attention to EM has led to the enhancement of corporate governance mechanisms and

disclosure as monitoring systems, since without suitable monitoring the separation of the firm's ownership and control may lead to a serious problem.

Therefore, corporate disclosure is viewed as a form of monitoring mechanism used by investors and other outside users to reduce the information asymmetry problem (Huang and Zhang 2011). Hence, disclosure is considered as one of the potential solutions to reduce the agency problem between managers and shareholders, by reducing information asymmetry and consequently reducing the likelihood of EM (Lang and Lundholm 2000; Eng and Mak 2003). In the literature, few studies have examined the relationship between voluntary disclosures and EM practices, all these studies have been conducted in developed countries (e.g. Kasznik 1999; Katmun 2012; Bozanic et al. 2013a). Therefore, this study has a strong motivation to shed light on the potential effect of FLID on EM practices, in a developing economy.

Secondly, there has recently been a considerable amount of research on the topic of managerial characteristics of CEOs. The physiological, sociological, professional and individual characteristics of managers may have an effect on various decisions (Shefrin 2001; Bonner 2008). Further evidence reveals that financial reporting practices vary with the individual characteristics of managers (Dikolli et al. 2012; Schrand and Zechman 2012; Davidson et al. 2013). However, there is a limited number of studies that have tested the effect of CEOs' personal traits on the level of voluntary disclosure. Most of these studies have been conducted in the US, UK and other developed countries. To date, no empirical evidence has been documented in this field of accounting research in developing countries. Thus, this consideration provides the motivation for the current study to fill this gap in the literature by providing new empirical evidence in this area of accounting in the Middle East and Arab countries, and particularly in the context of Jordan.

Thirdly, numerous studies have indicated that EM practices are affected by the characteristics and motivations of the company's executives (e.g. Cheng and Warfield 2005; Davidson III et al. 2007; Jiang et al. 2008; Berry-Stölzlea et al. 2015). In addition, Lewis et al. (2014) suggest that "differences in environmental strategy can be explained by CEO's characteristics". Nevertheless, only a limited number of studies have examined the effect of the CEO's age, gender and overconfidence on EM in developed countries, and even fewer in Middle Eastern countries. Furthermore, Jia et al. (2014) reported that the number of studies that link financial reporting practices to the CEO's personal characteristics is small. Therefore, the study is motivated to fill this gap in the literature and to extend the body of knowledge by shedding more light on this area.

1.4.THE AIM AND OBJECTIVES OF THE STUDY

Based on the findings of previous studies and consistent with them, this study proposes that decision making by CEOs might be influenced by their personal characteristics. Thus, this study aims to understand the relationship between FLID and EM practices in Jordanian companies and identify the effect of CEOs' personal characteristics on the level of FLID and EM practices. To fulfil this aim, the following objectives are determined:

- To investigate the relationship between FLID and EM practices among non-financial Jordanian companies listed on the ASE over the period 2008-2013.
- To investigate whether or not the CEO's personal characteristics (age, gender and overconfidence) affect the level of FLID within the context of non-financial Jordanian companies listed on the ASE during the period 2008-2013.
- To investigate whether or not the CEO's personal characteristics (age, gender and overconfidence) affect EM practices among non-financial Jordanian companies listed on the ASE over the period 2008-2013.

1.5.THE STUDY METHOD

This section provides a summary of the study methods used in this research. Further detail and specification of the methods, including the justification for the selection of the study methodology and approaches, are provided in the methodology chapter (Chapter 4). Regarding the first objective of the study the association between the level of FLID and EM practices is addressed in Chapter five. Following the studies of Haniffa and Cooke (2005); Celik et al. (2006); Hassan and Harahap (2010); Mathuva (2012) and Athanasakou and Hussainey (2014), the present study has used both content analysis and disclosure index techniques to capture and measure the level of FLID. In respect of EM practices, the three most common EM models have been used to detect EM in terms of the study data: the Jones (1991), Modified Jones (1995) and performance-matched Kothari et al. (2005) models. In this study, Jones (1991) and Modified Jones (1995) models were used as the main proxies to detect EM. As a robustness check, the study also employed the performance-matched Kothari et al. (2005) model. The annual reports were used as the main sources of EM and FLID data (Salama et al. 2012), while the data on CEOs' characteristics was collected through additional sources such as press releases and direct communication with analysts, for a sample of 1,206 firm-year observations over the period 2008-2013.

In addition to the descriptive analysis, the current study has used multivariate methods to test the research hypotheses. These statistical methods include the use of panel regression of 1,206 firm-year observations in Jordan for 2008-2013. The endogeneity problem has been tested using two-stage least square regression and applying instrumental variables, and to check whether the results of EM and FLID are affected by this problem of endogeneity between EM and FLID variables.

Following the work of Malmendier and Tate (2005a, 2008); Hackbarth (2008); Campbell et al. (2011) and Ahmed and Duellman (2013), this study has used three measures of CEO overconfidence: net buyer, capital structure, and leverage ratio methods.

The multicollinearity problem among the data set has been tested using correlation matrix and the variance inflation factor (VIF).

1.6. CONTRIBUTION OF THE STUDY

Several contributions to knowledge are made through this research. First, it adds to the literature in terms of determinants of EM. Universally, a limited number of studies have attempted to examine the association between voluntary disclosures and EM. Although previous studies found that FLID enhances investors' ability to predict future earnings (Hussainey et al. 2003; Hussainey and Walker 2009), academic research has shown that no study has used the level of FLID to investigate this relationship. Thus, the present study is the first to use the level of FLID to provide a better and deeper understanding of the nature of the relationship between corporate disclosure and EM practices. In the context of Jordan, this is the first study that investigates the effect of voluntary disclosures on EM behaviour. Thus, a different viewpoint can be gained from developing countries such as Jordan, which in many respects are different and might improve the transparency and credibility of financial reporting in the Middle East. Therefore, the present study offers interesting new empirical evidence from a country that has different business regulations, a different environment and is considered as representative of Middle Eastern and Arab countries.

Secondly, since financial reporting practices vary predictably with particular individual characteristics of CEOs, this study provides two contributions to the literature in terms of determinants of FLID. It examines the impact of CEOs' personal traits on the level of FLID. The current literature on the determinants of FLID focus on institutional characteristics. To the best of the author's knowledge, to date there is no empirical evidence regarding the effect

of the CEO's age and gender on the level of FLID, other than the work of Nalikka (2009) which examined the impact of gender diversity on voluntary disclosure. This study provides empirical evidence on the relationship between CEOs traits and FLID. Thirdly, only a limited number of scholars that have studied the disclosure of FLID in developing countries, and even fewer such studies can be found in Middle Eastern countries. This study provides new evidence for the impact of CEO characteristics on the level of FLID, in a developing country context.

In addition, few studies have attempted to address the impact of the CEO's characteristics on EM practices. This study sheds light on the relationship between these characteristics and EM, and is the first to investigate their effect in the Jordanian market. Therefore, this study makes a contribution to the existing body of knowledge by shedding more light on EM practices, by investigating whether a CEO's personal characteristics (as an explanatory factor) have an influence on EM practices. However, existing studies have been carried out in developed countries, and to the best of the author's knowledge, no study has been conducted in a developing country.

1.7. SCOPE OF THE STUDY

The main purpose of this study is to investigate the relationship between the level of FLID and EM practices and the extent to which a CEO's personal characteristics (age, gender and overconfidence) affect the level of FLID and EM practices in the context of Jordan over the period 2008-2013. The rationale behind selecting this area is that, the literature on corporate disclosure and EM practices (Kasznik 1999; Lobo and Zhou 2001; Patten and Trompeter 2003; Hunton et al. 2006; Prior et al. 2008; Sun et al. 2010; Katmun 2012; Yadollah et al. 2012; MeilaniPurwanti 2013; Kiattikulwattana 2014) broadly supports the argument that the relationship between corporate disclosure and EM is contradictory. While, several studies find that EM and voluntary disclosure are negatively related (Lobo and Zhou 2001; Hunton et

al. 2006; Katmun 2012; Yadollah et al. 2012), others find a positive relationship between them (Kasznik 1999; Patten and Trompeter 2003; Prior et al. 2008). However, Sun et al. (2010) and MeilaniPurwanti (2013) fail to find any relationship between EM and corporate environmental disclosure. Secondly, the previous literature reveals that managers play a significant role in their companies' voluntary disclosure decisions, which might influence investors' decisions (e.g. Bamber et al. 2010; Li 2010). Personal CEO characteristics may have an effect on various managers' decisions (Shefrin 2001). This study will focus on providing empirical evidence for the potential effect of managers' personal characteristics (age, gender and overconfidence) on the level of FLID and EM practices in the annual financial reports of non-financial Jordanian companies listed on the ASE during the period 2008-2013.

The study does not include financial firms and non-listed firms, since they have different practices and regulations when compared to those of non-financial companies. In addition, the study covers the period 2008-2013 which was when corporate governance reforms was initially implemented in Jordan.

1.8. STRUCTURE OF THE STUDY

The thesis consists of eight chapters, including the current chapter, which introduced the study and discussed its aim, objectives and motivation. The remaining part of the thesis is organized as follows. Chapter 2 seeks to offer working definitions of EM, and explores EM techniques, motivations and measurements; it provides a detailed review of relevant literature.

Chapter 3 reviews the theoretical and empirical studies related to FLID. The first section discusses previous studies that attempt to link voluntary disclosure with EM practices and CEOs' personal characteristics. The second section discusses existing theories that attempt to link FLID to EM practices and CEOs' characteristics.

Chapter 4 describes the research design and methodology used. As at 2008 when the data collection began, 270 companies from three sectors were officially listed on the ASE. After excluding all financial companies, and 27 non-financial companies due to unavailability of data, the final sample consists of 201 companies and covers the fiscal years 2008-2013, making 1,206 firm-year observations. Data were collected from the annual reports of each company in the final sample. Different models were proposed using the panel regression technique. EM was measured by applying three models, and three proxies were used to measure CEO overconfidence.

Chapter 5 analyzes and summarizes the findings regarding the relationship between FLID and EM practices among the study sample. The main aim of this chapter is to achieve the study objective regarding the relationship between FLID and EM practices. It presents the results from several types of analysis including descriptive statistics, correlation matrix and regression analysis. The robustness or sensitivity of the results was checked against the potential presence of the endogeneity problem. This was addressed by estimating a lagged FLID variable as instrumental variable by applying a two-stage least squares regression technique.

Chapter 6 discusses the main findings of the effect of CEOs' personal characteristics on the level of FLID. Discussion of the descriptive results is followed by checking for the multicollinearity problem using correlation matrix and variance inflation factors methods. In addition, this chapter presents the empirical results based on three models to test the relationship between CEOs' characteristics and the level of FLID. The empirical results are based on the net buyer method, the leverage ratio and finally capital expenditure as proxies for CEO overconfidence.

Chapter 7 reports the results from different types of analysis including descriptive statistics, pairwise correlation and the multivariate analysis tests. The main purpose of this chapter is to

achieve the final research objective, which is related to the association between CEOs' personal characteristics and EM practices. The first section of this chapter summarizes the descriptive statistics of all research variables, and then multivariate regression is used to test all the hypotheses related to the study questions.

Chapter 8 presents the conclusions of the study, summarizing the key research findings and discussing the policy implications and potential avenues for future research and improvements.

CHAPTER TWO: A REVIEW OF THE LITERATURE ON EM PRACTICES

2.1. INTRODUCTION

As noted, the first objective of the current study is to investigate the association between the level of FLID and EM practices among non-financial Jordanian companies listed on the ASE during the period 2008-2013. This chapter reviews previouse studies on EM practices, and is organized as follows: Section 2.2 provides definitions of EM. Section 2.3 covers EM techniques. Section 2.4 illustrates EM motivations. Section 2.5 illustrates measurements of EM. Section 2.6 sheds light on the relationship between EM practices and CEOs' personal characteristics. The last section, 2.7, is a summary of the chapter.

2.2. DEFINITIONS OF EM

EM is an accounting treatment that managers adopt to manipulate the earnings of the company through accounting choices and discretionary accruals. Over the last two decades, a large volume of publications has described the nuances of how managers manage earnings. In most cases, EM occurs when managers have the flexibility to choose accounting methods such as revenue recognition and depreciation expenses, and employ discretion in financial reporting to estimate accruals and to alter financial reports (Healy and Wahlen 1999). Degeorge et al. (1999) divide EM behaviour into two categories: (1) misreporting earnings, involving the discretionary accounting of decisions and outcomes already realized; and (2) direct or real EM, involving the strategic timing of investment, sales, expenditure and financing decisions. The accepted view suggests that "EM involves either aggressive or conservative accounting procedures, used within the GAAP framework to bring about the

desired level of reported earnings that often mislead users of financial information" (Davidson III et al. 2007, p. 369).

Previous studies have examined various methods to discover how managers manage earnings (Barua et al. 2010b; Chang and Sun 2010; Jackson and Liu 2010). Several EM techniques are used to reduce or increase the reported earnings (Healy and Wahlen 1999). EM involves numerous accounting treatments that are accommodated within GAAP, either conservative or aggressive accounting procedures, aimed at the manipulation of financial information (Xiong 2006).

Generally, the different ways in which EM is described depend on the researcher's individual assumptions, opinion concerning behaviour and the incentive behind EM, since these are subject to numerous issues such as culture. This is in line with the view of Gong et al. (2008) who argue that differences in culture should be considered when types of EM and motivations are defined. Likewise, Geiger and Smith (2010) claim that motivations for and exercise of EM may be different in many countries. A research carried out by Noronha et al. (2008) reported that size and the firm's ownership structure have an effect on the nature of EM motivations or techniques. For instance, in China there is strong reason for publicly owned firms to manipulate EM in order to increase management compensation. While, firms under private ownership pay more attention to tax expense savings.

For the above reasons, there is no universally accepted definition for EM or full agreement on the concept. For example, Healy and Wahlen (1999, p. 7) state that, "EM takes place when managers use their discretion in financial reporting and in structuring transactions to change financial reports, in order to mislead some stakeholders about underlying economic performance of a firm; or to affect contractual outcomes relying on reported accounting practices". In a similar vein, another definition suggest that EM is "the process of taking

deliberate steps within the constraints of generally accepted accounting principles, to bring about a desired level of reported earnings" (Davidson III et al. 2007, p. 369). Roychowdhury (2006, p. 377) verified that EM practices emerge from standard daily business practices which are driven by the desire of managers to manipulate financial information and consequently mislead owners in understanding the company's future circumstances. Likewise, Schipper (1989) sees EM as a means of abusing the provisions of accounting systems to manipulate financial information by employing accounting techniques for a particular purpose. EM has also been considered as comprising methods that include taking decisions on the selection of financial procedure and deciding when to recognise expenses and revenue (Smith 1993).

Recently, Rahman et al. (2013) defined EM as the accounting procedures or the discretionary accruals control chosen by managers to make earnings meet the expected level, under pressure from owners and the constraints of GAAP. Given this definition, EM can be considered as structuring accounting transactions or using discretionary accruals based on managers' judgement and reporting them in financial statements so as to mislead some of the users concerning the underlying economic position and the company's future performance (Beneish 2001).

The main concept in the above definitions is that managers are motivated to exercise EM either to mislead some stakeholders regarding the company's underlying economic position, or to maximize their private gains within the company. Beneish (2001) argues that EM has two perspectives: opportunistic and informative. The aim of the former is to mislead owners or to ensure the manager's job security, compensation and reputation, while the latter seeks to disclose more firm-related information to the owners. In respect of Beneish's argument, Fields et al. (2001) mention that managers can use their discretion either opportunistically or to maximize the company's value. Additionally, Parfet (2000) claims that EM is not

completely a bad thing if rational and suitable practices are used in a well-managed company and if it delivers value to investors. In this regard, Ronen and Yaari (2008) classify definitions of EM in three groups: white, grey or black (see Table 2.1).

Table 2.1: Alternative Definitions of EM.

White	Grey	Black
EM is taking advantage of flexibility in the choice of accounting treatment to signal the manager's private information on future cash flows.	EM is choosing an accounting treatment that is either opportunistic (maximizing the utility of management only) or economically efficient.	EM is the practice of using tricks to misrepresent or reduce transparency of the financial reports
(Kasznik 1999); (Beneish 2001)	(Xiong 2006); (Roychowdhury 2006)	(Schipper 1989); (Healy and Wahlen 1999); (Davidson III et al. 2007)

Source: Ronen and Yaari (2008, p. 25)

Dechow and Skinner (2000) report that a common criticism of the above definitions is that they are unable to distinguish between EM action and financial reporting fraud; EM action falls within GAAP, while fraud contravenes it. They admit that there is only a fine line between the two concepts. It is not easy to identify aggressive EM by distinguishing opportunistic behaviour from legitimate accounting practices without considering the managerial motivation to manipulate financial information (see Table 2.2).

The above definitions indicate that EM is an accounting treatment that managers adopt to manipulate the earnings of the company in two ways: discretionary accruals and accounting choices. The current study will define EM as a method employed by managers in managing earnings through abusing the flexibility of accounting methods available in GAAP.

Table 2.2: The Distinction between EM and Fraudulent Financial Reporting.

	Accounting choices with GAAP	**"Real" Cash Flow Choices**
"Conservative" Accounting	➢ Overly aggressive recognition of provisions or reserves. ➢ Overvaluation of acquired in-process R&D in purchase acquisitions. ➢ Overstatement of restructuring charges and assets write-offs.	➢ Delaying sales. ➢ Accelerating R&D or advertising expenditures.
"Neutral" Earnings	➢ Earnings that result from a neutral operation of the process.	
"Aggressive" Accounting	➢ Understatement of the provision for bad debts. ➢ Drawing down provisions or reserves in an overly aggressive manner.	➢ Postponing R&D or advertising expenditures. ➢ Accelerating sales.
	Violates GAAP	
"Fraudulent" Accounting	➢ Recording sales before they are realizable. ➢ Recording fictitious sales. ➢ Backdating sales invoices. ➢ Overstating inventory by recording fictitious inventory.	

Source: Dechow and Skinner (2000, p. 239).

2.3. EM TECHNIQUES

This section discusses various EM techniques. In accordance with prior studies, it is appropriate to define EM as a method of selecting or violating GAAP in order to influence the reported earnings. Earlier researchers report that three techniques can be used in earnings manipulation: income smoothing, big bath and accounting choices. (See Table 2.3.)

2.3.1. INCOME-SMOOTHING TECHNIQUE

According to Barnea et al. (1976, p.110) income smoothing is "the deliberate damping of fluctuations about some level of earnings that is currently considered to be normal for the firm". There are two types of smooth-income streams: first, naturally smoothed earnings, resulting from an income-generating process; and second, those that are intentionally smoothed by managers, resulting from real smoothing techniques (Eckel 1981; Albrecht and Richardson 1990).

Income smoothing is a common form of EM due to its compatibility with different earnings objectives. The technique is used to reduce variance in profit over a given period (Sun and Rath 2010). For example, managers might use income-decreasing EM behaviour when a company tends to shift excess earnings in profitable years to compensate for loss in less profitable years. Excessive levels of provision for depreciation allowance and doubtful debts may be used by managers in profitable years and are reversed in periods when losses are incurred. This technique is called "cookie jar reserves" because high provisions are reported as cookies saved in a jar which can be used at the manager's discretion (Rahman et al. 2013). In this specific situation, a company may recognize a larger than essential loss in order to save for a better tomorrow, since the likelihood of meeting earnings targets in the present period is low (Degeorge et al. 1999). In this regard, DeFond and Park (1997) document that in order to even earnings out, managers are inclined to move them from profitable to bad years. Conversely, when the present year's profits are lower than the previous year's earnings

or the results for the current year are negative, earnings may be managed upward through aggressive recognition of income in the current year or through deferring expenses to the next year. For instance, assets may be recorded for expenditures, which should only be met when incurred, such as research and development expenditure (R&D). For example, Markarian et al. (2008) carried out a study using data from Italian listed companies for the year 2003; they examined the association between the choice of R&D costs and EM incentives. Their results reveal that Italian companies use R&D costs as a method of manipulation, suggesting that those with low profit are more likely to capitalize R&D expenditure, whereas those with high profit tend to expense R&D costs. Likewise, Gunny (2010) conducted a study based on a sample of all companies with available financial information from the Compustat industrial database over the period of 1988-2002. The findings reveal that companies manage earnings in order to meet benchmarks by reducing the discretionary investment of R&D costs and Selling, General and Administrative expenses (SG&A) to decrease expenses. Furthermore, Rusmin et al. (2012) examined 238 Asian transportation companies over the period 2006-2009 to see whether managers practice income-smoothing behaviour to meet or beat earnings targets. Their findings show that managers are motivated to manage earnings downward when the company's current earnings exceed the previous year's. On the other hand, they are more likely to manage earnings upward if the company's current earnings are less than the previous year's. In summary, income smoothing is considered as a tool used by managers to mislead stakeholders regarding the firm's risk level or financial performance in order to reduce the cost of capital and gain private benefits (Shubita 2015).

2.3.2. BIG BATH TECHNIQUE

The big bath technique of EM suggests that companies experiencing a low profit in a current year might take discretionary accrual write-downs to decrease even further the present year's earnings (Jordan and Clark 2011). Thus, this technique is used when a firm's earnings in a

given year are unable to meet earnings forecasts or when a firm decreases the level of present earnings to improve the level of the subsequent year. Watts and Zimmerman (1986) and DeAngelo (1988) claim that big bath accounting is used to describe large earnings reducing write-offs or "income decreasing EM" in profit and loss statements. In this regard, Healy (1985) found that managers save the given year's earnings by using income-decreasing EM when they observe that current earnings are less than the future bonus plan. In addition, when the bonus schemes have already been achieved, managers are more likely to manage earnings downwards for use in the next year. Furthermore, when a company's current earnings are below expectation and unable to meet targets, income-decreasing practices are employed for use in the following year. Likewise, McNichols and Wilson (1988) reported that managers manipulate earnings by recording future expenses in a given period when they know that the present earnings are inadequate to meet earnings forecasts.

Moore (1973) examined the relationship between discretionary accrual choices and no routine CEO changes, arguing that new managers are more likely to decrease earnings in their first year to improve reported financial information in future years, compared with previous managers' results. This allows new managers to blame the previous bad year on the managers who came before them. In a similar vein, Pourciau (1993) provides empirical evidence that new executives are more motivated to manage discretionary accruals in a way that decreases profit in the year the CEO changes and increases earnings in the following year to engage in income-decreasing EM in their first year.

2.3.3. ACCOUNTING-CHOICE TECHNIQUE

Under accounting standards, EM occurs when managers have the flexibility to choose the accounting method, such as revenue recognition, depreciating expenses, investments and leases and employing discretion in financial reporting to estimate accruals and to alter financial reports (Healy and Wahlen 1999; Nelson et al. 2002; Aljifri 2007). In this regard,

Poitras et al. (2002) investigated Singaporean firms based on a sample of 44 public companies and concluded that firms abuse the flexibility offered by GAAP in order to manipulate earnings using the sales revenue and assets depreciation method.

In term of inventory-estimated methods, it is argued that companies prefer to employ a First-in-first-out (FIFO) method to account for inventory costs when they tend to report higher earnings. Conversely, they are more likely to apply Last-in-first-out (LIFO) when they want to show lower earnings. In this respect, Sweeney (1994) and Aljifri (2007) reported that FIFO and LIFO are the most common methods of manipulating inventory valuation. Their studies show that FIFO is used when managers desire to increase earnings, particularly when there is an increase in prices. Sweeney argues that companies shift between inventory cost methods to manipulate earnings when they are in danger of loan default. By the same token, Han and Wang (1998) document evidence that firms operating in the oil sector used inventory valuation methods as a technique to reduce their reported earnings over the Gulf crisis period.

In addition, depreciation techniques such as sum-of-the-year's digits, straight-line and double-declining balance are other accounting choices available to managers. While the same amount of annual depreciation expense is offered by the straight-line method, the sum-of-the-year's digits and double-declining balance methods show the highest depreciation figures (lower income) in the first year and lowest amount of depreciation (higher income) in the final year of the asset's useful life. Thus, in order to achieve their earnings target, managers are more likely to use depreciation methods that offer them better results. Furthermore, deferred tax may be preferred by managers to improve earnings. They may also reduce the current year's expenses through capitalizing expenditure. As evident from the above, managers have different techniques to manage earnings which will not be easily observable by outside investors. For this reason, many EM studies have focused on EM incentives. The following section will discuss EM motivations.

Table 2.3: Earnings Management Techniques.

Techniques	Aims	Common Areas	Types	Examples
Income Smoothing (Cookie Jar Reserves)	➢ Reducing the variance in profit over the period.	➢ Estimating sales returns and allowances. ➢ Estimating bad debt write-offs. ➢ Estimating warranty costs. ➢ Estimating pension expenses. ➢ Terminating pension plans. ➢ Estimating percentage of completion for long-term contracts.	➢ Income Increasing. ➢ Income Decreasing.	➢ Defer Expenses. ➢ Defer excess incomes.
Big Bath	➢ Reporting estimated expenses on the high side to avoid possible earnings surprises later.	➢ Operations restructuring. ➢ Troubled debt restructuring. ➢ Asset impairment and write-down. ➢ Operations disposal.	➢ Income Decreasing.	➢ Writing off R&D costs.
Accounting Choices	➢ Using flexibility of GAAP to alter financial reports.	➢ Revenue recognition. ➢ Depreciation expenses. ➢ Inventory recognition. ➢ Investments and leases.	➢ Income Increasing. ➢ Income Decreasing.	➢ Using FIFO ➢ Capitalizing Expenditures. ➢ Deferred Tax. ➢ Double-Declining Balance. ➢ Using LIFO.

Source: Author's development

2.4. EM MOTIVATIONS

Previous publications have reported that managers have both personal and business incentives to report impressive and satisfactory earnings levels in their financial reports, on a consistent basis (e.g. DeFond and Park 1997; Greenfield Jr et al. 2008). Some have investigated different aspects of managers' incentives to manipulate the reported earnings (Watts and Zimmerman 1986; Gaa and Dunmore 2007; Habbash and Alghamdi 2015; Hsiao et al. 2016).

This section covers various motivations for EM, classified into six groups: (1) capital market expectations; (2) management compensation; (3) lending contracts; (4) regulatory considerations; (5) political cost, and (6) tax avoidance.

2.4.1. CAPITAL MARKET EXPECTATIONS MOTIVATION

Capital market expectations are defined as "the Investor's prospects regarding the risk and return of company's future performance" (ALghamdi and Ali 2012, p. 32). The use of financial information to influence stock prices is considered one reason for EM, and consequently viewed as an opportunistic action. Hence, previous researchers have reported that managers are more likely to be involved in EM in order to maintain or enhance stock prices (Friedlan 1994; Burgstahler and Dichev 1997; Nelson et al. 2002; Graham et al. 2005). For example, a study carried out by Nelson et al. (2002) identified EM motivations by using a questionnaire survey based on a sample of 253 USA external auditors. Their findings reveal that several incentives act as motivation for managers to practice EM, such as influencing the stock price, achieving analysts' forecasts, managers' remuneration objectives and increasing future performance for various targets.

Graham et al. (2005) interviewed and surveyed 400 CEOs working in USA companies and used descriptive and correlation matrix analysis to find that managers are motivated to engage in EM practices in order to maintain and increase stock prices, consequently improving their external reputation and communicating future growth forecasts. In the case of the UK, Athanasakou et al. (2009) examined whether companies engaged in EM practices to meet analysts' earnings expectations during the period 1994-2002. Their findings reveal that firms are more likely to be involved in EM practices to meet earnings expectations or to avoid negative earnings surprises. Similarly, Burgstahler and Eames (2006) found that managers of US companies have more motivation to report earnings that meet or beat analysts' expectations. Ebaid (2012) investigated whether Egyptian listed companies were involved in EM practices in order to meet or beat earnings benchmarks over the period 1997-2007. Their results show that these companies are more likely to engage in EM behaviour to avoid reporting losses and earnings decreases. Their findings are consistent with those of Glaum et al. (2004), who used a sample of 38,714 USA and 3,524 German companies to identify EM motivations and found that both practiced EM to avoid losses and a decrease in earnings in order to meet analysts' earnings forecasts.

A comparative study conducted by Othman and Zeghal (2006) identified EM motivations in a sample of 1,674 Canadian companies and 1,470 French company-year observations over the period 1996-2000. Their findings indicate that EM practiced in French companies is mainly related to the effective tax rates and contractual debt incentives. On the other hand, market-related incentives such as subsequent equity offerings and initial public offerings are strong motivations for EM in Canadian companies.

Peek (2004) conducted a study using a sample of 134 non-financial companies listed on the Amsterdam Stock Exchange over the period 1989-2000, using discretionary accruals as a proxy for EM to examine the motives of Dutch managers to engage in EM practices. The

results show that managers of Dutch companies tend to engage in EM before extraordinary items in order to reveal better performance. Likewise, in a sample drawn from Brazilian public firms over the period 1995-1999, Martinez (2005) employed a multiple regression technique to estimate discretionary accruals with the aim of achieving a better understanding of the relationship between capital market incentives and EM. The study reveals that Brazilian companies tend to engage in EM practices to prevent reporting losses, to achieve sustainable performance and to maintain stable cashflow.

By using information collected through 464 questionaries and 16 interview surveys in Egypt, Kamel and Elbanna (2009) documented that the primary motivations for managers' involvement in EM are: to enhance their chances of obtaining external finance, to report a better income, to sustain the previous year's performance, to accomplish high stock valuation and to avoid reporting losses.

According to another study conducted by Matsumoto (2002), based on a sample of non-financial US companies over the period 1993 to 1997, firms with high growth tend to manage earnings to avoid negative market response to bad earnings news. Likewise, Madhogarhia et al. (2009) used Compustat data on all US companies over the period 1997-2001 to investigate EM practices of growth versus value companies. Their findings show that growth companies are more likely to aggressively manage their earnings upward and downward than are value firms.

In summary, capital market expectations have been recognized as the key important reason for managers to engage in EM practices. This is supported by several studies (e.g. Teoh et al. 1998; Noronha et al. 2008; Habbash and Alghamdi 2015). For example, managers become involved in income-increasing EM to avoid potential losses and decrease in earnings (Burgstahler and Dichev 1997; Glaum et al. 2004). They also manipulate earnings upward or

downward to meet expected dividend levels (Daniel et al. 2008; Atieh and Hussain 2012; Ebaid 2012), to maintain or increase share prices (Graham et al. 2005; Ambrose and Bian 2010) and to meet or beat analysts' earnings forecasts (Burgstahler and Eames 2006; Ebaid 2012).

2.4.2. MANAGEMENT COMPENSATION MOTIVATION

A compensation contract between managers (agents) and owners (principals) motivates managers to engage in EM practices (Cheng and Warfield 2005), since this contract is tied to the firm's performance. Thus, managers are encouraged to practice income-increasing EM in order to maximize their benefits. Bergstresser and Philippon (2006) report empirical results, which show that employing discretionary accruals to manipulate the earnings figure is more noticeable in companies where the executives' bonus is tightly linked to the value of options and shareholdings. Several researchers have investigated the effect of choice of accounting practice on compensation. For instance, a study carried out by Healy (1985) reports that increasing the size of a bonus plan can, to a certain extent, be an incentive to manipulating earnings. This suggests that managers' choice of accounting accruals is closely associated with income-increasing motivations for their bonus plans. In another words, Healy's study found a strong association between bonus plans and discretionary accruals. Moreover, by using the Jones and Modified Jones models in measuring discretionary accruals, Dye (1991) demonstrated that using accounting numbers in compensation contracts is considered a most important internal incentive for engaging in EM behaviour. Therefore, managers tend to use EM to improve and increase their compensation as their bonuses are often tied to the company's earnings.

Similarly, a study conducted by Guidry et al. (1999) examines whether managers of USA companies manage reported earnings to maximize their bonus schemes. The results of the study reveal that their bonus plans are a strong motivation for them to make discretionary

accrual decisions in order to maximize their bonus schemes. Furthermore, using a sample collected from the annual compensation review of the *Wall Street Journal*, Baker et al. (2003) examine whether the structure of management compensation, specifically stock options, is associated with discretionary accruals as a proxy for EM behaviour. Their findings reveal that higher compensation options are associated with discretionary accrual choices in periods before option-award dates. They argue that the relationship between compensation options and EM practices is high when executives are seeking to announce earnings before the date on which the options are granted. Consequently, they conclude that management compensation is an opportunistic motivation for managers to engage in EM actions.

Leuz et al. (2003) identify EM motivations by examining a sample from 31 countries. The study investigates the effect of managers' compensation plans, stock option and bonus schemes on EM practices. They found that these compensation packages are connected to the reported earnings figure, thereby creating the motivation.

In particular, recent evidence suggests that large option packages motivate managers to be involved in EM. For example, based on a sample of 37 companies listed on the Indonesia Stock Exchange, MeilaniPurwanti (2013) examined the effect of EM and voluntary disclosures on information asymmetry. The study concludes that, when the firm has a bonus plan, managers will shift earnings from the future into the present period in order to enhance current earnings. Consequently, this increases their own compensation.

Briefly, most management compensation and bonus plan contracts are associated with the firm's performance. Thus, managers have internal motivation for manipulating earnings using different methods. For instance, managers are more likely to shift earnings from the future to the current period in order to increase earnings-based bonus awards (Watts and Zimmerman

1986; Guidry et al. 1999), or use buyback policy to increase the share price, consequently enhancing compensation (Balachandran et al. 2008).

2.4.3. LENDING CONTRACTS MOTIVATION

Avoidance of breach of debt convenant is another contractual motivation for EM. In this kind of EM, managers are contractually motivated to transfer wealth from debt-holders to shareholders through, for instance, excessive dividend payments, increasing their borrowing and allowing the firm's net worth to fall below the minimum level, which has not been agreed with their lenders (Aljifri 2007). According to the debt covenant perspective, creditors impose restrictions on the share buybacks, on dividend payment and on the issue of more loans in terms of reported earnings figures and ratios, so as to ensure the repayment of the company's borrowing (Beneish 2001; Habbash and Alghamdi 2015). Thus, in firms with a high financial leverage ratio, managers have strong motivations to manipulate their reported earnings so they do not breach their debt covenant (Dichev and Skinner 2002). DeFond and Jiambalvo (1994) similarly investigated the behaviour of both abnormal accrual and working capital in companies which are technically unable to keep their debt covenant. Their findings reveal that firms are more likely to report significantly positive abnormal and working capital accrual in the pre-violation year. Their result also suggests that changes in management and / or going concern qualification are likely to result in negative violation-year accruals. The abnormal total accruals show a positive result when companies that meet these conditions are excluded from their sample, but no significant variation from zero. However, their findings show a significant positive working capital accrual, which indicates that these accruals are manipulated even during a covenant-violation year.

In light of this reasoning, Schipper (1989) and Healy and Wahlen (1999) examined whether companies are inclined to breach their debt-lending covenants by changing accounting methods such as earnings recognition, accounting of depreciation, inventory methods and

accounting estimates, or using other transactions that can increase income and thus avoid breaching their debt covenant. Skipper and Healy did not find evidence of EM in these companies. Conversely, DeFond and Park (1997) argued that companies who violated their lending covenant used accruals to improve their income in the year before the violation.

Jaggi and Lee (2002) empirically investigated whether the creditors' waivers of debt-covenant violations influence the likelihood of income-increasing or income-decreasing discretionary accruals. Using data collected from annual reports of 216 USA companies during 1989-1996, their findings reveal that managers use positive discretionary accruals when companies are granted waivers after violation of the debt covenant. However, managers use negative discretionary accrual choices when waivers are not granted. Rodríguez-Pérez and van Hemmen (2010) used panel regression to estimate discretionary accruals and to investigate the relationship between debt and earnings manipulating among listed Spanish companies. They found that marginal increases in lending produce incentives for managers to use EM. Also, empirical evidence showed that managers are inclined to manipulate earnings so as to decrease the cost of external financing and also to avoid covenant restrictions (Dechow and Skinner 2000).

Based on a sample of 15,000 USA firms during 1992-2005, a study undertaken by Daniel et al. (2008) reveals that companies use earnings manipulation to meet dividend expectations. Their results report that this motivation is obvious only in firms with a high level of debt to avoid breaching their debt covenant.

In conclusion, external contracts, for example debt covenants, motivate managers to manipulate reported earnings by using income-decreasing EM in the case of current good performance, in order to save income for future bad performance with the aim of meeting the contract requirements, and vice versa (Kanagaretnam et al. 2003).

2.4.4. REGULATORY MOTIVATION

Regulatory considerations including industry regulations induce managers to manage earnings with the aim of satisfying specific industry regulations and to reduce the risk of political exposure (Habbash and Alghamdi 2015). Previous studies have reported that industry regulations might create pressure for managers to exercise EM action (Lim and Matolcsy 1999; Belski et al. 2008). For example, using data collected from annual reports of the 500 largest Australian companies listed on the ASE, Lim and Matolcsy (1999) investigated the relationship between EM activities and product price controls recognized by the Australian government at the beginning of the 1970s. Their results show that Australian companies are inclined to be involved in EM income increasing when they are going public, in order to control the share price. By using 483 quarterly earnings statements of 47 insurers over 1989-1992, Christensen et al. (1999) examined the relationship between EM and regulatory standards. The findings of their study confirm that meeting regulatory standards is one motivation for managers to engage in EM practices.

Navissi (1999), using the Modified Jones model to measure discretionary accruals, investigated the relationship between discretionary accruals made by New Zealand manufacturing companies and Price Freeze regulations issued in 1971-1972. The study found that income-decreasing discretionary accruals are applied for price increases, suggesting that companies are more likely to be involved in EM actions due to the financial distress caused by the introduction of a price freeze regulation. Likewise, a study carried out by Gill-de-Albornoz and Illueca (2005) examined the effect of price regulation on the accounting strategies of all Spanish electricity firms over the period 1991-2001. The outcome of the study provides empirical evidence that government price regulations motivate managers to engage in EM behaviour.

Using the data of listed Chinese corporations during the period 1996-1998, Haw et al. (2005) investigated income-increasing EM as a reaction to new statutory regulations, requiring at least 10% ROA for companies that seek to offer shares or issue new bonds. The findings confirm that those government regulations created strong motivations for EM practices.

In summary, regulatory considerations put pressure on managers to manage reported earnings upward or downward in order to show their compliance with regulations. For example, managers of companies subject to higher adverse political or regulatory pressure have incentives to manipulate reported earnings in a way that allow their companies to appear less profitable, to reduce potential political exposure (Hsiao et al. 2016). However, companies are inclined toward income-increasing EM when they are going public, in order to increase the share price (Lim et al. 2007).

2.4.5. POLITICAL COST MOTIVATION

Political costs are a concern for companies and may lead managers to manage reported earnings. Therefore, firms may make use of annual financial reports to report more or fewer earnings to reduce government interference (Aljifri 2007). For example, managers may engage in EM and present a low profit to reduce political risk (Habbash and Alghamdi 2015; Hsiao et al. 2016). Watts and Zimmerman (1986) documented that political pressure motivates companies to engage in income-decreasing EM, avoiding public attention because of their high reported earnings, therefore reducing the impact of adverse political actions and minimizing expected cost.

Han and Wang (1998) investigated EM practices during the first Gulf Crisis and reported that companies in the US oil and gas sector were more inclined to manage their earnings downward during the last six months of their financial year, so as to decrease the impact of political costs which may result from possible unfavourable political action (e.g. antitrust

government policies and regulations). Thus, by reporting lower earnings, managers might reduce political costs in various ways (Key 1997). Likewise, Monem (2003) revealed that Australian companies engage in income-decreasing EM in order to decrease political costs.

MeilaniPurwanti (2013) argues that in large firms with a high political cost, managers are more likely to delay reporting earnings for the current period and purposely report these earnings in future periods in order to reduce reported earnings for the current period. This is because political costs arise when high profitability attracts the attention of consumers and the media. Hsiao et al. (2016) examined whether US oil and gas companies were involved in EM practices over the 2011 Arab Spring period. Their findings show that US oil and gas companies engaged in income-decreasing EM practices at this time so as to reduce public scrutiny and mitigate potential political costs.

In summary, political cost creates motivations for managers to make accounting choices to show lower reported earnings (income-decreasing EM), in order to reduce potential political costs generated by possible adverse political actions such as government antitrust regulations and policies (Hsiao et al. 2016).

2.4.6. TAX AVOIDANCE MOTIVATION

Managers' response to anticipated changes in tax policy has been identified as one of the reasons why they manage earnings (Adhikari et al. 2005). When the figures and ratios are the basis for tax calculation, tax avoidance motivates managers to employ EM actions. For example, Lemke and Page (1992) examined the economic determinants of accounting policy choice among 287 UK listed companies in 1983. Their findings show that these companies chose income-decreasing accruals to influence tax policy, suggesting that they are willing to reduce reported earnings in order to decrease tax costs. Adhikari et al. (2005), using data from the 177 largest companies in Malaysia during 1994-1997, examined the relationship

between the effective tax rate and EM in a non-western context. Their findings suggest that for Malaysian companies, the motivation to manipulate reported earnings can be related to tax policy changes. Similarly, a comparative study conducted by Othman and Zeghal (2006) identified EM motivations in a sample of 1,674 Canadian companies and 1,470 French company-year observations over the period 1996-2000. Their findings indicate that EM practiced in French companies is mainly related to the effective tax rates and contractual debt incentives. On the other hand, market-related incentives such as subsequent equity offerings and initial public offerings are strong motivations for EM in Canadian companies. Another study undertaken by Goncharov and Zimmermann (2006) examined the impact of tax legislation on EM among Russian listed companies and reported that firms were involved in EM to minimize tax expenses. Coppens and Peek (2005) investigated whether private European companies were using EM concluding that, in the absence of pressure from capital market expectations, companies intend to engaged in EM in order to avoid the tax burden. The study also reported that, in countries where there are strict tax regulations, private companies are more likely to report even small losses and that tax motivations affect EM actions. Rahman et al. (2013) suggested that shareholders' opinions and decisions, government regulations and tax laws motivate companies to manage their earnings by changing financial statements.

In summary, tax avoidance motivation is another reason to practice EM. For example, if the aim of managers is to maximize company value, reducing the tax cost will provide substantial motivation to manipulate taxable income. For this reason, managers are more likely to engage in income-decreasing EM to achieve tax savings, consequently minimizing the potential tax expenses of the company (Guenther 1994).

2.5. MEASUREMENTS OF EM

EM is grouped into real economic action and accounting action (Kiattikulwattana 2014). Real economic action is also known as real-based or transaction-based EM, and this type has an impact on cash flow. Healy et al. (1999); Dechow and Skinner (2000) and Roychowdhury (2006) used the acceleration of sales, the alteration of shipment schedules, the delay of R&D and maintenance expenses, and increased production as examples of real EM techniques which managers might employ. Roychowdhury (2006) demonstrates that manipulation of sales, reducing discretionary expenses (e.g. R&D, maintenance and advertising), and firm's overproduction activities can be detected from abnormal production costs. Roychowdhury (2006) used three measurement: abnormal cash flow from operations, abnormal discretionary expenses, and abnormal production, to detect real EM. Gunny (2010) modified Roychowdhury (2006) model to develop other measures to identify abnormal R&D, abnormal SG&A, abnormal gains on sale of assets, and abnormal production costs. The accounting action of EM is also known as accrual-based EM, in which certain accruals are manipulated with no direct cash flow effect (Kiattikulwattana 2014). In addition, the literature on EM suggests that managers tend to manage earnings through accruals since it is easier to manipulate them and harder to be observed by outsiders. Thus, abnormal accrual values are employed as a proxy for EM. In general, researchers have used three main approaches in examining the existence of EM: aggregate accruals (Healy 1985; DeAngelo 1986; Jones 1991; Dechow et al. 1995; Han and Wang 1998; Bowman and Navissi 2003; Kothari et al. 2005); specific accruals, such as loan-loss provisions and the loss reserve (McNichols and Wilson 1988; Beneish 2001; Beatty et al. 2002; Beaver et al. 2003); and frequency distribution of earnings (Burgstahler and Dichev 1997; Degeorge et al. 1999). Each of these approaches will be briefly discussed in the following sections. (See Table 2.4).

2.5.1. AGGREGATE ACCRUALS APPROACH

There are several approaches to measuring EM, but the most common used in accounting studies is the aggregate accruals approach (Dechow et al. 1995). Aggregate accruals have two components: first, Discretionary Accruals (DA) (managed by managers) which represent EM; and second Non-Discretionary Accruals (NDA), which are influenced by external factors and thus outside the control of managers. The common issue faced by EM methods is how to identify and separate the total types of accrual into the two components (Jones 1991), and numerous models have been presented in the accounting literature. These range from simple models, whereby EM is measured by the perceived change in total accruals, to more advanced ones in which aggregate accruals are divided into the DA and NDA types. The following sub-sections discuss the most common models in the total accruals approach.

2.5.1.1. THE HEALY (1985) MODEL

The Healy (1985) model was the first attempt to estimate discretionary accruals using aggregate accruals scaled by the lagged value of aggregate assets in the given year (van Praag 2002). This model attempts to measure aggregate accruals by deducting reported earnings from operating cash flow. Healy's implicit supposition is that, in the absence of EM, the expected aggregate accruals will be zero in the estimation period. Although the Healy model assumes that the total accruals comprise DA and NDA, it does not separate them. Healy argues that systematic EM occurs in every period. This model is presented as follows:

$$\mathbf{EDA_{it} = TA_{it} / A_{it-1}} \qquad \mathbf{[2.1]}$$

Where

EDAit	Estimated discretionary accruals for the firm i in year t.
TAit	Total accruals, defined as the difference between reported earnings and operating cash.
Ait – 1	The lagged value of total assets at the beginning of the year.

The primary supposition of Healy's model is that the volume of NDA is estimated to be zero over the estimation period. This assumption has been criticised for several reasons: First, their volume is not expected to be zero in any given period because it varies depending on the firm's conditions and economic circumstances (Kaplan 1985). Second, due to the influence of depreciation expenditure, the level of total accruals including NDA is usually negative for many firms (Perry and Williams 1994).

2.5.1.2. THE DEANGELO (1986) MODEL

The second attempt to estimate DAs was introduced by DeAngelo (1986), who eliminated the weaknesses of Healy's model by not recognising a benchmark for the anticipated accruals (Aljifri 2007). DeAngelo (1986) measures DA through computation of the variance of the present year's DA and the whole accrual in the last year, since NDA may be constant over time. In order to check this assumption, DeAngelo defines aggregate accruals as the sum of DA and NDA and calculates total accruals as the difference resulting from deduction of net income from operating cash flow. In this model, NDA is measured as the total accrual of the previous period scaled by the lagged value of total assets.

$$\mathbf{EDA_{it} = (TA_{it} - TA_{it-1}) / A_{it-1}} \qquad \mathbf{[2.2]}$$

Where

EDA_{it} Estimated non-discretionary accruals for the firm i in year t. measured as the difference between total accruals in the event year and total accruals in the estimated year.

TA_{it} Total accruals, defined as the difference between net income and operating cash.

A_{it-1} Lagged value of total assets at the beginning of the year.

DeAngelo (1986) model works on the assumption that NDA follow a random walk and that any change in them is constant over time and is therefore approximately zero in the estimation period. However, this has been criticised by several EM researchers, since the

NDA should change in response to changes in the firm's circumstances and not be constant over time (e.g. Aljifri 2007; Islam et al. 2014).

Although the Healy (1985) and DeAngelo (1986) models are considered as the simplest models, researchers are unwilling to measure DA using them because they neglect the fact that the firm's economic circumstances affect the NDA (e.g. Dechow and Sloan 1991; Jones 1991).

2.5.1.3. THE INDUSTRY (Dechow and Sloan 1991) MODEL

Due to the shortcomings of the Healy (1985) and (DeAngelo 1986) models which assume the constancy of the NDA over time, Dechow and Sloan (1991) introduced the industry model to capture EM. They argued that companies in the same sector have similar variations in NDA, and therefore that they are equal to the median of aggregate accruals in the given year divided by the lagged value of aggregate assets for all non-sample companies in the same industry. Therefore, in the industry model, NDA are measured as follows:

$$\mathbf{NDA}_{it} = \alpha_{1\,it} + \alpha_{2\,it}\,\mathbf{Median}_{j}\,(\mathbf{TA}_{it-1}) / \mathbf{A}_{it-1} \qquad \textbf{[2.3]}$$

Where:

NDA it	Non-discretionary accruals for the firm i in the year t, measured by using the difference between total accruals in the event year and total accruals in the estimated year.
$\text{Median}_{j}\,(TA_{it-1}) / A_{it}$	Median value of overall accruals industry, firm i in year t scaled by lagged value of total assets.
TA_{it}	Total accruals, resulting from the difference between net income and operating cash flows.
A_{it-1}	Lagged value of total assets at the beginning of the year.
$\alpha_{1\,it}$ and $\alpha_{2\,it}$	Firm-specific parameters as estimated by using Ordinary Least Squares (OLS) on observations in the estimated period.

Although the industry model attempts to avoid the shortcomings of the Healy (1985) and DeAngelo (1986) models, it has two weaknesses. First, it neglects the variation in NDA that is common in the same industry. Therefore, if changes in NDA reflect responses to unstable economic circumstances of the company, then DA may be missclassified as NDA. Second, it ignores the changes in DA which show correlation across companies in the same sector. Thus, the model may not properly distinguish DA from NDA (Jones 1991; Dechow et al. 1995).

2.5.1.4. THE JONES (1991) MODEL

This is the most common model used in studies of total accruals, since it can classify accruals into DA and NDA (Peek et al. 2013; Islam et al. 2014). It is based on the assumption that the total accruals could be the result of managers' interventions in the financial reporting process, and from changes in a company's economic conditions (Kaplan 1985). Jones (1991) believes that changes in revenue would bring changes in operating capital, causing variations in accruals. On the other hand, depreciation expense would decrease the accruals (Chen 2012). Therefore, Jones suggests a linear regression-based model that controls for the change in revenues and depreciation to estimate DA. She uses a two-stage producer to partition aggregate accruals into two components: DA and NDA (Xiong 2006). In the first stage, Jones relates NDA to the change in revenue (ΔREV) and gross property, plant and equipment, all standardized by the lagged value of total assets using time-series data as follows:

$$\mathbf{NDA_{it} = \alpha_1 (1 / A_{it-1}) + \alpha_2 (\Delta REV_{it} / A_{it-1}) + \alpha_3 (PPE_{it} / A_{it-1}) + \varepsilon_{it}} \qquad \mathbf{[2.4]}$$

Where

TA_{it}	Total accruals for the firm i in year t.
ΔREV_{it}	Change in revenue for the firm i in year t scaled by total assets.
PPE_{it}	Gross property, plant and equipment for the firm i in year t scaled by assets.
A_{it-1}	Lagged value of total assets at the beginning of the year.

α_1, α_2, and α_3 : Firm-specific parameters.

ε_{it} The residual.

In the next phase of DA estimation, the parameters α1, α2, and α3 from equation (2.4) are used to analyse the data from the given year t. The following equation is used to estimate DA:

$$\mathbf{DA_{it} = [TA_{it} / A_{it-1}] - [\alpha_1 (1 / A_{it-1}) + \alpha_2 (\Delta REV_{it} / A_{it-1}) + \alpha_3 (PPE_{it} / A_{it-1}) + \varepsilon_{it}]} \quad \mathbf{[2.5]}$$

Where

DA_{it} : Discretionary accurals for the firm i in period t.

The Jones model includes changes in revenue (ΔREV) and fixed assets (PPE) to control for the company's circumstances and depreciation respectively. However, controlling for the change in revenue and depreciation of fixed assets without including the change in accounting receivables in the event period leads to missing a factor that managers could use to alter the earnings (Hoang 2014). The Jones model is based on the assumption that the revenues are NDA, since revenues are likely to be manipulated by managers (e.g. increasing sales recognition near year-end period). Employing the Jones model will lead to the removal of some DA. Aljifri (2007) asserts that in the Jones model, the manipulation of the sales revenue is neglected since it supposes the total sales revenue of a given year is not controlled by managers and estimates are constant. Therefore, the Jones model does not consider this discretionary component of accruals (Islam et al. 2014). Despite the prevalence of this model, it has been criticized for providing biased and non-reliable assessments of DA (Stubben 2010).

2.5.1.5. THE MODIFIED JONES (1995) MODEL

In an attempt to overcome the shortcomings of the original Jones model, which assumes that revenue cannot be controlled by managers and is therefore NDA, Dechow et al. (1995) proposed a modified version to minimize the error of measurement in DA through deduction of the change in debtors accruals (ΔREC) from the change in revenues (ΔREV) to omit the

element in the change in revenue that is expected to be controlled by managers' discretion (the Modified Jones Model relaxes the assumption that revenues are exogenous). Thus, this model uses changes in cash revenue rather than changes in total revenue since some credit revenue might be discretionary in the event period (Stubben 2010). The modified Jones (1995) model uses the estimated parameters of equation (2.4) (α1, α2, and α3) in the following equation:

$$\mathbf{DA_{it} = [TA_{it} / A_{it-1}] - [\alpha_1 (1 / A_{it-1}) + \alpha_2 (\Delta REV_{it} / A_{it-1} - \Delta REC_{it} / A_{it}) + \alpha_3 (PPE_{it} / A_{it-1})]} \quad \textbf{[2.6]}$$

Where:

ΔREC_{it} Change in accounts receivable (debtors) for the firm i in given year t.

Dechow et al. (1995) believe that the variation in accounts receivable in the given year is wholly due to DA because it is the result of managers' discretion in credit sales rather than cash sales. However, the assumption that the entire change in receivables in the period is DA overestimates these accruals to the extent that the change in receivables results from a firm's economic conditions.

It is necessary to mention that the standard Jones (1991) model was originally developed in a time-series approach, which in turn needs a sufficiently long time-series of data (e.g. at least 8-10 years) to provide effective estimator coefficients. However, employing a time-series method has several limitations. First, it raises the possibility of survivorship bias problems (DeFond and Jiambalvo 1994; Peasnell et al. 2000). Second, the assumption that the estimation of changes in gross PPE and revenues are constant over time might not be appropriate. In an attempt to avoid these problems, DeFond and Jiambalvo (1994); Subramanyam (1996) and Becker et al. (1998) employed the cross-sectional version of the Jones (1991) model, by resolving equation 2.4 (stage one) for each industry on a year-specific rather than a company-specific basis, and then estimating the coefficients of predicted DA for each company through equation 2.5 (stage two), to control for year and industry-specific

influence. Recently, several studies have preferred to use the cross-sectional approach over the time-series approach to avoid the limitations embedded in the latter (Xie et al. 2003b; Bergstresser and Philippon 2006; Haniffa et al. 2006; Iqbal et al. 2009; Chen et al. 2010; Katmun 2012; Peek et al. 2013; Islam et al. 2014).

2.5.1.6. THE PERFORMANCE-MATCHED (Kothari et al. 2005) MODEL

Several scholars have tried to evaluate the specification and accuracy of the standard Jones (1991) model. For example, Dechow et al. (1995); Kasznik (1999) and Kothari et al. (2005) found that the findings predicted in the Jones models show that the DA have both a positive and significant relationship to the company's performance measured by return on assets (ROA), suggesting that the Jones models do not control for the firm's economic conditions. To overcome this issue of a company's financial performance-related misspecification, several attempts have been made to eliminate the possible impact of the relationship between DA and ROA as a proxy for the company's performance by applying a matched-firm performance or portfolio approach to adjust the DA (Kasznik 1999; Bartov et al. 2000; Kothari et al. 2005).

Kothari et al. (2005) claim that the DA, as measured by Jones and modified Jones models, may include serious errors of measurement in DA because both neglect the effect of the company's previous performance. They developed a model that contains an intercept and control for the company's performance. Kothari et al. (2005) proposed improving the modified Jones models by including ROA as a control for the firm's financial performance; DA are estimated as the residuals of the following regression equation:

$$DA_{it} = [TA_{it}/A_{it-1}] - [\alpha_1 (1/A_{it-1}) + \alpha_2 (\Delta REV_{it}/A_{it-1} - \Delta REC_{it}/A_{it}) + \alpha_3 (PPE_{it}/A_{it-1}) + \alpha_4 ROA_{it-1}] \quad [2.7]$$

Where

ROA_{it-1} Lagged value of return on assets for the firm i in year t.

2.5.2. THE SPECIFIC ACCRUALS APPROACH

It has been observed that most EM scholars rely upon total accruals models rather than the specific-accruals approach as a proxy to detect EM (Beneish 2001; Sun and Rath 2010; Kashmiri 2014). This neglect of the specific-accrual approach led Healy et al. (1999, p.372) to emphasise the need for additional research based on specific accruals. They argue that, "Overall, there is remarkably little evidence on EM using specific accruals, suggesting that this is likely to be a fruitful area for future research. By examining specific accruals, researchers can offer direct evidence for standard setters in areas where standards work well and where there may be room for improvement". Similarly, Beneish (2001) pointed out that studies on the specific-accruals approach were required, due to the difficulties involved in using total-accruals techniques. Generally, previous studies have employed two types of specific-accruals approach, single and multiple accruals. Some studies measure EM by using specific accruals, including provisions for bad debt (McNichols and Wilson 1988), deferred tax (Teoh et al. 1998; Phillips et al. 2003) and depreciation (Teoh et al. 1998). For example, instead of total accrual, the residual value of bad debt provision was used by McNichols and Wilson (1988) to measure EM practices. Their findings reveal that companies with remarkably low earnings prefer to be involved in income-decreasing EM, suggesting that this action is consistent with the big bath technique. Similar studies examined other single specific accruals (Elnahass et al. 2014; Ali et al. 2015). For example, Elnahass et al. (2014) examined the use of reported loan loss provisions by investors in their valuations of banks. Their study decomposes loan loss provisions into DA and NDA, using a sample of Islamic and conventional banks listed in the Middle East and North Africa over the period 2006-2011. The findings reveal that loan loss provision has a positive value relevant to investors in both types of bank. Likewise, Ali et al. (2015) using a sample of 291 banks from 35 countries

over the period 2003-2010, used loan loss provisions to estimate DA as a proxy for EM. Their findings reveal that Islamic banks engage in EM less than conventional banks, perhaps because they are subjected to more monitoring by the additional layer of governance.

Phillips et al. (2003) suggested employing deferred tax expense accruals when measuring EM, along with DA. They proved the incremental usefulness of deferred-tax expense over total accruals and DA in measuring EM, deduced from both Jones and modified Jones models, with the aim of avoiding small loss and decline in revenue.

With respect to the multiple specific accruals approach, Beneish (2001), for example, established a model to measure EM in companies with high financial performance. The model contains variables such as prior market performance, ownership structure, capital structure, time listed, sales growth and other motivations for managers to violate GAAP. The study finds a systematic association between the probability of violating GAAP and the variables (e.g. prior market performance, capital structure, and sales growth) that are employed as proxies for incentives to manipulate earnings.

Although there are obvious benefits in using specific accruals in measuring DA in certain economic conditions, there are drawbacks when estimating DA in most circumstances, as pointed out by McNichols and Wilson (1988). First, specific accruals reflect all the managerial discretion. For instance, if the discretion of the manager is exercised through different accruals, which is the common case, this will reduce the power of a specific accrual measurement for EM. Second, the specific-accruals approach is insufficiently flexible for the investigation of additional variables such as corporate governance. Hence, for studies aiming to examine the relationship between EM and other hypothesised variables, the specific approach is not meaningful since a separate model for each specific accrual is needed, with a high probability of being influenced by the hypothesised variables. Third, this model is more

appropriate for institutions and is frequently used by financial institutions (banking and insurance industries). Furthermore, Sun and Rath (2010) suggest that the number of companies that use specific accruals could be small when compared to the number of companies using aggregate accruals, which will affect the generalisability of the findings of studies on specific accruals.

2.5.3. FREQUENCY DISTRIBUTION APPROACH

The frequency distribution method is built on the assumption that, through avoidance of losses or decline in reported earnings, managers are encouraged to meet a specific earnings benchmark, with investigation of the earnings distribution around this benchmark. This frequency distribution approach differs from previous approaches in that it attempts to detect EM by using earnings distribution. Thus, researchers have examined the evidence of EM practices through testing the reported earnings distribution (Burgstahler and Dichev 1997; Degeorge et al. 1999). For example, the first study conducted by Burgstahler and Dichev (1997) used earnings distribution and changes in earnings to examine whether managers become involved in EM to avoid loss and to decrease reported earnings. The study reports that EM to avoid losses is practiced through unusually low frequencies of slight losses and unusually high frequencies of slight profits. Equally, avoiding earnings decrease is practiced in forms of unusually low frequencies of minor earnings decreases and unusually high frequencies of minor earnings increases. The study reveals that the companies with small pre-managed profits are involved in income increasing to report earnings increases, and those with slightly negative pre-managed earnings are involved in income increasing to report higher earnings. The findings also show that the main tools for earnings manipulation are changes in working capital and cash flow from operations activities.

Similarly, the distribution of earnings per share was used by Degeorge et al. (1999) in testing whether managers' EM practices are motivated by loss avoidance, maintaining recent

performance and their desire to meet analysts' forecasts. Their results show that the manager's desire to avoid reporting losses, their quest to report earnings that are at least close to previous earnings and their ability to meet the expectations of analysts are the most important reasons why managers are involved in EM.

Beatty et al. (2002) employed the distribution method to investigate whether the desire to avoid earnings decrease is the major reason why managers in private and public banks practice EM. Their study finds that publicly controlled banks report lower increase in earnings and lower level decreases than estimated; however, evidence for fewer small decreases in earnings being unexpectedly reported by the private banks is weak. In addition, they find that more small decreases in earnings are reported by public banks than by private banks, even after differences in their operations are considered (e.g. bank size, cash flow, asset growth, loan characteristics and geographic regions). The results of the study show that loan provisions and realised security gains and losses are more likely to be used by public banks to increase their reported earnings. Generally, public banks are more likely to manipulate reported earnings than are private banks. Furthermore, by using the distribution-earnings approach, Ebaid (2012) examined whether Egyptian companies engage in EM practices to meet or beat earnings benchmarks, over the period 1997-2007. Egyptian companies are shown to be more likely to engage in EM action with the aim of avoiding reporting losses and avoiding earnings decreases in their annual reports.

Xiong (2006) argues that the distribution reported earnings approach is more effective in identification of EM practices than other approaches. However, Healy and Wahlen (1999) claim that this method does not measure the level of EM or the specific methods that are used for EM. Durtschi and Easton (2005) argued against the method of discontinuity around zero and the shapes of frequency distributions on which scholars depend as a proof of EM, and that these shapes are affected by depression, criteria for choosing the sample and/or changes

in the features of observations to the right and left of zero. Their conclusion is that the shapes of patterns of distribution are not sufficient evidence of EM practices. Therefore, researchers must rule out these confounding factors before using the shape of earnings distributions around zero as evidence of EM. These authors also claim that there is no empirical evidence to support the concept that the pervasive discontinuity of DA at zero is a result of EM practices.

Based on the reasons given above, one can conclude that there are significant benefits in using the total-accrual approach in detecting EM, rather than the other two approaches. The obvious advantages justify why a large number of EM researchers have used the total-accruals approach to detect EM, and it will be used in the current study in the estimation of DA as a proxy for EM. The findings of this review are summarized in Table 2.4.

Table 2.4: EM Measurements.

Measurements	Proxies	Description	Authors
Aggregate Accruals Models	Discretionary Accruals Proxy	➢ Total Accruals. ➢ Change in Total Accruals. ➢ The residual from regression of the median of aggregate accruals in given year divided by lagged value of total assets for all non-sample companies in the same industry. ➢ Residual from regression of total accruals on change in sales and property, plant and equipment. ➢ Residual from regression of total accruals on change in sales and on property, plant and equipment, where revenue is adjusted for change in receivables in the event period. ➢ Residual from regression of total accruals on change in sales and on property, plant and equipment, where revenue is adjusted for change in	➢ Healy (1985) ➢ DeAngelo (1986) ➢ The industry model Dechow and Sloan (1991) ➢ Jones (1991) ➢ Modified Jones Model Dechow et al. (1995) ➢ Matched-Firm Performance. Kothari et al. (2005)

		receivables in the event period. Includes ROA as a control for the firm's performance.	
Specific Accruals Approach	Discretionary Accruals Proxy	➢ Residual provision for bad debt, estimated as the residual from a regression of the provision for bad debts on the allowance beginning balance, and current and future write-offs.	➢ McNichols and Wilson (1988).
Frequency Distribution Approach	Test for Earnings Management	➢ Test whether the frequency of annual earnings realizations in the region above (below) zero earnings and previous year's earnings in greater (less) than expected. ➢ Test whether the frequency of quarterly earnings realizations in the region above (below) zero earnings, previous quarter's earnings and analysts' forecasts is greater (less) than expected.	➢ Burgstahler and Dichev (1997) ➢ Degeorge et al. (1999)

Source: Moderated from (McNichols 2001, p. 317).

2.6. EMPIRICAL STUDIES OF EM AND CEOS' CHARACTERISTICS

The previous decade has seen a growing amount of research on the topic of managerial characteristics. According to Shefrin (2001), the physiological and sociological characteristics of managers may have an effect on their decisions. Other studies show that CEOs' personal characteristics influence different decisions; for example, the CEO's gender and risk-taking (e.g. Byrnes et al. 1999), gender and using tools of IT in the learning process (Obaidat and Alqatamin 2011), age and investment decisions (e.g. Prendergast and Stole 1996; Li et al. 2011; Serfling 2012), age and voluntary financial disclosure choices (Bamber et al. 2010), overconfidence and corporate acquisitions (e.g. Brown and Sarma 2007), overconfidence and capital structure decisions (Tomak 2013), overconfidence and earnings forecast (Schrand and Zechman 2012) and overconfidence and voluntary disclosure (Andriosopoulos et al. 2013). Nevertheless, the relationship between a CEOs' personal characteristics and EM practices remains ambiguous and controversial. As such, the focus of the present study is to acquire an understanding of whether specific characteristics, namely CEO's gender, age and overconfidence, influence EM practices.

2.6.1. CEOs GENDER

Previous studies claim that gender is likely to have an influence on a company's decisions and suggest that female executives see a different perspective and demand different information compared to men (Peni and Vähämaa 2010; Abdul Hameed and Counsell 2012; Dowling and Aribi 2013). Several feminist economists argue that women are more inclined to be neutral in moral judgements and behaviour than are men (Nelson 1996; Collins 2000), while Barber and Odean (2001) and Nelson (2012) find them on average more inclined to be risk-averse than men in decision making. Hansemark (2003) provides evidence for the difference between men and women when taking decisions regarding starting a new business. Using a sample of 35,000 householders from a large discount brokerage, Barber and Odean

(2001) analysed the common stock investments of male and female during the period 1991-1997, and reported that males tend to be more overconfident than females. Dowling and Aribi (2013) examined the relationship between female directors and UK firms' acquisitiveness over the period 2000-2011, and found that women appear to be less overconfident in their decisions making in this respect. Based on data collected from Fortune 1000, Carter et al. (2003) reported that a significant relationship exists between the proportion of women on a board and the firm's performance. However, Rose (2007) found no relationship between the proportion of females on the board and company performance among Danish firms. This result is consistent with previous studies (Shrader et al. 1997; Du Rietz and Henrekson 2000; Smith et al. 2006; Campbell and Mínguez-Vera 2008).

Several attempts have been made to examine the effect of CEOs' traits on EM practices (Geiger and North 2006; Jiang et al. 2008; Matsunaga and Yeung 2008; Peni and Vähämaa 2010). For instance, Peni and Vähämaa (2010) studied the association between the gender of company executives and EM among 500 US S&P firms. Their results show that companies with female CFOs have a higher likelihood of using income-decreasing DA. Nonetheless, these authors found no evidence for a link between CEO's gender and EM, and their results are consistent with previous studies (e.g. Geiger and North 2006; Jiang et al. 2008; Matsunaga and Yeung 2008). Conversely, Gavious et al. (2012) used multivariate analysis among Israeli high-technology companies listed in the USA during 2002 and 2009 and found a negative relationship between the presence of females on the board and EM practices, arguing that EM is lower in companies with female CEO/CFOs. Srinidhi et al. (2011) provide empirical evidence that a greater proportion of women on the board of directors improves earnings quality. Similarly, Krishnan and Parsons (2008) and Srinidhi et al. (2011) examined the association between gender diversity and earnings quality and found that companies with a higher percentage of females in top management are more likely to increase the quality of

reported earnings than those with a lower percentage of female executives. Thus, female CEOs may have higher moral standards and be more trustworthy than male CEOs, and therefore less likely to engage in EM or to manipulate corporate financial disclosures (Bernardi and Arnold 1997; Heminway 2007).

Using samples of 1,222 and 1,559 US firms from 2004 and 2005 respectively, Barua et al. (2010a) examined the association between CEO/CFO gender and discretionary accruals as a proxy for financial reporting quality, measured by the modified Jones (1995) and performance-matched (2005) models. They found that CEO/CFO females are significantly and negatively associated with DA. Likewise, based on a sample of 1,500 S&P firms during the period 1996-2010, Jia et al. (2014) examined the association between facial structure of CEOs and their company's financial misreporting. Their results show that companies with CEOs who have more masculine faces have a higher incidence of financial misreporting. Recent studies by Ho et al. (2015) and Thankom et al. (2015) show that female directors tend to adopt restrained EM and more conservative accounting policies, given the conservative mind-set of female CEOs and their tendency to be less aggressive and more anxious. In addition, the literature indicates that females in business are associated with better organizational performance, due to their rational decisions (e.g. Gul et al. 2011). The ethical behaviour in the workplace of both women and men has been widely examined, the result showing that females and males display distinct differences in values and interests and in their tendency to become involved in unethical business activities (Gilligan 1982; Betz and Boreiko 1989). Males are more concerned about financial benefits and a successful profession and are more likely to break the law and rules to attain competitive success, while females lean more towards appropriate relationships and helping people and are less likely to engage in unethical issues (Betz and Boreiko 1989; Mason and Mudrack 1996). Therefore,

from the findings of the studies mentioned above, the present study expects a Positive relationship between CEOs gender and EM practices.

2.6.2. CEO's AGE

The literature indicates that the CEO's age is one human aspect that influences decision making (e.g. Hambrick 2007; D'Ewart 2015), since older and younger managers may have different attitudes that effect their decisions (Lin et al. 2014). Thus, some studies have attempted to explain the relationship between the CEO's age and decision-making processes. For example, Serfling (2012) assumes that older CEOs invest less than younger ones because the latter are more prone to take risks. Serfling (2012) also argues that the CEO's age has a significant impact on corporate financial decisions, because younger CEOs do not have a previous record related to their accomplishments. Likewise, Bertrand and Schoar (2002) used birth cohorts (year of birth) as a proxy for age to investigate the relationship between the CEO's age and investment decisions, using a sample of the 800 largest US firms. Their findings show that CEOs from earlier birth cohorts are more likely to be conservative in making investment decisions, suggesting that younger CEOs are more likely to make more investment decisions than older CEOs. Similarly, Prendergast and Stole (1996) and Li et al. (2011) reported that younger CEOs are likely to make more investment decisions than older ones because they want to demonstrate their capability to the stakeholders. Conversely, Miller and Shamsie (2001) found that the CEO's age has a positive association with a firm's performance: older CEOs tend to make more investment decisions than younger ones, thereby influencing the firm's performance. Moreover, evidence suggests that the CEO's age has a significant effect on mergers and acquisitions (Yim 2013). Lin et al. (2014) in a study of 4,374 non-financial USA firms, found a negative and significant association between the CEO's age and internal control quality. Davidson III et al. (2007) investigated the impact of age and career horizon on EM practices. Their findings indicate that companies with older

CEOs, especially those nearing retirement, are associated with EM practices, as they are more interested in their current company's performance and less concerned about the future with the aim of maximizing their own wealth or pension. Based on the above discuision, this study expects a significant statistical association between CEOs' age and EM practices.

2.6.3. CEO's OVERCONFIDENCE

According to Hambrick (2007), the senior manager's personal characteristics affect judgement and decision making, and among these characteristics is overconfidence. Overconfidence is the tendency of individuals to consider themselves above average (Svenson 1981; Alicke 1985; Kruger 1999). Langer (1975, p.315), defines overconfidence as "an overestimation of one's own abilities and outcomes relating to one's personal situation". Weinstein (1980) and Alicke (1985) reported that overconfidence is often seen in managers (Cooper et al. 1988; Landier and Thesmar 2009). The influence of CEO's overconfidence on corporate decisions has received significant attention in the academic literature. For example, Malmendier and Tate (2008) and Frank and Goyal (2009) documented that CEOs' overconfidence might have a significant influence on the variation in leverage across companies. Similarly, Malmendier et al. (2011) found that overconfidence influences investment decisions. Ahmed and Duellman (2013) suggested that managers who are overconfident are more likely to be over-optimistic about their firm's future performance and overestimate their own capacity to maximize future earnings.

Employing data from 4,238 CEO-year observations of 500 S&P companies during the period 1992-2001, collected from the ExecuComp database, Francis et al. (2008a) investigated the effect of the CEO's reputation (as a proxy for overconfidence) on earnings quality. They found that the coefficient of reputation is positively and significantly related to earnings quality and suggested that companies managed by reputed managers have better-reported earnings. Moreover, using data from 78,423 US firm-year observations collected from

ExecuComp over the period 1989-2009, Demerjian et al. (2012) examined the association between managerial ability and earnings quality, and found that they are positively linked. The outcome of the study is consistent with the idea that managers' characteristics can and do influence the quality of the judgements and forecasts used to form earnings, suggesting that companies managed by more able managers are more likely to report higher-quality earnings.

Schrand and Zechman (2012) used a sample of 49 corporations subject to the accounting and auditing enforcement Issues by Securities and Exchange Commission (SEC), and examined the relationship between CEOs' overconfidence and their overstatement of earnings. They found a positive relation between CEOs' overconfidence and financial-reporting fraud, arguing that overconfident managers are more likely to engage in fraudulent practices. Hribar and Yang (2010) indicated that there is a positive relation between overconfidence and the likelihood of income-increasing EM. Furthermore, Hsieh et al. (2014) examined the relationship between CEOs' overconfidence and EM using only US companies during the period 1991-2009. Their results show that overconfident CEOs are more likely to engage in income-increasing EM behaviour, relative to non-overconfident CEOs. Similarly, based on data merged from Compustat North America's executive compensation, and using 288 firm-year observations over the period 2009-2013, a study carried out by Berry-Stölzlea et al. (2015) investigated the relationship between managerial overconfidence and EM. Their findings provide evidence that the coefficient of the CEO's overconfidence is positively and significantly related to the likelihood of income-increasing EM.

Based on studies of the effect of manager's overconfidence on decision-making processes in general, and EM in particular and consistent with the idea that overconfident managers are considered risk takers (Malmendier and Tate 2005a) who are more likely to disclose overestimated information and underestimate the risks, this study is therefore motivated to examine whether the CEO's overconfidence influences EM practices. Consistent with the

work of Schrand and Zechman (2012); Hsieh et al. (2014) and Berry-Stölzlea et al. (2015), this study expects to find a positive and significant association between CEOs' overconfidence and EM practices.

2.7. SUMMARY

Chapter 2 has introduced a broader understanding of EM by offering several definitions and discussing those factors that encourage managers to manipulate reported earnings. To meet earnings forecasts, managers may use numerous accounting techniques without violating GAAP, allowing them to select alternative accounting methods in estimating the company's performance during the event period. The literature presents different methods and models for measuring EM. Although researchers have used specific-accruals models and frequency distribution as alternative approaches, the total-accruals approach, which captures the total effects of accruals on earnings, is the most widely reported one. Under the aggregate accrual approach, the models are based on classification of the total accruals into two components: manageable and non-manageable accruals. Non-manageable accruals are adjustments mandated by accounting standards, while discretionary or manageable accruals are adjustments made by managers. Although the literature suggests several models for measuring EM, the Jones, modified Jones and performance-matched models are the most common and most accurate in testing EM (e.g. Guay et al. 1996; Peasnell et al. 2000; Katmun 2012; Islam et al. 2014). Therefore, this study will employ these three models to estimate DA as a proxy for EM, using the residual value of DA to investigate the association between EM and the level of FLID.

CHAPTER THREE: LITERATURE REVIEW: FLID

3.1. INTRODUCTION

This chapter reviews several aspects that are relevant to FLID as a proxy for voluntary corporate disclosure. It also reviews previous studies on CEOs' characteristics and corporate disclosure, and is organized as follows. Section 3.2 reviews the corporate information disclosure definitions and voluntary disclosure of FLID, while section 3.3 covers FLID motivations. Section 3.4 discusses empirical studies related to FLID. Section 3.5 covers the theoretical framework for voluntary disclosure of FLID. Finally, section 3.6 provides a summary of the chapter.

3.2. FLID DEFINITIONS

Corporate disclosure is a mechanism to provide more information (financial or non-financial) to investors and other stakeholders through formal and informal channels, and has been widely perceived as a feature of an efficient capital market (Meek et al. 1995). Therefore, corporate disclosure is considered as a primary tool that managers adopt to communicate information to investors. Various definitions of corporate disclosure have been proposed. For example, Gibbins et al. (1990, p.122), define it as "the release by a firm of information, which may be financial or non-financial, qualitative or quantitative; mandatory or voluntary, disseminated through formal or informal channels", while Abraham et al. (2006, p.3) prefer "communicating a firm's financial performance to outside investors and capital markets". In addition, many studies report that companies disclose their financial and non-financial information using a variety of means, for instance annual reports, press releases, interim reports, direct communication with analysts and conference calls (e.g. Lang and Lundholm 1993; Botosan 1997; Aljifri and Hussainey 2007; Abed et al. 2011). Lang and Lundholm (1993) and Botosan (1997) reported that companies are more likely to use the annual

financial report , given its efficiency as a marketing tool and an avenue for conveying a particular corporate message (Preston et al. 1996). However, in the literature corporate disclosure is categorized as both mandatory and voluntary disclosures (Uyar et al. 2013). Mandatory disclosure is compulsory for firms since a minimum level of information, such as the financial statements and corresponding footnotes in their annual reports, is demanded by the law or the regulatory framework (Wallace et al. 1994; Owusu-Ansah 1998; Uyar et al. 2013) of certain organizations, such as the Exchange Security Authorities (ESA), International Accounting Standards Board (IASB), and Financial Accounting Standards Board (FASB). Consequently, this type of disclosure fails to offer sufficient information about a firm's value and management performance (Healy and Palepu 2001). Voluntary disclosure provides additional and private information when an adequate depiction of the firm's value and management performance is unlikely to be achieved through mandatory disclosure (Healy and Palepu 2001; Akhtaruddin 2005). Voluntary disclosure is widespread, and companies provide much of their private information without laws or other specific requirements (Botosan 1997). Thus, when the information disclosed exceeds the minimum requirements and involves accounting, financial and other non-financial information which executives of a firm judge to be relevant to the needs of different users, it is defined as voluntary disclosure (Meek et al. 1995). In general, voluntary disclosure comprises two large categories of information (Marco et al., 2014):

1. The disclosure that is included in regulated annual report statements, such as financial statements' footnotes, management's strategies, etc.
2. The disclosure provided through voluntary communication with shareholders, for example, press releases, analysts' presentations, and other regulated corporate reports.

Voluntary disclosure, such as FLID, is considered essential to demonstrate a company's position to the stakeholders and other interested parties (Jensen and Meckling 1976; Lim et

al. 2007). In fact, a number of studies argue that the most significant items in voluntary disclosure are to be found in FLID (Morton and Neill 2001; Francis et al. 2008a; Wang and Hussainey 2013; Qu et al. 2015). Francis et al. (2008b) and Kieso et al. (2010) define FLID as a voluntary disclosure which allows users of firm's financial reports to assess the firm's future performance and improve their ability to make rational investment decisions.

Celik et al. (2006, p. 200) define FLID as "any prediction or information that helps to make estimates about the future; it includes management's strategy, valuations of opportunities and risks and forecasts data". Hussainey (2004) argues that FLID captures current plans and future projections to enable users of financial statement to understand future performance. In the same vein, Menicucci (2013, p. 1668) defines FLID as "the type of information regarding future forecasts that allows users to assess a firm's future performance". It includes assessments of opportunities and risks, management's strategies and anticipated data about the firm's operations. Similarly, Alkhatib (2014, p. 858) defined FLID as " corporate predictions regarding the future of the company state of affairs that ultimately provide owners with valuable financial information concerning the firm's future circumstances".

In the above discussion, all the definitions indicate that the primary purpose of FLID is to provide stakeholders with useful information about a firm's future performance and improve their ability to make rational investment decisions. In line with this argument, the present study considers FLID as a primary tool that allows users of a firm's financial reports to assess the firm's future performance.

3.3. FLID MOTIVATIONS

Companies have many motivations for disclosing voluntary information. For example, a considerable amount of literature has reported that extending the level of voluntary disclosure helps to reduce information asymmetry between agents and principals, and consequently

increases financial analysts' confidence (e.g. Barry and Brown 1986; Diamond and Verrecchia 1991; Kim and Verrecchia 1994; Morton and Neill 2001; Lundholm and Van Winkle 2006). A review of existing empirical studies in the voluntary disclosure field by Lundholm and Van Winkle (2006) concludes that companies are more likely to disclose FLID in order to add value to their communication with their shareholders, with the aim of reducing the level of information asymmetry between managers and shareholders and take advantage of a lower cost of capital.

Graham et al. (2005) reveals that managers in the US make a voluntary disclosure for three reasons: i) to enhance a reputation for transparent reporting; ii) to address the insufficiencies of mandatory disclosure; and iii) to minimize the information risk assigned to the company's stock. Hence, managers are more likely to disclose more FLID to the stakeholders to increase their confidence about the company's future performance (Singhvi and Desai 1971; Healy and Palepu 2001).

Using a sample of 300 firms listed on the Toronto Stock Exchange during the period 1989-1991, Clarkson et al. (1994) indicated that the disclosure of such information is viewed as one measurement of financial reporting quality, suggesting that financial reports including FLID are more likely to be percieved as qualitative.

Other studies considered that the disclosure of accounting information is essential for parties who utilise this information in order to make rational investment decisions (Kieso et al. 2010; Menicucci 2013). For example, the study by Menicucci (2013) which assessed the level of FLID in management commentaries of a sample of 40 companies listed on the Italian Stock Exchange during 2010 reported that FLID would enhance the ability of shareholders to assess future cash flows, estimate future earnings and make better decisions regarding their investments. In particular, current and potential investors rely on financial information to take decisions in order to buy, sell or maintain their investments.

Based on an examination of 1,113 US firm-year observations over the period 1985 to 1989, Shaw (2003) found that corporate disclosure is one of the fundamental means of communication between stakeholders and the company's management. Thus, managers should use voluntary disclosure to declare essential information about the firm's circumstances to those parties, which in turn leads to a stronger relationship between managers and stakeholders. In addition, Verrecchia (1983) and Verrecchia and Weber (2006), using samples of UK and Indonesian companies respectively, reveal that even if disclosure is costly because of product market consequences, managers may tend to extend the level of voluntary disclosure in order to avoid undervaluation of their shares by the capital market. Furthermore, expanding the level of disclosure can improve intermediation for a firm's stock in the capital market (Core 2001).

Numerous studies have attempted to explain what encourages managers to disclose additional information. Healy and Palepu (2001) and Walker and Tsalta (2001) concluded that companies disclose more information because they suppose expected benefits will exceed costs.

Kieso et al. (2010) argued that FLID included financial and non-financial information valuable to investors in their decision-making process, because investors pay more attention to the firm's future forecasts than to past performance. Schleicher and Walker (1999) and Hussainey et al. (2003) suggest that increased FLID in annual reports improves the capital market's ability to estimate future earnings surprises.

3.4. EMPIRICAL STUDIES OF CORPORATE DISCLOSURE

This section reviews the two strands of the literature most relevant to this study's hypotheses: the first is the relationship between corporate disclosure and EM practices, and the second focuses on the association between CEOs' personal characteristics and corporate disclosures.

3.4.1. CORPORATE DISCLOSURE AND EM PRACTICES

The literature on corporate disclosure and EM practices (e.g. Kasznik 1999; Lobo and Zhou 2001; Patten and Trompeter 2003; Hunton et al. 2006; Prior et al. 2007; Sun et al. 2010; Katmun 2012; Yadollah et al. 2012; MeilaniPurwanti 2013; Kiattikulwattana 2014; Muttakin et al. 2015) broadly supports the argument that the relationship between corporate disclosure and EM is contradictory. Although several studies find that EM and voluntary disclosure are negatively related (e.g. Lobo and Zhou 2001; Hunton et al. 2006; Iatridis and Kadorinis 2009; Katmun 2012; Yadollah et al. 2012) and, conversely, others find a positive relationship between them (e.g. Kasznik 1999; Patten and Trompeter 2003; Prior et al. 2008; Muttakin et al. 2015). However, the study undertaken by Sun et al. (2010), using data collected from the *Financial Times* and the London Stock Exchange for a sample of 245 UK companies over the years 1 April 2006 to 31 March 2007, examines the relationship between corporate environment disclosure and EM, and investigates the impact of corporate governance on that relationship. Their findings show no significant relationship. Likewise, MeilaniPurwanti (2013) fails to find any relationship between EM practices and the level of voluntary disclosure.

Lobo and Zhou (2001) using a sample of 2,531 company-year observations, investigated the relationship between corporate disclosure and DA as a proxy for EM, employing the modified Jones model. The results show that corporate disclosure is negatively and significantly associated with EM practices, indicating that companies that disclose more information are less involved in EM. Furthermore, Shen and Chih (2005) examined the relationship between investor protection and EM practices. In their model, they added a disclosure index as one of the control variables for EM, using a data set collected from 48 countries, including Jordan, from 1993 to 1999 as a sample. Their study reports that the

coefficient of disclosure index shows a negative and significant association with EM actions, confirming the role of voluntary disclosure in constraining executives' EM behaviour.

Using a sample consisting of 90 Swiss companies collected from the SPI Global Index over the period 1997-2001, Lapointe-Antunes et al. (2006) conducted a study to explore the association between voluntary disclosure and EM practices. The results show a negative and significant relationship between them and suggest that DA as a proxy for EM are reduced for companies that voluntarily disclose more information.

Hunton et al. (2006) employed an experimental approach using a data set of 62 USA public firms, their findings confirming that disclosures that are more transparent will reduce the probability of managers being involved in EM action. Similarly, Iatridis and Kadorinis (2009) studied the relationship between EM practices and voluntary disclosure among UK companies. Their findings reveal that voluntary disclosure is negatively and significantly related to EM actions. These results suggest that companies that practice more voluntary disclosure seem to be less motivated to be involved in EM practices.

Using a sample of 19 Tunisian companies listed on the Tunis Stock Exchange, collected between 1999 to 2008 and employing the Kothari et al. (2005) model to measure DA, a study by Riahi and Mounira (2011) explored the association between voluntary disclosure frequency and EM practices. They found that companies with a higher level of information disclosure were associated with a lower level of DA. Their findings suggest that disclosing more information decreases information asymmetry and increases transparency, thereby giving managers less motivation to engage in EM behaviour. Furthermore, using data of 700 Iranian company-year observations for the period 2001-2010, and the Kasznick and modified Jones models to measure EM, Yadollah et al. (2012) investigated the relationship between the quality of corporate disclosure and EM practices, and found that companies with high-quality

disclosure have fewer DA. Moreover, Gray (2013), argued that managers that engage in EM are less likely to disclose voluntarily private information.

Richardson (2000) provided further evidence of the relationship between corporate disclosure and EM, using information identified from the Fitch data sheets and New York Stock Exchange (NYSE) daily sales reports for all NYSE companies for the period 1988-1992, to examine the relationship between information asymmetry measured by voluntary disclosure and EM. The result of the study shows that companies with higher information asymmetry had a higher level of DA, suggesting that companies disclosing more information will reduce information asymmetry and, consequently, reduce the level of EM. Chih et al. (2008), employing multinational company data from 46 countries and 1,653 firms, investigated whether corporate social responsibility disclosure (CSR) has an effect on EM. Their findings reveal that companies with a significant commitment to CSR disclosure employ a low level of earnings smoothing. A study undertaken by Kim et al. (2012) investigated whether voluntary disclosure measured by CSR disclosure constrains EM practices, by using data of 18,160 USA firm-year observations during the period 1991-2009. Their findings show that companies with a high level of CSR have less motivation to manage earnings through DA or real earnings. Similarly, using data from 2,042 South Korean firm-year observations for 2002-2008 and employing the modified Jones model, Choi et al. (2013) explored the association between EM and the level of voluntary disclosure as a proxy for CSR. Their results conclude that the coefficient of the level of CSR is significantly and negatively associated with EM practices. Likewise, Scholtens and Kang (2013) found that Asian companies with a relatively high level of voluntary disclosures as a proxy for CSR are less involved in EM.

On the other hand, using a sample of 366 USA corporations during from 1987 to 1991, a study undertaken by Kasznik (1999) examined the relationship between EM and voluntary

disclosure. The findings of the study indicated that voluntary disclosure is higher for firms with higher DA and argued that managers who have overestimated earnings are more likely to shift reported earnings toward their expectations. Furthermore, Patten and Trompeter (2003), using a sample of 40 USA chemical companies, examined the association between corporate environmental disclosure and EM. Their findings indicate that the coefficient of magnitude of DA is found to be positively and significantly related to the level of environmental disclosure, and they thus argued that firms with greater levels of environmental disclosure are more likely to engage in EM actions. Their findings are consistent with the view that corporate managers may believe that corporate disclosure is an effective solution for reducing exposure to possible regulatory cost and that decisions to manage earnings are tied to a superior strategy for dealing with increased political pressure. In a similar vein, Prior et al. (2008) in their investigation of the relationship between CSR and EM using DA, provided evidence from 26 countries (Europe, Australia, and North America) using data of 593 companies over 2002-2004. This showed a positive relationship between CSR and EM practices. However, Sun et al. (2010) and MeilaniPurwanti (2013) in their studies in two different countries, the UK and Indonesia respectively, examined the relationship between corporate environmental disclosure and EM and concluded that there is no association between the two variables.

The literature indicates that two perspectives are related to the relationship between corporate voluntary disclosure and EM: managerial opportunism and the long-term perspectives. The managerial opportunism perspective suggests that companies might be strategically using voluntary disclosure to cover their opportunistic EM action (Sun et al. 2010). This is consistent with the central assumption of agency theory that "all individual action is driven by self-interest and that individuals will act in an opportunistic manner to increase their wealth" (Jensen and Meckling 1976). In such cases, voluntary disclosure is used as an

entrenchment instrument to hide this opportunistic performance and to defend managers against potential attention and reaction from shareholders. In line with this view, several empirical studies reveal a positive relationship between voluntary disclosure and EM (e.g. Kasznik 1999; Patten and Trompeter 2003; Prior et al. 2008; Muttakin et al. 2015)

On the other hand, the long-term perspective suggests that companies with a high level of FLID are not only concerned about increasing current profits and managers' wealth but are also looking to create and improve a strong future relationship with shareholders. Since FLID constitutes an important component of a company's information disclosure, it will provide shareholders with superior and value-relevant information that can assist them in making more informed decisions (Qu et al. 2015). Therefore, such companies will act in an accountable way when reporting financial information. This perspective is consistent with agency and signalling theory, which suggest that managers are likely to disclose more FLID to interested parties in order to decrease information asymmetry and increase owners' confidence about the future performance of the company (Singhvi and Desai 1971; Hossain and Hammami 2009; Uyar et al. 2013).

In line with this perspective, prior empirical evidence shows a negative relationship between voluntary disclosure and EM (e.g. Lobo and Zhou 2001; Jo and Kim 2007; Katmun 2012; Kim et al. 2012; Choi et al. 2013).

3.4.2. CEOS' CHARACTERISTICS AND CORPORATE DISCLOSURE

The last decade has seen a growing amount of research on the topic of the personal characteristics of CEOs. Physiological, sociological, professional and individual characteristics may have an effect on various decisions, including disclosure decisions (e.g. Shefrin 2001; Brown and Sarma 2007; Bonner 2008; Bamber et al. 2010; Hirshleifer et al.

2012; Dejong and Ling 2013; Ho et al. 2015; Hribar and Yang 2015). These characteristics were discussed in Chapter 2 (see section 2.6).

In particular, few studies have examined the influence of CEOs' characteristics on voluntary disclosures. For example, Bamber et al. (2010) investigated the effect of top managers' characteristics: their experience, education and age, on voluntary corporate disclosure, using a sample of 1,500 S&P firms over 1995 to 2005. The study divided age into two cohorts: managers who were born before World War II and those who were born after it. The former were shown to be more likely to develop conservative communication styles than the latter.

Based on a sample of 108 firms listed on the Helsinki Stock Exchange during 2005 to 2007, Nalikka (2009), using a dummy variable for measuring CEO and CFO gender, studied the relationship with voluntary disclosure. The results show a significant relation between the CFO's gender and the level of voluntary disclosure; while the CEO's gender has no significant relationship with it.

Using a sample of 400 companies primarily listed in the UK over the period 1997-2006, Andriosopoulos et al. (2013) investigated the effect of CEO characteristics, namely overconfidence, tenure, connectedness, nationality, founder, and educational background, on information disclosure and share-buyback completion rates. CEOs' overconfidence was found to be significantly and positively associated with both voluntary disclosure and share-buyback completion rates, suggesting that overconfidence influences corporate disclosure. In the same vein, Hribar and Yang (2015) examined the effect of overconfidence on management forecasting behaviour across US firms. They concluded that overconfidence is positively associated with the decision to issue voluntary forecasts and that their forecasts have a greater optimistic bias. Hence, overconfident CEOs are more likely to disclose a high level of FLID. Ahmed and Duellman (2013) examined the association between CEO overconfidence and accounting conservatism, their results suggesting a negative relationship

among US firms. Since overconfident CEOs usually overestimate future sales and return on assets, they have an incentive to disclose more information. Building on the above discussion, the current study proposes that there is a significant relationship between the level of FLID and CEOs' personal characteristics, as reported in Table 3.1.

Table 3.1: CEO's Characteristics and Corporate Disclosure.

CEO's characteristics	Authors	Year	Data	Aims	Findings and Results
CEO's Age	(Bamber et al. 2010).	1995-2005.	1,500 S&P firms.	Investigate the impact of CEO's age on voluntary disclosure styles.	Negative relationship between age and disclosure style.
	(Andriosopoulos et al. 2013).	1997-2006.	400 UK companies.	CEO's age and information disclosure and buyback completion rates.	Positive relationship between CEO's age and buyback completion rates.
CEO's Gender	(Nalikka 2009).	2005-2007.	Non-financial listed companies on the Helsinki Stock Exchange.	Examine the effect of CEO's gender on the level of voluntary disclosures.	No significant relationship between the study variables.
CEO's Overconfidence	(Andriosopoulos et al. 2013).	1997-2006.	400 UK companies.	CEO's overconfidence and information disclosure and buyback completion rates.	Positive relationship between CEO's overconfidence and buyback completion rates and information disclosure.
	(Hribar and Yang 2015).	2001-2010.	US companies.	CEO's overconfidence and management forecasting.	Positive relationship between CEO's overconfidence and management forecasting.
	(Ahmed and Duellman 2013).	1993-2009.	1,500 S&P firms.	CEO's overconfidence and accounting conservatism.	Negative relationship between overconfidence and accounting conservatism.

Source: Author's Development.

3.5. THEORETICAL FRAMEWORK

Several theories associated with corporate disclosure and EM have been established to demonstrate the motivations behind the decision to disclose voluntary and better information. The survey of this literature revealed that amongst them were agency theory, signalling theory and stakeholder theory (e.g. Watson et al. 2002; Prencipe 2004; An et al. 2011).

3.5.1. AGENCY THEORY

A large and growing body of literature has defined agency theory as "a contract under which one or more persons (principals) engage another person (agent) to achieve some service on their behalf that includes delegating some decision-making authority to the agent" (Jensen and Meckling 1976, p. 308). In the business environment, the agent represents the managers of a company while the principals refer to the company's owners. Based on this definition, agency theory focuses on the relationship between owners and managers. Deegan and Samkin (2008, p. 71) reported that agency theory is based on the central assumption of economics that "all individual action is driven by self-interest and that individuals will act in an opportunistic manner to increase their wealth". There are two derivative assumptions for agency theory, drawing on the central assumption:

1. Both the agent and the principal are utility maximizers who tend to maximize their returns by all means (An et al. 2011).
2. The interests of the two parties might not be aligned (Jensen and Meckling 1976).

It is anticipated that managers (agents) will to a certain extent act in their own interests in order to maximize their personal wealth, and not necessarily as the principal requests (e.g. Davidson et al. 2004; Uyar et al. 2013). Thus, when managers undertake opportunistic actions to achieve their goals, a conflict of interest between agents and principals exists (Jensen and Meckling 1976). Information asymmetry is another key concept of agency theory that arises from this conflict of interests and motivates managers to engage in EM (Davidson

et al. 2004; Jiraporn et al. 2008). The issue of asymmetric information has gained prominence through ground-laying work (Akerlof 1970; Spence 1973; Stiglitz 1982). Previous studies recognized the meaning of information as a market determinant, which has extensive applications in a range of disciplines. It follows that since managers are better informed than investors, the motivation to disclose voluntary information focuses on reducing the asymmetric nature of the information problem and on gaining the investor's confidence. The same phenomenon was discussed under agency theory, which has been employed in several academic fields, including accounting, finance, political science, economics and marketing (Clarke 2004). According to agency theory, the conflict could deepen when management discloses incomplete or asymmetric information to evaluate their performance. Thus, revealing more information voluntarily is considered as a real solution to mitigating the information asymmetry problem between managers and owners (Sun et al. 2010; Urquiza et al. 2010; Uyar et al. 2013) and to convincing the owners that they are acting in an optimal manner. Furthermore, this will influence the investment decision-making process (Kieso et al. 2010), including a possible reduction in the firm's cost of external financing (Bujaki and Zéghal 1999). In the Jordanian environment, the agency problem of listed companies may result from conflicts of interest between the majority and the minority shareholders, since the majority of Jordanian companies are family-owned. A family company is one where members of the founding family continue to hold positions in top management, either as top executives or as directors, or they are blockholder (possibly silent partners) in the company (Chen et al. 2008). Compared to non-family companies, family companies face fewer agency problems that arise from the separation of management and ownership (type one agency problem), due to the latter having more ability to monitor managers (Demsetz and Lehn 1985). Furthermore, family shareholders have more long-term investment orientation than non-family shareholders (Chen et al. 2008). These characteristics of family companies raise

very interesting issues about their disclosure practices (Ali et al. 2007). Previous studies employed agency theory to explain disclosure behaviour arising from different forms of ownership structure. There are two types of agency problems that arise from the differences in ownership structure (e.g., Ali et al. 2007; Wan-Hussin 2009; Al-Akra and Hutchinson 2013). The first type of agency problem focuses on the conflicts between managers and owners while the second deals with conflicts between majority and minority shareholders (Ali et al. 2007; De Massis et al. 2015; Cucculelli et al. 2014). Thus, theoretically there are two contradictory perspectives regarding the relationship between family companies and voluntary disclosure, the convergence of interest and the management entrenchment perspectives (Morck et al. 1988). The convergence of interest between the owners and outside investors occurs when the owner's holding is significant; an increase in the owner's holding will reduce stockholders' needs to monitor insiders and thus decrease the need for voluntary disclosure. On the other hand, in family companies, the management entrenchment perspective assumes that, founding family may have a high proportion of equity in their companies. This control gives them power to seek private benefits at the expense of the minority shareholders, maximizing the chances of information asymmetry problem between majority and minority investors. When investment decisions are more likely to be made to maximize the insiders' interests (founding family) at the expense of outside investors (minority investors), outsiders will find it necessary to monitor owner-managers by expanding the level of voluntary disclosure (Chau and Gray 2010).

In fact, there is no clear evidence concerning the issues of agency problem in the Jordanian context because of the shortage of studies in this area and because of emergence of corporate governance. It could be argued that agency relationship between agents and principals may be weaker in developing countries such as Jordan.

In summary, agency theory suggests that companies may use various techniques, such as compensation schemes or voluntary disclosure, to mitigate or reduce the conflict of interest between managers and shareholders (Sun et al. 2010), consequently decreasing opportunistic behaviour such as EM practices.

3.5.2. SIGNALLING THEORY

Corporate information disclosed by managers can be considered as a signal to capital markets. Signalling is a reaction to asymmetric information, in which firms have information that owners do not (Watson et al. 2002). This suggests that managers use voluntary disclosure to signal the private information that they have about the business (Watts and Zimmerman 1986). According to signalling theory, the information asymmetry problem could be reduced or avoided if the party (company) who has more information in regard to the company's operation discloses the private information voluntarily to the other (investors) and sends signals to the market (Watts and Zimmerman 1978). The sending of a message is based on the assumption that it should be favorable to the signaller, such as indicating a higher quality of product than its competitors' in order to attract existing or potential investors (Sun et al. 2010). However, Hughes (1986) argues that the credibility of information disclosed by a company is an element in confirming lower information asymmetry. In this regard, Bhattacharya and Dittmar (2003) argue that a good company can differentiate itself from a bad one by conveying a credible signal to capital markets about its operational quality. This signal will be reliable only if the bad company selects not to outbid the good company by sending the same message. Furthermore, Morris (1987, p. 51) argues that to ensure that information signalled from companies is effective in reducing information asymmetry, the asymmetry costs "must be borne by the agent so that he has an incentive to signal truthfully". However, Abhayawansa and Abeysekera (2009, p. 297) reported that there is no assurance that companies will offer accurate information despite bearing the signalling cost, because

managers' disclosure decisions are also determined by the "marginal benefit to be gained from reducing the information asymmetry in the market".

A number of studies employ signalling theory as a ground method. For example, Cheung and Lee (1995), in their theoretical work, suggested that being listed in a reputable stock exchange market (e.g. NYSE) signals a company's high level of disclosure and increases its chances of being listed on other stock exchange markets. Chiang and Chia (2005) also used signalling theory as a theoretical framework, indicating that high company transparency signals sound company performance. Hussainey and Aal-Eisa (2009) documented that voluntary disclosure of FLID is superior to sharing the information in respect of decreasing investor uncertainty about future earnings and thereby confirming the assumption of the signalling theory.

Given that corporate disclosure is used by shareholders as a monitoring tool to mitigate managers' opportunistic behaviour (Bushman and Smith 2001), it is expected to reduce the information asymmetry between managers and investors. In this regard, Healy and Palepu (2001) reported that investors require information to monitor the activities of managers and link managerial decisions to the performance of the firm. Based on the idea that corporate disclosure is a beneficial tool to avoid information asymmetry, previous studies anticipated a negative association between information asymmetry and corporate disclosure (e.g. Welker 1995; Coller and Yohn 1997; Brown et al. 2004). Managers are therefore likely to disclose more FLID to the interested parties in order to decrease information asymmetry and to increase owners' confidence about the future performance of the company (long term perspective) (Singhvi and Desai 1971; Hossain and Hammami 2009; Uyar et al. 2013). Thus, the shareholders will feel safer with an increase in the level of FLID. Furthermore, companies disclose more specific information to investors to signal that they are better than other

companies in the market for the purpose of attracting new investments and enhancing their reputation (Campbell et al. 2001; Sun et al. 2010).

Based on the above discussion, it can be seen that a substantial overlap exists between the signalling and agency theories since both are related to rational behaviour and information asymmetry between companies and investors. Both theories view disclosure as tools to decrease information asymmetry (Morris 1987). However, previous studies rely on implicit agency theory to clarify EM behaviour (Davidson et al. 2004; Jiraporn et al. 2008; Kent et al. 2010). From the perspective of agency theory, EM seems to be a kind of agency cost which emanates from both the conflict of interest between agent and principal and from asymmetric information (Christie and Zimmerman 1994; Prior et al. 2008). In accordance with this view, the study carried out by Richardson (2000) reveals that asymmetric information has a positive relationship with EM behaviour, which suggests the probability of EM practices being dependent on the degree of asymmetric information. Conversely, EM practices will be less likely when the level of information asymmetry is relatively small.

On the other hand, Kim and Verrecchia (1994) recommended that asymmetric information between managers and shareholders is reduced with voluntary disclosure. Similarly, Jensen and Meckling (1976) reported that corporate disclosure is perceived as one of the instruments mitigating agency cost. Eng and Mak (2003) claimed that the conflict of interest between managers and shareholders could be reduced using voluntary disclosure, which may lead to reducing the level of EM. Thus, the current study employs both agency and signalling theories to explain the possible association between the level of FLID and EM.

3.5.3. STAKEHOLDER THEORY

Stakeholders are defined as “any group or individual who can affect or is affected by the achievement of the organisation’s objectives” (Freeman et al. 2010, p. 46). According to Clarkson et al. (1994), a company’s stakeholders are divided into two groups:

- The primary or powerful group: shareholders, employees, suppliers, creditors, providers and government.
- The secondary group: which is not considered critical for the company and includes environmentalists and the media.

Freeman et al. (2010) argued that it is necessary to take into account the interest of all stakeholders rather than only the shareholders. According to Donaldson and Preston (1995), stakeholder theory has three perspectives: descriptive accuracy, instrumental power, and normative validity or managerial perspective. The first two views propose that a firm should strategically manage primary or powerful stakeholders by classifying them with the self-interest of the organization, while the normative perspective assumes that managers should pay attention to all stakeholder groups.

Based on the descriptive and instrumental perspectives, corporate disclosure is considered as a tool to manage the perception only of the primary or powerful stakeholder group (Ullmann 1985). Therefore, it is employed for the strategic purpose of gaining consent and support for the firm's continuing operation, rather than for accountability purposes (Deegan and Samkin 2004). In line with this notion, the perception of the important stakeholder group concerning the company is managed through corporate disclosure. However, the normative or managerial stakeholder viewpoint demonstrates that companies have specific duties and obligations to various stakeholders and that corporate disclosure is necessary for the company to ensure greater accountability by disclosing information to relevant stakeholders (Guay et al. 1996).

However, although this perspective offers a prescription for how executives can achieve strategies for treating and managing their various stakeholders, it does not have a direct role in forecasting managerial behaviour in practice (Deegan and Samkin 2004). This is based on the view that a firm is not perceived as a bilateral association between managers and shareholders, but as a many-sided set of associations between stakeholders.

Stakeholder theory has two branches to explain how accountability is discharged to numerous stakeholders:

1. An ethical branch.
2. A positive managerial branch.

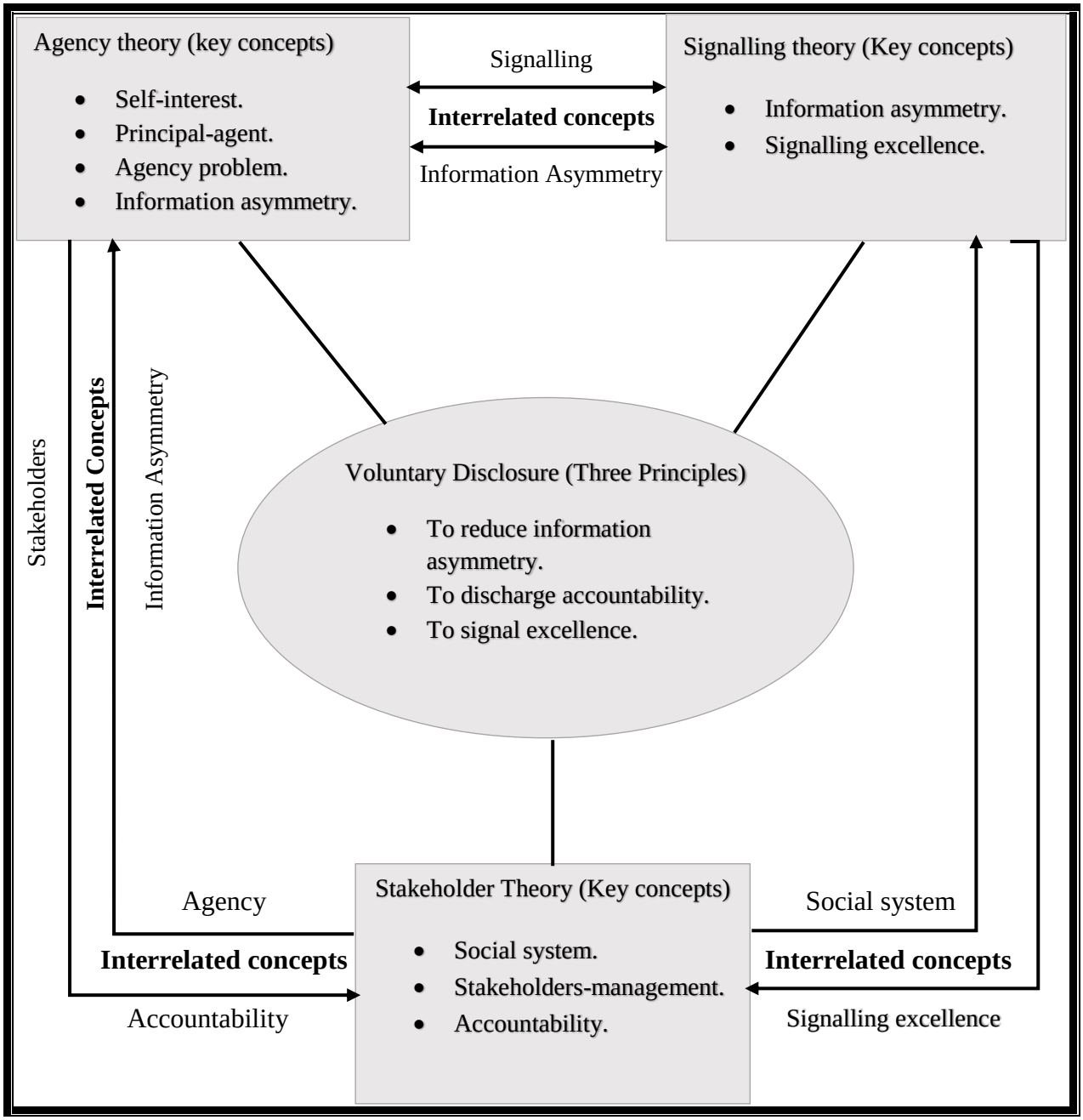
The ethical branch bestows certain intrinsic rights on all the stakeholders who should be protected by the company, and the managers should be involved in activities that benefit all stakeholders (Deegan 2006; Deegan and Samkin 2008). Deegan and Samkin (2008) argue that under the ethical branch, the company should support all stakeholder groups with information about how they are affected by its activities, irrespective of whether they choose to use the information or their ability to directly influence the fate of the company. The positive managerial branch of stakeholder theory tries to find an explanation for and to forecast how the demands of various stakeholders are taken care of by the company. The firm must identify the stakeholder group within this branch, as well as pay special attention to those stakeholders who they consider more powerful or significant to the on-going viability and success of the company (Watts and Zimmerman 1986; Roberts 1992).

In summary, from the theoretical stakeholder perspective the organization is seen in its wider social fabric, and should be positively accountable to various stakeholders groups for strategic purposes. Therefore, voluntary disclosure is considered as a strategic initiative and an important way for companies to discharge their accountability, leading to reduction of information asymmetry and creating a good relationship with stakeholders (Lundholm and Van Winkle 2006; An et al. 2011). Thus, managers are likely to be more motivated to use their discretion to increase the extent and the amount of information of the financial report to avoid the risk of being dismissed (Sun et al. 2010). In most cases, voluntary disclosure makes transparent to a broad audience the state of affairs and future prospects of the firm (Healy and Wahlen 1999). Thus, a corporate strategy of voluntary communication enhances the

relationship between the business and its stakeholders (Salama et al. 2006; An et al. 2011). The above discussion reveals that the potential advantages of voluntarily disclosing information, such as FLID, tend to support the demand for more transparency and credibility and consequently establish long-term relationships with stakeholders (García-Meca and Sánchez-Ballesta 2010). This perspective has been used to explain voluntary disclosure and recognizes the stakeholders' importance in the provision of high financial returns (Freeman et al. 2010).

An et al. (2011) proposed the integrated theoretical framework shown in Figure 3.1

Figure: 3.1: The Integrated Theoretical Framework.



Source: Moderated from (An et al. 2011, p. 580)

3.6. SUMMARY

This chapter offers a review of FLID, its definitions, motivations and the link between different aspects of voluntary disclosure and EM. The literature shows that two perspectives exist regarding the relationship between EM and voluntary corporate disclosure. The managerial opportunism viewpoint suggests that companies might be strategically using FLID to cover their opportunistic EM actions. In such cases, FLID is used as an entrenchment instrument to hide this opportunistic performance and to defend companies' managers against shareholders' potential attention and reaction. In line with this view, several studies reveal a positive relationship between FLID and EM (e.g. Kasznik 1999; Jog and McConomy 2003; Patten and Trompeter 2003; Prior et al. 2008). This perspective is in line with the agency theory assumption that managers will act in an opportunistic manner in order to increase their wealth.

On the other hand, the long-term perspective suggests that companies with a high level of FLID are not only concerned about increasing current profits and managers' wealth but are also looking to create and improve a strong future relationship with shareholders. Therefore, such companies will act in an accountable way when reporting financial information. In support of this view, empirical evidence shows a negative relationship between FLID and EM (e.g. Lobo and Zhou 2001; Jo and Kim 2007; Hribar and Yang 2010; Katmun 2012). This is consistent with signalling theory, that is managers are likely to disclose voluntarily more information to interested parties in order to decrease information asymmetry and increase owners' confidence about the future performance of the company (long-term perspective) (Singhvi and Desai 1971; Hossain and Hammami 2009; Uyar et al. 2013). Consequently, companies signal that they are better than their competitors at attracting new investment and enhancing their reputation (Campbell et al. 2001; Sun et al. 2010).

This chapter also focuses on the relevant theories to explain the association between FLID and EM practices. The literature indicates that the agency and signalling theories are a more appropriate framework with which to identify the relationship between FLID and EM. However, stakeholder and legitimacy theories deal with the relationship between management and all stakeholders. The chapter also covers the relationship between FLID and CEOs' personal characteristics.

Given that the primary aim of this study is to investigate the relationship between EM and FLID among non-financial Jordanian companies, the agency and signalling theories are applied as a framework to explain the study's results based on Jordanian company's ownership structure. Based on the literature on corporate disclosure and EM, and in line with agency and signalling theories, this study expects a negative relationship between FLID and EM.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1. INTRODUCTION

This chapter explains the research methodology used in this study. It is organized as follows. Section 4.2 explains the methodology related to assumptions about the nature of social science. Section 4.3 discusses the objectives and research questions, and section 4.4 the development of hypotheses. Section 4.5 describes the sample selection and data collection method. Section 4.6 provides the measurements of the study variables. Section 4.7 explains the empirical research models. Section 4.8 discusses practical procedures for data analysis. Section 4.9 presents a summary of the chapter.

4.2. RESEARCH METHODOLOGY

Punch (2013) believes it is essential to establish a research approach appropriate to the study's specific issues. Researchers around the world have employed two types of approach, namely qualitative and quantitative. According to Berg et al. (2004) the qualitative approach suggests a non-numeric and descriptive method for gathering the related data that helps to understand the phenomenon. Babbie (2015) claims that the qualitative approach is a flexible and active way for studying slight nuances in both behaviour and attitudes in examining changes in social processes over time. Conversely, Berg et al. (2004); Bryman (2004) and Collis and Hussey (2013) argue that quantitative analysis involves different forms of statistical analysis and thus offers more accurate and reliable measurement of the study variables and ability to generalize the research outcomes. Furthermore, Berg et al. (2004) suggest that by using the quantitative method, the generalisation capacity of the findings will improve if a large sample size and longer time periods are used.

The qualitative method suffers from some problems. First, if it selects and uses a small sample size it does not represent the entire population (Hakim 1987). Secondly, it lacks reliability and transparency (Berg et al. 2004). Third, it takes a lot of time and hence may not be efficient in achieving satisfactory explanations (Berg et al. 2004). Therefore, because of the difficulties of data collection through conducting interviews with different companies and the possibility of getting weak responses from these companies, the deductive positivism approach which identifies a pre-existing theoretical framework is chosen for the purpose of this study and is deemed appropriate for the establishment of the study's hypotheses.

4.3. OBJECTIVES AND RESEARCH QUESTIONS

The present study is motivated by three main objectives:

1. To examine the relationship between FLID and EM practices among non-financial companies listed on the ASE.
2. To investigate whether the CEO's characteristics (e.g. age, gender, and overconfidence) affect FLID behaviour.
3. To examine whether the CEO's personal characteristics influence EM practices within the context of non-financial Jordanian companies.

To achive these objectives, the study has established the following hypotheses:

4.4. HYPOTHESIS DEVELOPMENT

To achieve the first objective, the first research question is as follows:

- ***What is the effect of the level of FLID on EM practices?***

Agency theory explains that it is the responsibility of managers to make decisions on behalf of the owners and they must exercise their duties in a manner that increases the wealth of the owners and meets their expectations (Jensen and Meckling 1976). However, due to the

separation of ownership and management, together with the existence of asymmetric information, there is a strong possiblity of managers' opportunistic behaviour and their pursuance of self-interested objectives (Prior et al. 2008).

For the fact that, managers engage in EM activities either to maximize their benefits, to the disadvantage of other stakeholders, or to offer them misleading information regarding the financial position of the firm (Healy and Wahlen 1999), researchers acknowledge EM as a kind of agency cost. This is because managers are more likely to maximize their personal interests through provision of financial information that does not give a true picture of the company's circumstances (Prior et al. 2008). Corporate disclosure, on the other hand, is considered as a form of monitoring tool that enables investors and other external users to minimize the problem of asymmetric information (Huang and Zhang 2011). Hence, one of the possible ways of reducing agency conflict between managers and shareholder is through disclosure, since it reduces asymmetric information and consequently the likelihood of EM practices (Lang and Lundholm 2000; Eng and Mak 2003). Based on agency theory, this study expects a negative relationship between FLID and EM practices. The following hypothesis has been developed:

H1: There is a negative relationship between the level of FLID and EM practices.

The second objective of this study is to investigate whether a CEO's personal characteristics (e.g. age, gender and overconfidence) affect the level of FLID. In other words, the study aims to establish the relationship between the CEO's personal characteristics and the level of FLID. The rationale behind selecting such personal characteristics age, gender and overconfidence is that they are potentially related to risk-taking attitude, and will affect the manager's decisions, including on voluntary disclosure and EM practices (e.g. Byrnes et al. 1999; Ge et al. 2011). To achieve this, the second research question will be divided as follows:

- ***What is the relationship between the CEO's age and the level of FLID?***

A number of studies have attempted to explain the relationship between a CEO's age and the decision-making process. For example, Miller and Shamsie (2001) found that older CEOs tend to take faster investment decisions due to their accumulated experience and knowledge. On the other hand, Bertrand and Schoar (2002) showed that older CEOs are more likely to be conservative in making investment decisions, and that they are more likely to use conservative accounting choices (Ge et al. 2011). Bamber et al. (2010) confirm that older managers are more likely to develop conservative disclosure styles than younger ones. Prendergast and Stole (1996) and Li et al. (2011) found that younger CEOs are likely to make more investment decisions since they need to signal their capability to the stakeholders. Lin et al. (2014), however, found a negative significant relationship between CEOs' age and internal control quality. There is no evidence so far on the relationship between the CEO's age and the level of FLID.

- ***What is the relationship between the CEOs gender and the level of FLID?***

Several studies suggest that men are more likely to be risk-takers than women in making decisions about investments (Fellner and Maciejovsky 2007; Eckel and Grossman 2008; Ge et al. 2011). Furthermore, the literature suggests that the gender of company executives has an influence on corporate decisions. In addition, a number of studies have found a positive relationship between the gender diversity of the board of directors and the company's performance (Siciliano 1996; Erhardt et al. 2003). Byrnes et al. (1999) found that females, on average, are more risk averse than males in a variety of decision-making contexts. Hansemark (2003) provided further evidence of the difference between men and women in starting a new business. Dowling and Aribi (2013) found that females are less likely to appear overconfident in their decision making regarding the level of acquisitions of a company. Empirically, the evidence shows that female managers and risky decisions are negatively

related (e.g. Barua et al. 2010a). In support of this, psychological studies report that women are more cautious, ethical and risk averse than men. For instance, Jia et al. (2014) examined the relationship between the facial structure of CEOs and their company's financial misreporting, and showed that companies with CEOs who have more masculine faces have a higher incidence of financial misreporting. There is evidence that gender diversity affects the level of voluntary disclosure. For example, Nalikka (2009) found a positive significant relationship between female CFOs and the degree of voluntary disclosure. This study expects that CEO gender has an impact on the level of FLID.

- ***What is the relationship between the CEO's overconfidence and the level of FLID?***

The influence of a CEO's overconfidence on corporate decisions has received significant attention in the literature. Frank and Goyal (2009) found that the CEO's overconfidence has a significant influence on the variation of leverage ratio across companies. Malmendier et al. (2011) found that overconfident CEOs are more likely to use debt levels (external finance) rather than equity. In particular, the results of Andriosopoulos et al. (2013) suggest a positive relationship between CEOs' overconfidence and voluntary disclosure in UK firms. Moreover, Ahmed and Duellman (2013) reported a negative relationship between CEO overconfidence and accounting conservatism among US companies. Since overconfident CEOs usually overestimate future sales and return on assets, they have an incentive to disclose more information (Hribar and Yang 2010, 2015). Based on the discussion and arguments above, the following hypotheses have been developed:

H2: There is a negative relationship between the CEO's age and the level of FLID.

H3: The level of FLID is positively associated with the presence of male CEOs.

H4: There is a positive relationship between the CEO's overconfidence and the level of FLID.

The third objective of the present study is to investigate whether the CEO's personal characteristics affect EM practices. To achieve this, the third primary study question will be divided as follows:

- ***What is the relationship between the CEO's age and EM practices?***

Some studies have attempted to explain the relationship between the CEO's age and EM practices. For example, Davidson III et al. (2007) investigated whether age and career horizon affect EM practices, their findings indicating that companies with older CEOs, those nearing retirement, are associated with EM practices, as they are more interested in their current company's performance and less concerned about the future, aiming to maximize their own wealth or pension. Hambrick (2007) suggested that specific personal characteristics of top management affect the decision-making process, clarifying how personal characteristics influence judgement and decision making (JDM). JDM research proposes three aspects that affect the decision-making process: the person, environment and task (Bonner 2008). The group of person-related issues refers to how specific attributes such as age, overconfidence and attitudes to risk affect the procedures that lead to decision making (Ge et al. 2011).

- ***What is the relationship between the CEO's gender and EM practices?***

Gavious et al. (2012) found a negative relationship between the presence of females on the board and EM practices, concluding that EM is lower in companies with a female CEO/CFO. Furthermore, Srinidhi et al. (2011) provided empirical evidence that the percentage of women on the board of directors improves earnings quality. Similarly, Krishnan and Parsons (2008) found that firms with a higher proportion of females in top management have a greater likelihood of improving the quality of reported earnings. In addition, the literature indicates that females in business are associated with better organizational performance, due to their

rational decisions (e.g. Gul et al. 2011). The ethical behaviour in the workplace of both women and men has been widely examined, proposing that females and males display distinct differences in values and interests and in their tendency to become involved in unethical business activities (Gilligan 1982; Betz and Boreiko 1989). Males are more concerned with financial benefits and a successful career and are more likely to break the law and bend rules to attain competitive success; while females lean more towards appropriate relationships and helping people and are less likely to engage in unethical practices (Betz and Boreiko 1989; Mason and Mudrack 1996).

- ***What is the relationship between the CEO's overconfidence and EM practices?***

Schrand and Zechman (2012) found a positive relationship between CEOs' overconfidence and financial-reporting fraud, arguing that overconfident managers are more likely to engage in fraudulent practices. Hribar and Yang (2010) indicated that there is a positive relationship between overconfidence and the likelihood of greater EM. Based on several studies of the effect of managers' overconfidence on decision-making processes in general and EM in particular, and consistent with the idea that overconfident managers are considered risk takers (Malmendier and Tate 2005a), it is suggested that they will be more likely to disclose overestimated information and underestimate the risks the company faces. Thus, the motive of the current study is to examine whether CEOs' overconfidence influences their EM practices. The current study expects a positive association between CEOs' overconfidence and EM practices.

Based on the discussion and arguments above, the following hypotheses have been developed:

H5: There is a positive relationship between the CEO's age and EM practices.

H6: EM practices are positively associated with the presence of male CEOs.

H7: There is a positive relationship between the CEO's overconfidence and EM practices.

4.5. SAMPLE SELECTION AND DATA COLLECTION

4.5.1. SAMPLE SELECTION

The hypotheses were tested using data from the ASE in Jordan, established in 1999. The ASE lists 270 financial and non-financial companies, divided into three main sectors: (1) Financial (banking, insurance and real estate); (2) Industrial (pharmaceutical and medical, chemical, paper and cardboard, printing and packaging, food and beverages, tobacco and cigarettes, mining and extraction, engineering and construction, electrical, textiles and clothing, and glass and ceramics); and (3) Services (healthcare, education, hotels and tourism, transport, technology, media, utilities and energy, and commercial services). Following previous studies, the current study has excluded all 42 financial companies from the initial sample, given their unique characteristics, specific regulatory framework, and disclosure requirements, which may have an impact on the results (e.g. Naser et al. 2002; Hasseldine et al. 2005; Sun et al. 2010; Alsharairi and Salama 2012; Al-Akra and Hutchinson 2013; Athanasakou and Hussainey 2014; Al-Najjar and Abed 2014; Sun et al. 2014). The study also excludes any companies with missing data (Habbash et al. 2014), and any sector with fewer than six firms[1] (Athanasakou et al. 2009; Katmun 2012). Thus, the final sample consists of 201 ASE listed companies (see Tables 4.1 and 4.2). The related literature on voluntary disclosures and EM reports that economic conditions affect a company's economic performance, which in turn may motivate executives to manipulate earnings. In this regard, Berndt and Dipl-Kfm (2011) provide empirical evidence that managers are more likely to engage in EM during periods of economic crisis. Therefore, it is expected that in the face of uncertainty such as the global financial crisis of 2008, EM behaviour will not be uncommon. Additionally, Rolland and Dirige (2013) suggest that there may be a greater likelihood of EM practices during and after the period of financial crisis, to enhance the confidence of the

[1] OLS regression is used to estimate DA. It requires at least six observations for each industry to ensure unbiased estimation (DeFond and Jiambalvo 1994; Subramanyam 1996; Kasznik 1999).

shareholders regarding the companies' financial performance. Consequently, this study has adopted a 6-year period from 2008 to 2013 since the financial crisis started in 2008 and in the same year triggered different reforms and corporate governance practices in Jordan. The study period ends in 2013 due to the unavailability of data in subsequent years.

Jordanian companies were selected as Jordan offers an appropriate as well as an attractive setting for this study, because of its unique financial reporting system and socio-economic environment. In addition, Jordan is a developing country with an open economy. Trade liberalisation and adoption of a market economy underlie its economic philosophy and this has enabled the country to adopt its own laws in accordance with those of its international counterparts (Aljifri and Khasharmeh 2006). The practice of corporate governance in Jordan began in 2008 (Abed et al. 2012). The Jordanian corporate governance code number 15 requires that credibility and transparency of financial reporting should be increased among all listed companies through adoption of IFRS. This has since led to an increase in voluntary disclosure practices among all Jordanian listed companies (Al-Fayoumi et al. 2010; Al-Akra and Ali 2012). The ASE has become the biggest stock market within the region, operating an automated order-driven Electronic Trading System, working in close collaboration with the Jordan Securities Commission (JSC) on the issue of surveillance, and maintaining strong ties with other associations, exchanges and international organizations. The Jordanian capital market has shown a reasonable growth and is integrated with the Middle East market, which implies little long-term risk diversification (Saadi-Sedik and Petri 2006). The government of Jordan has introduced numerous reforms through accounting regulations, securities exchange laws and corporate disclosure practices. These reforms contribute to more transparent markets and the listed companies have enhanced their voluntary disclosure (Al-Fayoumi et al. 2010; Al-Akra and Ali 2012; JSC 2015). Omar (2007), indeed, found that Jordan showed a

significant improvement in disclosure after changes to the economic and accounting regulations (see Appendices 1A and B).

Table 4.1: Procedure for sample selection for the study period

Description	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Pooled**
Initial Sample	270	270	270	270	270	270	**1620**
Excluded:							
Financial industries	42	42	42	42	42	42	(252)
Sectors with fewer than six firms							
Healthcare	4	4	4	4	4	4	24
ITC	1	1	1	1	1	1	6
Media	2	2	2	2	2	2	12
Paper and cardboard	3	3	3	3	3	3	18
Utilities and energy	3	3	3	3	3	3	18
Printing and packaging	1	1	1	1	1	1	6
Tobacco and cigarettes	2	2	2	2	2	2	12
Glass and ceramics	1	1	1	1	1	1	6
							(102)
Firms with unavailable data	10	10	10	10	10	10	**(60)**
Final Sample	201	201	201	201	201	201	**1206**

Table 4.2: Final distribution of the sample by industry.

Description	**Number**	**Percentage**
Educational services	26	12.93%
Hotels and tourism	38	18.90%
Transport	23	11.44%
Commercial services	41	20.39%
Pharmaceutical and medical industries	12	5.97%
Chemical industries	15	7.46%
Food and beverages	17	8.45%
Mining and extraction industries	14	6.96%
Engineering and construction	6	2.98%
Textiles, leather and clothing	9	4.47%
Total	**201**	**100%**

Source: (JSC 2015).

4.5.2. DATA COLLECTION

The data of the study were collected from the annual reports published in 2008-2013. Each annual report was reviewed manually. Most of the annual reports are available on the websites of the companies. Most companies release their annual reports within the first

quarter of the year after the exercise. Botosan (1997) and Jizi et al. (2014) demonstrated that annual reports provide a good proxy and are a comprehensive resource for the information disclosed by a firm. They are also considered as a primary source of voluntary disclosure to the user group (e.g. Neu et al. 1998; Hussainey and Walker 2009). Furthermore, these financial reports are more easily compared across companies than are other informal channels of communication such as press releases or direct contact with analysts (Chang and Most 1985; Abed et al. 2012; Jizi et al. 2014). To cover some missing financial information in the annual reports, websites of the Securities Depository Centre (SDC), ASE and OSIRIS databases were used as additional sources.

4.6. MEASUREMENT OF THE STUDY VARIABLES

4.6.1. MEASUREMENT OF DEPENDENT VARIABLE (EM)

Previous studies found that the process of measuring or detecting EM is arduous, because it is not possible to observe it directly (Islam et al. 2014). However, researchers have tried to find a simple technique to measure it using statistical methods, including the specific accrual method, overall accruals method and frequency distribution method (McNichols and Wilson 1988; Jones 1991; Dechow et al. 1995; Burgstahler and Dichev 1997). (See Chapter 2, section 2.5.).

Regardless of its advantages, using the specific-accruals method to estimate EM is insufficiently flexible to examine additional variables such as corporate governance and FLID (McNichols 2001). The frequency distribution method has also been criticized because it does not enable researchers to assess the extent of EM or to differentiate between DA and NDA (McNichols 2001). However, total accruals are widely applied in the accounting literature as a proxy for EM (e.g. Dechow et al. 1995; Holthausen et al. 1995; Subramanyam 1996; Bartov et al. 2000; Bergstresser and Philippon 2006; Boulila Taktak and Mbarki 2014; Hsiao et al. 2016), for the following reasons:

- Total accruals allow researchers to control for additional variables.
- Total accruals distinguish between DA and NDA.
- Market participants view total accruals as a less reliable component of earnings.
- Total accruals are easier to subject to a manager's manipulation and therefore are valid measures of EM.

The literature suggests that managers tend to manage earnings through accruals since it is easier to manipulate them (Alsharairi and Salama 2012). Furthermore, due to the low degree of detectability of DA by users of financial reports when used for EM makes it a suited instrument for implementing opportunistic accounting choices (Jones 1991; Dechow et al. 1995; Van Praag 2001; Kothari et al. 2005). Therefore, the total accruals approach is preferred over the other methods in recent EM studies (Mohamad et al. 2011; Yip et al. 2011; Kim et al. 2012; Choi et al. 2013; Pyo and Lee 2013; Islam et al. 2014). Thus, consistent with the large body of literature advocating its efficacy, this study uses the total accruals approach to detect DA. The absolute discretionary accrual values have been used here, since the aim is to capture the extent of EM practices (Raman and Shahrur 2008; Mouselli et al. 2012; Böcking et al. 2015). However, in order to use this approach, three necessary steps have to be followed: first, estimation of total accruals; second, predicting DA to determine NDA; and third, calculating DA for each firm in the particular sector. The three stages are discussed below.

4.6.1.1. ESTIMATING TOTAL ACCRUALS

Total accruals are the result of net income deducted from operating cash flow. Two approaches have been used to predict total accruals: the traditional balance sheet and cash flow approaches. Most studies prefer to use the latter when the purpose is to estimate total accruals in the context of EM (e.g. Subramanyam 1996; Becker et al. 1998; Klein 2002; Kim et al. 2012; Pyo and Lee 2013), because the incidence and level of errors that results by using

the balance sheet is substantially greater than when using the cash flow (Hribar and Collins 2002). Furthermore, when firms experience acquisitions or merger, using the cash flow method may be preferred since error in the balance sheet method of estimating DA is correlated with the company's economic characteristics, reducing the power of the model to detect EM and its potential to generate valid inferences regarding EM (Hribar and Collins 2002; Stubben 2010).

Based on the cash flow approach, total accruals result from deducting earnings before extraordinary and abnormal items from the operating cash flow during the practical period. Following previous studies on EM, the present study uses the cash flow approach for estimating total accruals, as predicted by the following equation (Jo and Kim, 2007, p. 572):

$$\mathbf{TA_t = EBXA_t - CFO_t} \qquad \mathbf{(4.1)}$$

Where

$EBXA_t$: Earnings before abnormal and extraordinary items in year t.

CFO_t Cash flow from operation activities in year t.

4.6.1.2. ESTIMATING DISCRETIONARY ACCRUALS (DA)

The EM literature shows different models that have been widely used to predict DA as a proxy for EM (see Chapter 2, section 2.5). A large number of researchers (e.g. Peasnell et al. 2000; Sun et al. 2010; Chen 2012; Islam et al. 2014) have suggested that the Jones, Modified Jones, and performance-matched Kothari et al. (2005) models are more powerful than the alternatives since they measure discretionary accruals, which is in line with opportunistic accruals, assessing performance hypotheses. Furthermore, it is evident that the Jones and Modified Jones models with cross-section, popular for detecting EM, guarantee more control than when a times series is used (Guay et al. 1996; Subramanyam 1996; Beneish 2001; Kothari et al. 2005; Sun and Rath 2009; Jiang and Xin 2012; Choi et al. 2013; Pyo and Lee

2013). Thus, consistent with the large body of literature advocating its efficacy, the current study uses the original Jones (1991) and Modified Jones models (1995) as the primary proxies to detect EM practices. The performance-matched model, of Kothari et al. (2005) will be used as a robustness test (Katmun 2012).

4.6.1.2.1. JONES (1991) MODEL

Jones (1991) claimed that a company's economic situations has an effect on accounting accruals and attempted to control for such influences. The Jones study uses the change in revenue value as a proxy to control for the company's economic situation and the value of the gross fixed assets (PPE) as a proxy to control for the impact of depreciation.

The second step in predicting DA is estimating NDA. Total accruals are composed of NDA (unmanaged accruals) and DA (managed accruals). In this step, the Jones Model is applied to capture NDA, with the choice of one of two options: the original time-series and the cross-sectional approach. Recent studies related to EM prefer to use the latter (Dechow et al. 1995; Holthausen et al. 1995; Warfield et al. 1995; Subramanyam 1996; Bartov et al. 2000), for the following reasons:

- The original time-series, Jones Model works with an inappropriate assumption, arguing that the coefficient estimates of the variation in sales revenue and PPE level remain fixed over time.
- A specification problem in the form of serially correlated residuals may arise from the use of time-series models.
- The survivorship bias problem found in the time-series approach may be avoided be using cross-sectional accruals models; and
- Applying cross-sectional models permits the addition of firms with short histories (Subramanyam 1996; Bartov et al. 2000; Peasnell et al. 2000).

Thus, this study uses the cross-sectional Jones Model to estimate NDA for each year and industry.

The following regression equation of the cross-sectional Jones Model is applied to measure NDA:

$$\mathbf{NDA_{jit} = \alpha_0 (1/A_{jit-1}) + \alpha_1 (\Delta REV_{jit} / A_{jit-1}) + \alpha_2 (PPE_{jit} / A_{jit-1}) + \varepsilon_{jit}} \quad \mathbf{(4.2)}$$

Where

NDA = Non-discretionary accruals

ΔREV = Change in revenue

PPE = Gross property, plant and equipment

A = Total assets

J = Firm j; 1...N

T = Industry i; 1...N

ε = Error term.

In the second step, DA for each company j were calculated by deducting NDA from total accruals, as illustrated in Equation 4.1:

$$\mathbf{DA_j = [TA_{jit} / A_{jit-1}] - [\alpha_0 (1 / A_{jit-1}) + \alpha_1 (\Delta REV_{jit} / A_{jit-1}) + \alpha_2 (PPE_{jit-1} / A_{jit-1}) + \varepsilon_{jit}]} \quad \mathbf{(4.3)}$$

Where

DA = Discretionary accruals

J = Firm j; 1...N

α_0, α_1, and α_2 = the predicted coefficients from equation 4.2.

4.6.1.2.2. MODIFIED JONES (Dechow et al. 1995) MODEL

The Modified Jones Model adjusts the change in revenue by deducting the change in accounts receivable from revenue during the given period. The assumption is based on the notion that manipulation of earnings through recognition of credit sales is easier than

manipulation of cash sales. Thus, in this model, the estimation of DA is achievable using two steps, as suggested by (Dechow et al. 1995). The first step, NDA is calculated by using the following regression equation:

$$\mathbf{NDA_{jit} = \alpha_0 (1 / A_{jit-1}) + \alpha_1 (\Delta REV_{jit}/A_{jit-1} - \Delta RCE_{jit} / A_{jit}) + \alpha_2 (PPE_{jit} / A_{jit-1}) + \varepsilon_{jit}} \quad \mathbf{(4.4)}$$

Where

NDA = Non-discretionary accruals

ΔREV = Change in revenue

ΔRCE = Change in accounts receivable

PPE = Gross property, plant and equipment

A = Total assets

J = Firm j; 1...N

I = Industry i; 1…N

T = Year; 1…N

ε = Error term

The second step is capturing DA by using the following equation:

$$\mathbf{DA = [TA_{jit} / A_{jit-1}] - [\alpha_0 (1 / A_{jit-1}) + \alpha_1 (\Delta REV_{jit} / A_{jit-1} - \Delta RCE_{jit} / A_{jit}) + \alpha_2 (PPE_{jit} / A_{jit-1}) + \varepsilon_{jit}]} \quad \mathbf{(4.5)}$$

Where

DA = Discretionary accruals

J = Firm j; 1...N

α_0, α_1, and α_2 are the predicted confidence from equation 4.4.

4.6.1.2.3. PERFORMANCE MATCHED (Kothari et al. 2005) MODEL

Kothari et al. (2005) argued that a company's financial performance has an effect on accounting accruals, and therefore added financial performance to the modified Jones (1995) model to check its effect on accounting accruals. Their study uses the lagged value of return

on assets (ROA) as a proxy for the company's financial performance to reduce the problem of heteroscedasticity and to avoid the problem of misspecification of measurement.

Two steps are employed to measure DA according to the Performance Matched Model (Kothari et al. 2005). The first is to predict NDA using the following equation:

$$\mathbf{NDA_{jit} = \alpha_0 (1 / A_{jit-1}) + \alpha_1 (\Delta REV_{jit} / A_{jit-1} - \Delta RCE_{jit} / A_{jit-1}) + \alpha_2 (PPE_{jit} / A_{jit-1}) + ROA_{jit} + \varepsilon_{jit}} \quad \mathbf{(4.6)}$$

Where

NDA = Non-discretionary accruals

ΔREV = Change in revenue

ΔRCE = Change in accounts receivable

PPE = Gross property, plant and equipment

ROA = Return on assets

A = Total assets

J = Firm j; 1...N

I = Industry i; 1…N

T = Year; 1…N

ε = Error term.

The second step is to estimate discretionary accruals by applying the following equation:

$$\mathbf{DA_j = [TA_{jit} / A_{jit-1}] - [\alpha_0 (1 / A_{jit-1}) + \alpha_1 (\Delta REV_{jit} / A_{jit-1} - \Delta RCE_{jit} / A_{jit-1}) + \alpha_2 (PPE_{jit} / A_{jit-1}) + ROA_{jit} + \varepsilon_{jit}]} \quad \mathbf{(4.7)}$$

Where

DA = Discretionary accruals

J = Firm j; 1...N

α_0, α_1, and α_2 are the predicted coefficients from equation 4-6.

4.6.2. MEASUREMENT OF INDEPENDENT VARIABLES

4.6.2.1. MEASUREMENT OF FLID

Content analysis was employed to gather and explore the items of FLID in the study sample, as extensively reported in the literature as a powerful tool to explore corporate disclosures (Harte and Owen 1991; Cunningham and Gadenne 2003; Hussainey et al. 2003; Beattie et al. 2004; Aljifri and Hussainey 2007; Salama 2009; Aribi and Gao 2010; Mathuva 2012; Salama et al. 2012; Menicucci 2013). In addition, the disclosure index approach has been used to measure the level of FLID (Maali et al. 2006). Content analysis refers to "a research technique for making replicable and valid inferences from data to their context" (Krippendorff 2012, p.21). Similarly, Carney (1972, p.21) defines content analysis as a "research technique for making the inference by objectively and systematically identifying specified characteristics of messages". This study uses content analysis for several reasons:

- It looks directly at texts and hence at a central aspect of communication.
- It is easy to apply and allows both quantitative and qualitative analysis; and
- It provides valuable historical insights through the analysis of textual content for different periods (e.g. longitudinal data).

In content analysis, the selection of recording units such as sentences, words, lines, a group of words, pages, paragraphs or a whole document is needed. This research uses the word as a recording unit of analysis since words are considered more reliable than longer alternatives (Hackston and Milne 1996; Al-Najjar and Abed 2014). Ng (1985) argued that using portions of pages and sentences may be inappropriate because column, font sizes and page sizes may differ from one annual report to another. To overcome these problems, the current study uses a number of words as recording units. Keyword search is used to identify FLID items within the voluntary section in each annual report, the study has used a list of 35 forward-keywords

established by Hussainey et al. (2003) such as anticipate, next period, coming period, next, etc. (see Appendix 2.)

For content analysis to be used in a replicable manner, a checklist of four categories describes the criteria for identifying disclosure as FLID, as in the work of (Barako et al. 2006; Maali et al. 2006). Regarding the disclosure categories, Wallace and Naser (1996) and Francis et al. (2008b) reported that there is no consensus or general theory about categories to be selected for examining the extent of disclosure. The selection could be based on reviewing the literature or inspecting the content of FLID (Marston and Shrives 1991; Clarkson et al. 1994; Bryan 1997; Barako et al. 2006).

In this study, the categories and the list of FLID items include both financial and non-financial information disclosed by listed firms. These items are grouped into four categories and 45 items. Since the focus of this study is FLID, the preliminary categories and list were sent to various individuals chosen on the basis of their expertise and knowledge of accounting practices (academics and accounting professionals). Based on their valuable recommendations, the four categories were confirmed, while the initial list was reduced to 28 items. This method is consistent with previous studies (e.g. Kent and Ung 2003; Barako et al. 2006; O'Sullivan et al. 2008; Menicucci 2013). (see Appendix 3.)

The study has also employed three steps to ensure the reliability and validity of the content analysis process. This is necessary because of the ambiguity of word meanings (Weber 1990, p.15). In content analysis, two types of reliability and validity should be assessed: stability and reproducibility (Krippendorff 2012). Stability is ensured when the same unit is coded more than once by the same researcher (the results of content classification are constant over time), while reproducibility refers to how far the same result could be achieved by content classification if more than one researcher codes the same unit.

To ensure reliability and validity, common steps have been employed:

1. Development of a set of specified and explicit coding instruments (e.g. label of a meaning unit, abstraction) to minimize discrepancies and ensure objectivity, consequently reduce subjective instruments (Aribi and Gao 2011).
2. To assess reproducibility, five annual financial reports were tested by several coders to ensure that all coders adopt the same procedures, ensuring that differences between them are minimized and then resolved (Hussainey 2004; Aribi and Gao 2011; Salama et al. 2012).
3. To check the validity coding process, categories and checklist items were re-confirmed by five professional accountants (Barako et al. 2006; Beretta and Bozzolan 2008; Salama et al. 2012), and the results compared in order to identify possible disagreements, ensure consistency and assess reliability.

In addition to the content analysis, the present study has used a disclosure index to measure the extent of FLID (Ho and Wong 2001a; Maali et al. 2006; Francis et al. 2008b; Menicucci 2013). Cerf (1961) was the first to employ a disclosure index to assess the degree of corporate disclosure, but since then many researchers have extensively used it to measure the amount of information disclosed in annual financial reports (e.g. Cooke 1989; Marston and Shrives 1991; Barako et al. 2006; Maali et al. 2006; Mathuva 2012).

The decision to focus on the level of disclosures is because the extent of disclosure measures is often employed as a proxy for disclosure quality (Beattie et al. 2004; Beretta and Bozzolan 2008). The study's approach in scoring FLID items is dichotomous in that an item scores a value of 1 if disclosed, otherwise 0; and the approach to scoring is equally weighted. The disclosure index was constructed as a ratio obtained by dividing the number of FLID items

disclosed by the total number of FLID items for each company (e.g. Cerf 1961; Rizk et al. 2008; Muttakin et al. 2015).

This study used the following disclosure index to measure the level of FLID:

FWD = $\sum di$

Where FWD refers to the forward-looking category disclosed, and di = 1 if the category contains forward-looking items and zero if not.

The FLID for each company is set as:

FWD/TDS

Where TDS is the maximum number of disclosures provided by the companies in their published annual financial reports.

4.6.2.2. MEASUREMENT OF CEOS' CHARACTERISTICS

Following previous studies (Davidson III et al. 2007; Skalpe 2007; Cornett et al. 2008; Cornett et al. 2009; Andriosopoulos et al. 2013; Lin et al. 2014), this study measured the CEO's age as the difference between date of birth and the years of the study period. The CEOs gender is a dummy variable with the value of 1 if the CEO is male and 0 if female (Skalpe 2007; Yu et al. 2010; Andriosopoulos et al. 2013; Yim 2013). Regarding the CEO's overconfidence, several authors have built up various kinds of proxy for this. For example, Oliver (2005) at Michigan University estimated it using a consumer sentiment index, which considered opinions about both current economic conditions (40% of the index), and future perceptions (60%). Baker and Wurgler (2011) have used an investors' index as a proxy for overconfidence, but limited data regarding consumers' and investors' perceptions of overall economic conditions makes these proxies unsuitable in the current study.

Some researchers used the entrepreneurial status of a manager to indicate the degree of overconfidence, arguing that entrepreneurs have a greater tendency towards overconfident

behaviour (Barros and Silveira 2009). Campbell et al. (2011) and Andriosopoulos et al. (2013) estimated CEO overconfidence by a late-option exercise, a dummy variable that takes the value 1 for those CEOs who have held an option at any time during the sample period until its expiry, otherwise 0.

Malmendier and Tate (2005a, 2005b) developed four different types of overconfidence measurement:

I) Long holder.

II) Holder 67%.

III) Net buyer.

IV) Press assessment of CEOs.

The first three of these measurements Malmendier and Tate (2005a) were based on the personal portfolio decisions of CEOs. In long holder and holder 67%, the timing of the option exercises is used to detect CEOs' overconfidence, while net buyer uses the habitual acquisition of stock and options of the company. Both long holder and holder 67% measurements require comprehensive information about the CEO's personal portfolio transactions in the firm's stock and options (e.g. time, investment period of each CEO option package and exercise price), while the net buyer measure is based on the acquisition of the company's stock and options. This last relies on the tendency of CEOs to purchase additional company stock, even if already exposed to company risk. If during the sampling period, a CEO is a net purchaser of the stock and options of his or her own company, then the net buyer dummy variable is 1; otherwise 0. The fourth measurement is based on the press assessment of CEOs, with a CEO being classed as overconfident if described by a greater number of adjectives such as confident or optimistic than those implying a conservative nature, such as reliable, cautious, practical, frugal or steady. The shortcoming of this approach is that the data can be very limited, as every article needs to be verified.

The current study measures overconfidence using three different proxies. The first measure focuses on option holding behaviour and stock purchases, that is the net buyer method. First, following Malmendier and Tate (2005a, 2008), overconfidence is considered as a reflection of the degree to which CEOs fail to minimize the extent to which their personal wealth is exposed to company-specific risk. The measurement is based on the CEO's tendency to purchase extra stock from his/her own company despite his/her own personal wealth being exposed to a higher level of company risk. This is because the CEO overestimates the prospective returns of his/her own projects in the belief that the company stock price would rise more under his/her leadership than would normally be expected. If the CEO has such overconfident beliefs, he/she tends to buy up stock in the company in the hope of profiting from the expected future gains. Thus, the study defines the CEO as overconfident based on the net buyer measure if he/she is a net buyer of his/her own-company stock in the initial six years of the sample. It ought to be noted that in detecting overconfidence in a CEO, he/she is defined as being overconfident for all the relevant years if the options increase or remain constant. A dummy variable is established with 1 representing overconfidence and 0 otherwise (Malmendier and Tate 2005a).

The second measurement of CEO overconfidence is based on the CEO' investment decisions. Previous studies document that companies' investment decisions are associated with managerial overconfidence (Malmendier and Tate 2008; Campbell et al. 2011), and that overconfident CEOs are more likely to overinvest in capital projects (Malmendier and Tate 2005a; Ben-David et al. 2010). Following (Campbell et al. 2011; Ahmed and Duellman 2013), the present study measures CEOs' overconfidence by using capital expenditure, a dummy variable which takes the value 1 if the company's capital expenditure scaled by the lagged value of total assets in a given year is higher than the median level of expenditure scaled by the lagged value of total assets for the industry type in the same year; otherwise, 0.

The third measurement of CEO overconfidence is based on financing decisions and capital structure. The overconfident CEO can significantly influence debt/equity choice, and he/she will choose to issue more debt than their rational peers do. This occurs because the biased CEO believes that the firm is less likely to experience financial distress than is actually the case (Hackbarth 2008). In the same vein, Malmendier et al. (2007) indicate that overconfident managers use a higher level of debt than rational managers. Thus, he/she will underestimate the expected cost of bankruptcy and will take on more debt to exploit its tax benefits. The current study uses the leverage ratio as the third proxy for the overconfidence.

4.6.3. MEASUREMENT OF CONTROL VARIABLES

The current study uses three empirical models to test the research hypotheses. In the first model, EM is considered as a dependent variable, and the level of FLID as an independent variable. However, in the second model the level of FLID becomes the dependent variable while the CEO's characteristice are considered independent variables. In addition to these dependent and independent variables, a number of control variables are used, to control for the possible effect of a company's characteristics and corporate governance factors that may affect the extent of EM and FLID.

4.6.3.1. FIRM'S SIZE

Several studies have reported mixed results regarding the association between company size and EM practices (Watts and Zimmerman 1986; Becker et al. 1998; Lobo and Zhou 2001; Pincus and Rajgopal 2002; Xie et al. 2003a; Sun et al. 2010), that is company size may be positively or negatively related to EM practices. For example, Watts and Zimmerman (1986) and Pincus and Rajgopal (2002) argued that government security and political cost are higher for larger companies, which tend to be involved in income-decreasing EM. From a different perspective, Richardson (2000) reported that market pressure is higher for larger firms since they are subject to closer monitoring by shareholders and financial analysts. Hence, large

companies are more likely to use aggressive accounting policies, which in turn results in income-increasing EM. Conversely, Klein (2002) and Xie et al. (2003a) examined the relationship between firms' characteristics and EM, indicated that the likelihood of EM increases as the size of the firm decreases. Yadollah et al. (2012) found a positive relationship between a firm's size and the quality of financial reporting. Recently, a number of empirical studies have supported the negative association between company size and EM (Hong and Andersen 2011; Yip et al. 2011; Kim et al. 2012; Pyo and Lee 2013).

In respect to a firm's size and voluntary disclosures, agency theory assumes that larger companies perform a greater number of business transactions, which are more complex than in smaller companies, and consequently agency cost depends on the firm's size (Pérez 2004). Larger firms are more likely to publish voluntary disclosures to decrease these costs. In this regard, several studies have found a positive relationship between company size and the level of voluntary disclosures (Barako et al. 2006; Salama et al. 2012; Al-Najjar and Abed 2014; Jizi et al. 2014; Qu et al. 2015). The present study assumes that large Jordanian companies have a greater likelihood of disclosing more information and that they have fewer motivations to be involved in EM practices. Following earlier studies, company size is measured by the natural logarithm of total assets at the year-end (Yadollah et al. 2012; Gul et al. 2013; Sartawi et al. 2014).

4.6.3.2. FIRM'S PROFITABILITY

Previous studies documented that DA models cannot completely measure EM since they are linked with the company's profitability, a proxy for performance (Dechow et al. 1995; McNichols 2001). In addition, highly profitable companies are less likely to engage in EM practices. For instance, numerous studies have found that the coefficient of a firm's profitability is negatively and significantely related to DA (Yang et al. 2013; Boulila Taktak and Mbarki 2014; Habbash et al. 2014; Kiattikulwattana 2014; Sun et al. 2014). On the other

hand, Gavious et al. (2012) and (Hsiao et al. 2016) found a positive and significant relationship between the firm's profitability and EM practices.

The current study also uses company profitability to control the potential effects on the level of FLID (Urquiza et al. 2010; Alkhatib and Marji 2012; Uyar and Kilic 2012; Alkhatib 2014). For example, Alkhatib and Marji (2012) and Uyar and Kilic (2012) found that companies with high profits are motivated to disclose more information than those with small profits. This finding is consistent with signalling theory; firms will be more liable to signal their act to investors when their performance is good (Watson 2002). Thus, following previous studies (Lobo and Zhou 2001; Kiattikulwattana 2014), the current study adds company profitability as a control variable, to control for the influence of its financial performance on the level of FLID and EM practices. The coefficient of company profitability is expected to show a positive and significant relationship with the level of FLID and to be negatively and significantly associated with EM practices. Profitability is measured by return on assets (ROA) (net income before tax divided by total assets).

4.6.3.3. FIRM'S FINANCIAL LEVERAGE

Previous studies have documented that managers of companies with a high debt ratio have more motivation to use income-increasing accruals in order to satisfy covenant debt criteria (DeFond and Jiambalvo 1994; Jiang et al. 2008; Ali et al. 2010). In this regard they have found a positive association between the firm's leverage ratio and EM practices (e.g. Gavious et al. 2012; Habbash et al. 2014; Wasiuzzaman et al. 2015). However, extremely indebted companies might be less able to exercise EM since their lenders carefully monitor them. Chung et al. (2002); Park and Shin (2004) and Alsharairi and Salama (2012) found a negative relationship between financial leverage ratio and EM practices.

In respect to the relationship between the financial leverage ratio and the level of FLID, agency theory claims that highly leveraged firms have a greater contractual obligation to fulfil the information requests of long-term and short-term lenders, and therefore may offer more details to meet those needs than would a less leveraged company (Watson et al. 2002; García-Meca and Sánchez-Ballesta 2009). The literature has reported that leverage ratio has an effect on the level of FLID (Deshmukh 2005; Li and Zhao 2008; O'Sullivan et al. 2008; Hussainey and Walker 2009; Basiddiq and Hussainey 2012; Al-Najjar and Abed 2014). Consistent with other studies (Park and Shin 2004; Alves 2012), the financial leverage ratio is included in the current study's testing models. The financial leverage ratio is measured by total long-term debt divided by total assets.

4.6.3.4. FIRM'S DIVIDEND PAID

Previous studies found that managers are motivated to practice income-increasing EM to avoid reduction in dividends when unmanaged earnings are lower than the amount of earnings to be reported for target dividend payment (e.g. Kasanen et al. 1996; Daniel et al. 2008). Thus, the dividend ratio is found to be positively associated with EM behaviour. For example, Kasanen et al. (1996) reported that managers manipulate earnings upwards in response to pressure from powerful institutional owners to pay dividends. Similarly, Daniel et al. (2008) found a positive relationship between dividends and EM practices. Conversely, Healy and Palepu (1990) found no evidence that companies manage reported earnings in order to avoid the dividend restriction. With respect to dividends and FLID, this study considers dividend policy as one of its key drivers. Indeed, the relationship between the level of FLID and the firm's dividend policy has recently gained considerable attention. For example, Hussainey and Walker (2009) argued that FLID and dividend payments are alternative methods to convey important information to investors. Their findings are consistent with signalling theory, which suggests that companies with a lower level of FLID

are inclined to increase the dividend payment, which will indicate their future forecasts to present and future shareholders (Wang and Hussainey 2013). However, several studies have found a positive and significant relationship between dividends and FLID (e.g. Deshmukh 2005; Li and Zhao 2008; Hussainey and Al-Najjar 2011; Basiddiq and Hussainey 2012). Dividend ratio is measured as cash dividends divided by net income for the same period.

4.6.3.5. FIRM'S SECTOR TYPE

Sector type is another determinant of company information disclosure (Celik et al. 2006; Alkhatib and Marji 2012). Mixed statistically significant results were found. For example, Ahmed and Courtis (1999) examined the relationship between sector type and voluntary disclosure among US, Swedish and Canadian companies, and their findings confirm that there is a significant association between industry type and corporate disclosure. Salama et al. (2012) examined the relationship between a number of UK company's characteristics and environmental responsibility disclosure, revealing that industry type has a significant positive impact on environmental disclosures. Similarly, Cooke (1992) and Alkhatib (2014) found a significant association between industry type and FLID. On the other hand, other scholars have documented an insignificant relationship between industry type and FLID (McNally et al. 1982; Wallace 1987; Wallace et al. 1994). Following studies conducted by Aljifri and Hussainey (2007); Mathuva (2012) and Alkhatib (2014), the present study assumes that different accounting policies, valuation techniques, accounting measurements and disclosure techniques will be used by industrial and service sectors which will influence the level of FLID and EM practices. To identify the industry type, this study used the International Securities Identification Number (ISIN) issued by the JSDC (a unique ten-digit number indicating the firm's type and the sector in it operates) as a proxy for industry type.

4.6.3.6. BOARD SIZE

Board size is viewed as a crucial element of board characteristics that may influence EM activities. The Jordanian corporate governance code (15) suggests that the number of board members be left to the internal system of the firm, although members of the board should not exceed thirteen and should not be less than three in all cases. There is lack of consensus regarding the influence of board size in controlling management. For instance, Jensen (1993); Yermack (1996); Huther (1997); De Andres et al. (2005); and Santiago and Brown (2009) indicated that smaller board size (four to six members) might be able to make valuable decisions and monitor opportunistic managerial behaviour. Nevertheless, the majority of previous studies show that a larger board with a variety of expertise is better able to improve effective monitoring of the board to reduce the likelihood of EM actions (Xie et al. 2003a; Peasnell et al. 2005; Dâvila and Watkins 2009; González and García-Meca 2014). A more plausible explanation for this opinion is the dominance of smaller boards by block-holders or executive managers, while a larger board has more members from different positions and backgrounds, enhancing transparency and encouraging managers to voluntarily disclose more information (Gandía 2008). Several studies have agreed that larger boards improve the company's disclosure policies (Adams and Mehran 2005; Cheng and Courtenay 2006; Al-Najjar and Abed 2014; Sartawi et al. 2014), ensuring better supervision of managers' behaviour. The size of the board is measured by the total numbers of board members.

4.6.3.7. BOARD DUALITY

Another corporate governance issue raised by researchers is whether the CEO and chairperson of the board of directors is the same person. The Jordanian codes of corporate governance recommend that these roles should be separated to ensure that the CEO does not have unfettered powers of decision. A board with the same person in both positions is less likely to be actively monitored, which in turn makes it less likely that EM practices will be

reduced (Visvanathan 2008). In other words, CEO duality is a means of achieving a considerable concentration of CEO power, which can facilitate manipulation of earnings. Thus, the separation of the CEO's power may result in more efficient monitoring (Cornett et al. 2008). According to agency theory, the separation of CEO and chairman of the board of directors increases the board's independence from management and leads to better monitoring and overseeing (Jensen 1993).

Previous studies have found that the combination of the role of CEO and chairperson is related to a lower level of voluntary disclosure, with a negative relationship between CEO duality and voluntary disclosure (Ho and Wong 2001b; Gul and Leung 2004; Donnelly and Mulcahy 2008). In this study, board duality is used as a dummy variable that takes the value of 1 if the CEO and chairperson are the same person, and 0 otherwise.

4.6.3.8. BOARD MEETING

While the code of corporate governance in Jordan is not specific on the number of meetings required for the board of directors, in order to effect the quarterly endorsement of the financial statements, the board is required to meet at least four times in a given year. However, the frequency of meetings in each year is subject to the duties delegated to board members and the company's size, so as to ensure that the performance of the board meets future objectives (Zgarni et al. 2014). The regularity of meetings has been employed in previous research as a proxy for a board's diligence, since an inefficient board is less likely to monitor managers effectively. It is argued that active boards that meet frequently have a greater chance of performing their duties in line with the interests of their shareholders; they put more effort into controlling issues such as EM, financial reporting integrity and conflicts of interest (Habbash 2010; Qu et al. 2015).

Concerning board meeting and voluntary disclosure, the literature shows a positive relationship (e.g. Kent and Stewart 2008; Jizi et al. 2014). Therefore, board meeting is used as a control variable in this study, to reduce its effect on the level of FLID. Board meetings are measured by the number of meetings per year held by the board of directors.

4.6.3.9. BOARD INDEPENDENCE

According to agency theory, boards with a high percentage of outside directors are supposed to be more effective in overseeing managers (Jizi et al. 2014). The board's independence should be achieved by the presence of non-executive directors. Zahra and Pearce (1989) pointed out that non-executive directors might influence the quality of directors' information and their decisions, which may lead to enhanced performance. Altogether a number of studies, for example, Klein (2002); Xie et al. (2003a); Davidson et al. (2005); Benkel et al. (2006); Niu (2006); Jaggi et al. (2009); Sarkar et al. (2008); and Riro (2013), have documented a negative association between the percentage of outside directors and EM.

In respect to the board's independence and voluntary disclosure, numerous studies have found a positive relationship between the number of independent directors and voluntary disclosures (e.g. Forker 1992; Ajinkya et al. 2005; O'Sullivan et al. 2008; Hossain and Hammami 2009; Qu et al. 2015). Therefore, consistent with previous studies and agency theory, this study expects a negative relationship between EM and a board's independence, and a positive association between FLID and the board's independence, among non-financial Jordanian companies. Board independence is measured by the total number of outside directors.

4.6.3.10. MANAGERIAL OWNERSHIP

Agency theory argues that when managers do not own a considerable proportion of the firm, their behaviour is influenced by self-interest and not geared towards maximisation of the

firm's value, leading to EM practice (Jensen and Meckling 1976). Conversely, if managers invest a significant percentage of their wealth in the acquisition of stock in the firm which they manage, they are more likely to align their wealth to that of other investors (Mehran 1995). Thus, managerial ownership is acknowledged as a valuable tool to limit the scope of EM practice, and has been considered as a possible incentive mechanism. Most previous studies supposed that share ownership by insiders leads to a suitable alignment of interest (Warfield et al. 1995; Peasnell et al. 2005) between managers and stockholders, since it gives managers an incentive to maximize the firm's performance (Jensen and Meckling 1976). From the agency theory perspective, companies with a large proportion of managerial shareholdings are more likely to have a better corporate governance structure, which in turn enhances the quality of financial reporting (Sánchez and Meca 2005). In line with this argument, a negative relationship between the level of managerial ownership and EM is therefore expected. Thus, consistent with the literature, this study assumes that managerial ownership and EM practices are negatively related, while managerial ownership and voluntary disclosure are positively related. Managerial ownership is measured by the number of total shares held by managers as a proportion of the total number of shares.

4.6.3.11. FAMILY OWNERSHIP

There is considerable discussion on how family ownership affects managerial behaviour (Anderson and Reeb 2003; Wang 2006; Sánchez et al. 2007; Jiraporn and DaDalt 2009), with two opposing views. The first argues that the monitoring provided by the founding family, with long-term investment, should limit the capacity of managers to manipulate reported earnings (Anderson and Reeb 2003; Jiraporn and DaDalt 2009). In short, compared with non-family companies, family-controlled companies are more likely to maximize the wealth of the company over the long term. Therefore, there is less motivation to gain private benefit to

the detriment of minority shareholders' interests, in turn, increasing earnings quality (Sánchez et al. 2007).

On the other hand, opponents argue that the controlling family might confiscate the wealth of minority shareholders (Jaggi et al. 2009). The first perspective can be explained by agency theory, that concentration of ownership reduces agency problems (Tosi Jr and Gomez-Mejia 1989). In other words, family-controlled firms typically have strong motivation to confront agency problems stemming from conflict between minority and majority investors (type II agency problem) (Ali et al. 2007). In particular, family-controlled firms are less likely to manipulate earnings than non-family-controlled companies (Jiraporn and DaDalt 2009). Previous empirical studies suggested that companies controlled or owned by families seem to be associated with a higher level of earnings quality (Wang 2006; Ali et al. 2007; Jiraporn and DaDalt 2009). However, theoretically there are two contradictory views regarding the relationship between family companies and voluntary disclosure: the convergence of interest perspective, and the entrenched management perspective (Morck et al. 1988). Family ownership is measured by the percentage of total shares held by the family.

4.6.3.12. INSTITUTIONAL OWNERSHIP

Institutional ownership has received significant consideration in previous studies, as owners have considerable influence over the business, which consequently improves the overall controlling processes and mitigates opportunistic actions. It is argued that institutional ownership can be a vital governance mechanism in monitoring managers' discretion and enhancing the effectiveness of information in capital markets (Balsam et al. 2003; Koh 2003; Ferreira 2010). For example, Koh (2003) provides evidence that there is a negative relationship between the level of institutional ownership and EM practices. A number of other studies have argued that a higher proportion of institutional ownership should lead to a

significant negative influence on the incidence of EM (Bushee and Noe 2000; Hsu and Koh 2005; Charitou et al. 2007; Habbash 2010).

Previous studies have investigated the effect of institutional ownership on the level of voluntary disclosure. For example, Ajinkya et al. (2005); Karamanou and Vafeas (2005) and Truong and Dunstan (2011) showed that companies with greater institutional ownership are more likely to disclose more management forecasts. In addition, Qu et al. (2015) argued that effective corporate governance, including institutional ownership, motivates managers to disclose more FLID. In this regard, previous studies have found a positive relationship between institutional ownership and voluntary disclosure (Carson and Simnett 1997; Bushee and Noe 2000; Barako et al. 2006). Thus, this study expects that a high percentage of institutional investors may lead to reduction of EM actions and increase the level of FLID. Institutional ownership is measured by dummy variable 1 if there are institution-held shares and 0 otherwise.

4.6.3.13. BLOCKHOLDER OWNERSHIP

Another form of ownership is that in which different types of investor, such as individuals, mutual and pension fund corporations, fund managers, private equity firms, banks and trusts are considered as blockholders (Habbash 2010). Previous studies have found blockholder ownership to be a useful tool for monitoring managers' actions (e.g. Shleifer and Vishny 1986; Jensen 1993; Persons 2006; Iqbal and Strong 2010), finding a negative association between EM practices and large blockholder ownership. However, Ching et al. (2006) found a positive relationship between these variables. Two opinions have emerged; the first argument is that more monitoring mechanisms could be achieved through concentration of ownership, which will reduce opportunistic activities. The second argues that a majority of stakeholders may work together with managers against minority shareholders, to maximize their interest (Shleifer and Vishny 1997). Furthermore, concentrated ownership may be a

motivation for blockholders to employ accounting information in their personal interests, such as income-decreasing strategies, in order to decrease the remaining claims of other shareholders (Claessens et al. 2000). In fact, neither view can be generalized; for instance, the first view may be a phenomenon in developed countries because of strict regulation and investors' protection; in developing countries, the second opinion may be justified for many reasons, such as weak rules and regulation, and poor accounting disclosure and investor protection.

Mixed results have been reported on the impact of blockholder ownership on voluntary disclosures. For example, several studies have found that, blockholder ownership is negatively related to the level of voluntary disclosure (McKinnon and Dalimunthe 1993; Mitchell et al. 1995; Schadewitz and Blevins 1998), while others have provided evidence that it is positively associated with voluntary disclosures (e.g. Huafang and Jianguo 2007; O'Sullivan et al. 2008). Blockholder is measured as a dummy variable that takes the value 1 if the firm has an external stockholder owning 5% or more of the outstanding shares, and 0 otherwise.

4.7. EMPIRICAL RESEARCH MODELS

This study has three main objectives. To recap:

- Investigate the relationship between the level of FLID and EM practices among non-financial companies listed on the ASE.
- Examine the relationship between CEOs' personal characteristics and the level of FLID among non-financial companies listed on the ASE.
- Examine the relationship between CEOs' personal characteristics and EM practices among non-financial companies listed on the ASE.

To achieve these objectives, the following regression models are applied (key in Table 4.3):

1. $EMit = \beta_0 + \beta_1 FLID_{it} + \beta_2 FSIZE_{it} + \beta_3 FPROF_{it} + \beta_4 FDIVID_{it} + \beta_5 FLEVER_{it} + \beta_6 FISIN_{it} + \beta_7 BSIZE_{it} + \beta_8 BDUAL_{it} + \beta_9 BMEET_{it} + \beta_{10} BINDEP_{it} + \beta_{11} MOWNE_{it} + \beta_{12} FOWNE_{it} + \beta_{13} INSTITU_{it} + \beta_{14} BLOCKH_{it}$ + Year Controls + Industry Controls + εi.

2. $FLIDit = \beta_0 + \beta_1 CAGE_{it} + \beta_2$ CGEND + β_3 COVER + $\beta_4 FSIZE_{it} + \beta_5 FPROF_{it} + \beta_6 FFDIVID_{it} + \beta_7 FISIN_{it} + \beta_8 BSIZE_{it} + \beta_9 BDUAL_{it} + \beta_{10} BMEET_{it} + \beta_{11} BINDEP_{it} + \beta_{12} MOWNE_{it} + \beta_{13} FOWNE_{it} + \beta_{14} INSTITU_{it} + \beta_{15} BLOCKH_{it}$ + Year Controls + Industry Controls + εi.

3. $EMit = \beta_0 + \beta_1 CAGE_{it} + \beta_2$ CGEND + β_3 COVER + $\beta_4 FSIZE_{it} + \beta_5 FPROF_{it} + \beta_6 FFDIVID_{it} + \beta_7 FISIN_{it} + \beta_8 BSIZE_{it} + \beta_9 BDUAL_{it} + \beta_{10} BMEET_{it} + \beta_{11} BINDEP_{it} + \beta_{12} MOWNE_{it} + \beta_{13} FOWNE_{it} + \beta_{14} INSTITU_{it} + \beta_{15} BLOCKH_{it}$ + Year Controls + Industry Controls + εi.

Where

Table 4.3: Variables' definitions and measurements.

Label	Variable	Description
Dependent Variable		
EM	Earnings Management	The absolute value of discretionary accruals estimated using 1. Cross-sectional Jones model. 2. Cross-sectional modified Jones model 3. Cross-sectional performance-match model
Independent Variables		
FLID	Forward-Looking Information Disclosure	Total level of FLID score (independent variable in model one and dependent variable in the model two) measured by disclosure index.
CEAGE	CEO's Age	Measured by the difference between the CEO's date of birth and the years of the study period.
CGEND	CEO's Gender	A dummy variable taking value 1 if CEO male, and 0 if CEO female.
COVER	CEO's Overconfidence	Measured using 1. Net Buyer: dummy variable taking value 1 if the proportion of CEO share ownership, options and stock exercise increases, and 0 otherwise. 2. Capital Expenditure: dummy variable taking value 1 if the capital expenditure scaled by lagged total assets in a year t is greater that the median level of capital expenditures to lagged total assets for the

		firm's industry in that year and 0 otherwise. 3. Leverage ratio: measured by total long-term debt divided by total assets.
Control Variables		
FSIZE	Firm Size	The natural log of a firm's total assets.
FPROF	Firm Profitability	Measured by ROA (net income before tax divided by total assets).
FDIVID	Dividends Ratio	Cash dividends divided by net income for the same period.
FLEVER	Leverage Ratio	Used as another proxy for CEO overconfidence in models two and three; measured by total long-term debt divided by total assets.
FISIN	Industry Type	Measured by using the ISIN code, as stated by Jordanian Securities Depository Centre.
BSIZE	Board Size	Measured by the total number of members on the board.
BDUAL	Board Duality	A dummy variable that takes the value 1 if the CEO and chairman are the same person and 0 otherwise.
BMEET	Board Meeting	The number of meetings per year held by the board of directors.
BINDEP	Board Independence	Measured by the total number of outside directors.
MOWNE	Managerial Ownership	Measured by the proportion of total shares held by executive directors divided by the total number of shares.
FOWNE	Family Ownership	Measured by the proportion of total shares owned by the family. Dummy variable takes 1 if a family or individual holds 10% or more of equity and 0 otherwise.
INSTITU	Institutional Ownership	Measured by dummy variable taking 1 if there are any institution-held shares and 0 otherwise.
BLOCKH	Blockholder Ownership	A dummy variable that takes the value 1 if the firm has an external stockholder owning 5% or more of the outstanding shares, and 0 otherwise.

4.8. EMPIRICAL PROCEDURES OF DATA ANALYSIS

This section covers the steps in data analysis: preliminary analysis technique, multivariate analysis technique and robustness tests.

4.8.1. PRELIMINARY ANALYSIS

Preliminary analysis of the data comprises three primary analyses: descriptive statistics, univariate analysis, and correlation matrix. Descriptive statistics are employed to describe and summarize the data in terms of central tendency tests and shape of distribution on a single variable in a sensible way. Central tendency tests comprise minimum values, maximum values, mean, median, and standard deviation. A histogram is used to test the normality of data distribution (see Appendix 4). The correlation between sample explanatory variables is tested using a pairwise correlation matrix and the Variance Inflation Factor (VIF) method, in order to explain the level of linear relationship between two explanatory variables (Gujarati and Porter 2011). The correlation coefficient is in the range +1 to -1, where +1 refers to a strong linear relationship between explanatory variables. According to Grewal et al. (2004); Gujarati (2008) and Harris and Raviv (2008), a higher degree of the correlation coefficient between explanatory variables harms the results of the regression analysis due to the multicollinearity problem. These studies suggest ± 80% or above as the beginning of a serious multicollinearity problem which would affect the regression results.

4.8.2. MULTIVARIATE ANALYSIS

In general, statistical multivariate data analysis can be classified into two categories, parametric and non-parametric methods. However, the researcher decides the choice of technique based on the nature and characteristics of the data. Gujarati (2003) proposes five fundamental assumptions to be examined before choosing the type of multivariate analysis:

1. Normality: This assumes the distribution of the data set to be normal.

2. Linearity: This hypothesis assumes that the association between the dependent and explanatory variables is linear.
3. Heteroscedasticity: This hypothesis assumes that there is constant change in the dependent variables.
4. Multicollinearity: This assumes no collinearity among independent variables.
5. Independence: In this assumption, the error term of two or more observations should not be associated.

To check whether it is more appropriate in this study to use the parametric or non-parametric test, several tests were employed to check the above assumptions. First, the histogram test was used to check the normality problem. Second, the linearity problem was examined using the Quantile-Quantile (Q-Q plot) test. Third, this study used the Breusch-Pagan/Cook-Weisberg and White's general tests to test for heteroscedasticity. Fourth, the pairwise Pearson correlation matrix and VIF tests were both applied to check the independence and multicollinearity problems.

4.8.2.1. PANEL REGRESSION ANALYSIS

The study used regression analysis as the primary tool to examine the research hypotheses, in which the researcher seeks a positivist understanding of how the methodological process which is "unaffected by individual perceptual differences" is to be conducted (Ardalan, 2012). Hair et al. (2009) stated, "The appropriate method of analysis when the research problem involves a single metric variable is presumed to be related to two or more independent variables". Serrasqueiro and Nunes (2008) argued that panel data models have a remarkable advantage for measuring non-observable individual effects that reduce the problem of the reliability of explanatory variables in explaining the dependent variable. Moreover, the panel data regression model facilitates the analysis of cross-sectional and time-series data and involves a large number of observations, which increases the degree of

freedom and improves the efficiency of the statistic (Pesaran et al. 2000; Gaud et al. 2005; Sakata et al. 2010).

The major difference between the panel data model and pooled regression is that the latter does not distinguish between the various companies and times, whereas the former does distinguish between the companies and varies over time, allowing researchers to remove any unobservable heterogeneity in the sample (Himmelberg et al. 1999). It also considers both spatial (units) and worldly (time) scope, and is thus an important technique for linear information examination. The linear aspect represents several cross-sectional surveillance components such as companies, state, countries and commodities. The temporal dimension denotes regular periodic annotations of a set of variables in cross-section units over a particular period (that is 2008-2013). Panel data is also a primary means of longitudinal data analysis especially when the sources of information are different. Indeed, in a situation whereby the perceptions are long enough for individual analyses, panel data analysis offers several procedures, which may be helpful in scrutinizing variations over time in a particular kind of cross-sectional unit. The combination of cross-sectional and time-series data in the panel data regression method helps in improving the degree of freedom and the data quantity, which may be impossible when only one of them is used (Gujarati 2003; Gujarati 2008). Other benefits of the panel data technique are the following:

1. It provides more variability, additional instructive information concerning the data, reduces co-linearity among variables, and offers an additional degree of flexibility and further effectiveness, given its combination of cross-sectional and time-series dimensions.
2. It is able to identify and measure non-observable impacts when cross-sectional or time-series information is used.

3. It helps to analyse complex behavioural models, such as technological change, which is unlikely to be achieved with only cross-sectional or time-series information.
4. It aims at eliminating heterogeneity in the process of estimation due to its consideration of particular variables.

Given these advantages of panel data regression, this study chose it as a primary analysis tool to investigate the relationship among the study's variables (Chih et al. 2008; García-Meca and Sánchez-Ballesta 2009; Chang and Sun 2010; Yu et al. 2010; Wang and Hussainey 2013; Ben Othman and Mersni 2014; Ali et al. 2015; Böcking et al. 2015).

4.8.3. FURTHER ANALYSIS AND ROBUSTNESS CHECKS

The study conducted additional and sensitivity analysis to confirm that the main findings are robust to various measurements and estimators. For example, three models were used to measure DA as proxy for EM: the Jones (1991), modified Jones (1995), and Kothari (2005) models. In addition, three measurements were employed to measure CEOs' overconfidence (net buyer, financial leverage ratio and capital expenditure). However, to control for the endogeneity problem, the lagged value of FLID and CEO characteristics have been used as instrumental variables.

4.9. SUMMARY

This chapter explains and justifies the study approaches and methods in accordance with the research objectives and questions, in an attempt to provide evidence of the impact of FLID on EM on one side and on the effect of CEO characteristics on the level of FLID and EM practices, on the other. The data analysis is achieved using panel regression, random effect models on the study hypotheses, 1,206 company-year observations (201 non-financial listed companies) for the period 2008-2013 are used.

The next three chapters will highlight and analyse the impact of the level of FLID on EM practices. In addition, the effect of CEO characteristics on the level of FLID and EM practices is analysed in Chapters six and seven respectively.

CHAPTER FIVE: FLID AND EM PRACTICES: RESULTS AND DISCUSSION

5.1. INTRODUCTION

This chapter presents the results of empirical analysis through descriptive statistics, the correlation matrix and regression analysis. The main purpose of the chapter is to achieve the study's objective regarding the relationship between FLID and EM practices:

To investigate the relationship between the level of FLID and EM practices among non-financial Jordanian companies.

Three empirical research models were used to examine this relationship, based on the hypothesis summarized in the methodology chapter (See section 4.4). In order to properly analyses the data, the FLID index, Jones, modified Jones and performance-matched models were used. In addition, control variables such as company characteristics, board characteristics and ownership structure were included in the models. Therefore, this chapter is organized as follows: section 5.2 discusses the descriptive statistics, section 5.3 explains the correlation matrix and section 5.4 outlines and discusses the findings from examination of the hypotheses. Section 5.5 offers alternative measurement of EM, and section 5.6 reports the results of the endogeneity tests. Section 5.7 provides a short summary of the chapter.

5.2. DESCRIPTIVE STATISTICS

Table 5.1 presents the total observations, mean, standard deviation, minimum and maximum values and median for all variables used in this study. The dependent variable EM is the absolute DA value measured by the Jones and Modified Jones Models. The descriptive statistics reveal that the minimum value of EM based on these models are 0.0000 and 0.0001 respectively, and the maximum values are 0.870 and 0.925, indicating a considerable dispersion in the rates. The mean values are 0.0988, 0.0973, which is quite similar to the

results of Al-Fayoumi et al. (2010), who found that the mean value of EM among Jordanian industrial companies is around 0.10. This result implies that the average value of DA in non-financial Jordanian companies is 0.09, which can be compared to the findings of Al-Fayoumi et al. (2010) and ALghamdi and Ali (2012), who documented that the average values of discretionary accruals in Jordanian and Saudi listed companies are around 0.10. However, these results imply that the magnitude of EM in Jordan may be higher than those reported by Klein (2002); Katmun (2012); Ugbede et al. (2013) and Habbash et al. (2014), who found that US, UK, Malaysian and Chinese companies have an average absolute value of DA of 0.07, 0.065, 0.075 and 0.066 respectively. Nevertheless, they are below the figures of Roodposhti and Chashmi (2010) and González and García-Meca (2014), who found that the mean value of DA among companies listed on the Tehran Stock Exchange and Latin American companies were 0.16 and 0.11 respectively. In addition, the median values are 0.061 and 0.060 with a standard deviation of 0.114 and 0.112 respectively. This study employed the median value as a benchmark to classify high and low levels of EM. The independent variable FLID is the percentage obtained using the disclosure index (Uyar and Kilic 2012; Menicucci 2013). As can be seen from Table 5.1, the minimum value of FLID is 0.00 and the maximum 0.78, which indicates a considerable dispersion. The mean value of 0.3114 shows a low level of FLID across the companies. This study employed the median value of 0.33 as a benchmark to classify high and low levels of FLID. This figure is relatively higher than those of Uyar and Kilic (2012); Bozanic et al. (2013b) and Menicucci (2013), who found that the average value of FLID scores in Turkish, US and Italian companies were 0.178, 0.314, and 0.325 respectively. With respect to the control variables, the company size values are widely dispersed, ranging from .93e+03 to 3.23e+09. The results of profitability reveal that it varies between a minimum of -0.859 (loss) and maximum of 0.95 (profit) with a standard deviation of 0.1217. In addition, Table 5.1 shows that the mean value of dividend

ratio is 0.1882, with minimum and maximum values of 0 and 0.9751 respectively. Correspondingly, the median value is zero with standard deviation of 0.3077. The leverage ratio ranges from 0 to 0.978 and the mean value is 0.295. The mean value of industry type indicates that 0.3618 of companies in the sample operate in the industrial sector.

Concerning the other control variables, board size has a mean value of 8.011, which is relatively consistent with the number reported by (Peasnell et al. 2005). However, the maximum board size is 19 members, which indicates that, in general, Jordanian firms do not follow the Jordanian corporate governance code number (15), which recommends that board size should be no more than 13. A dummy variable of board duality has a mean of 0.205 and numbers of meetings and board independence have mean values of 7.572 and 2.020 respectively. With regard to the ownership structure, managerial and family ownership have 0.035 and 0.612 mean values respectively, whereas, institutions and blockholders have mean values of 0.355 and 0.4892.

Table 5.1: Descriptive Statistics of FLID and EM practices.

Variable	N	Minim	Maxim	Mean	Median	Stan-Dev.
EMJOMO	1206	0.0000	.8705	0.0988	0.061	.11468
EMMOJO	1206	0.0001	0.92508	0.0973	0.060	.112734
FLID	1206	0.000	0.780	0.3114	0.330	0.1844
[2]FSIZE	1206	.93e+03	3.23e+09	5.55e+07	1.87e+07	1.57e+08
FPROF	1206	-0.85904	0.9500	0.0012302	0.01109	.1217121
FDIVID	1206	0	0.9751	0.1882211	0	0.307755
FLEVER	1206	0.0002	0.97808	0.2950135	0.240055	0.2320937
FISIN	1206	1	201	.3631841	101	.481111
BSIZE	1206	3	19	8.011	7	2.4494
BDUAL	1206	0	1	.2056	0	.40433
BMEET	1206	3	28	7.5729	7	2.1378
BINDEP	1206	0	8	2.0207	2	1.2345
MOWNE	1206	0	.7185	.03528	0	.08595
FOWNE	1206	0	.9450	0.6127	.15472	.27206
INSTITU	1206	0	1	.35547	.3320	.76537
BLOCKH	1206	0	1	.48922	0	.50009

EMJOMO= *Discretionary accruals as a proxy for EM measured by using Jones model;* ***EMMOJO=*** *Discretionary accruals as a proxy for EM measured by using modifies Jones model;* ***$FLID_{it}$=*** *Forward-looking information disclosure score of company i in year t, expressed as % of total FLI disclosed out of all items.* ***FSIZE****= Firm size, the natural log of firm's total assets.* ***FPROF****= profitability, measured by ROA (net income before tax divided by total assets).* ***FDIVID****= dividend ratio measured as cash dividend divided by net income for the same period.* ***FLEVER****= leverage ratio, measured by total long-term debt divided by total assets.* ***FISIN****= industry type, measured by the ISIN number, as stated by Jordanian Securities Depository Centre.* ***BSIZE****= board size, measured by the total numbers of board members.* ***BDUAL****= Board duality, a dummy variable, 1 if the CEO and chairman are the same person and 0 otherwise.* ***BMEET****= Board meeting, the number of meetings per year held by the board of directors.* ***BINDEP****= board independence, measured by the total number of outside directors.* ***MOWNE****= managerial ownership, measured by the percentage of total shares held by executive directors divided by the total number of shares.* ***FOWNE****= family ownership, measured by the proportion of total shares owned by the family; a dummy variable, 1 if a family or an individual holds 10% or more of equity and 0 otherwise.* ***INSTITU****= institutional ownership, measured by dummy variable, 1 if any institution-held shares and 0 otherwise.* ***BLOCKH****= blockholder ownership, measured*

[2] Following previous studies company's size is measured by using the natural logarithm of total assets at the year-end (Aljifri and Hussainey 2007; Samaha et al. 2012; Wang and Hussainey 2013).

by a dummy variable, 1 if the firm has an external stockholder owning 5% or more of the outstanding shares and 0 otherwise.

5.3. MULTICOLLINEARITY

The multicollinearity problem implies that two or more independent variables are associated, with a high level of correlation ± 80% (Grewal et al. 2004; Gujarati 2008; Harris and Raviv 2008). Thus, when multicollinearity exists, it is not easy to distinguish the individual effects of descriptive variables, and panel regression random effect estimators may tend to have large variances (Murray 2005). Moreover, when a perfect relationship exists between the estimator variables, the results of the regression cannot be uniquely calculated. The two common methods to check for the incidence of multicollinearity between independent variables are the correlation coefficients matrix and VIF with tolerance values. These two methods have been employed extensively in the literature on disclosure (e.g. Hair et al. 2006; Abdel-Fattah 2008; ALghamdi and Ali 2012). This study uses both correlation matrix and VIF to test whether there is multicollinearity between independent variables. There has been no agreement between researchers regarding the cut-off correlation percentage (Alsaeed 2006). For example, those using a correlation matrix (e.g. Gujarati 2003; Grewal et al. 2004; Harris and Raviv 2008; Gujarati and Porter 2011) suggest that a coefficient of ± 80% is considered as the starting point at which a serious multicollinearity problem might exist and harm the results of the regression analysis, although Tabachnick and Fidell (2001) reported that ± 70% is appropriate. Tables 5.2 and 5.3 show that the highest correlation is between the leverage ratio and FLID, with a coefficient of 54.20%. Therefore, the problem of multicollinearity does not exist among the data set used in these models. In addition, the results of the VIF test, presented in Table 5.4, show the coefficients of each independent variable. According to Gujarati (2003, 2008) multicollinearity does not exist among explanatory variables if the mean VIF is less than 10, and it can be seen from Table 5.4 that the maximum value of VIF is

very low (1.48) and the mean 1.13. Therefore, the results of the VIF test confirm that the multiconllineaity problem does not exist in this model.

Table 5.2: Correlation Matrix for First Model.

variables	EMJOMO	FLID	FSIZE	FPROF	FDIVI	FLEVE	FISIN	BSIZE	BDUAL	BMEET	BINPEN	MOWNE	FOWNE	INSTIT	BLOCK
EMJOMO	**1.000**														
FLID	**-0.022**	**1.000**													
FSIZE	**-0.078****	**0.018**	**1.000**												
FPROF	**-0.003**	**0.032**	**0.013**	**1.000**											
FDIVID	**0.019**	**0.071***	**0.068****	**0.371****	**1.000**										
FLEVER	**-0.012****	**0.542****	**0.032**	**-0.156****	**0.034****	**1.000**									
FISIN	**0.026**	**-0.008**	**0.049***	**-0.021****	**0.029**	**-0.023**	**1.000**								
BSIZE	**-0.103****	**-0.010**	**0.271****	**0.017**	**0.040**	**-0.026**	**0.040**	**1.000**							
BDUAL	**0.052**	**0.048**	**-0.019**	**-0.068****	**0.009**	**-0.001**	**-0.102****	**-0.061***	**1.000**						
BMEET	**-0.035**	**0.029**	**0.062***	**0.052***	**-0.029**	**-0.027**	**-0.084****	**0.007**	**0.022**	**1.000**					
BINDEP	**-0.006****	**0.028**	**0.049***	**-0.007**	**0.062***	**0.047***	**0.009**	**0.415****	**0.139****	**-0.081****	**1.000**				
MOWNE	**-0.017**	**-0.007**	**-0.066***	**-0.015**	**-0.025**	**0.036**	**-0.063***	**-0.117****	**0.239****	**0.016**	**0.083**	**1.000**			
FOWNE	**-0.011**	**-0.010**	**0.001**	**-0.040**	**-0.017**	**-0.034**	**0.034**	**-0.014**	**0.013**	**0.006**	**-0.048**	**-0.009**	**1.000**		
INSTITU	**-0.019**	**-0.073***	**0.033**	**0.052***	**0.021**	**-0.083****	**0.024**	**0.055***	**-0.140****	**-0.049***	**0.011**	**-0.170****	**-0.041**	**1.000**	
BLOCKH	**-0.031**	**0.033**	**0.046**	**-0.082****	**-0.053***	**0.019**	**-0.022**	**-0.010**	**0.035**	**-0.025**	**0.023**	**0.027**	**-0.028**	**-0.009**	**1.000**

EMJOMO= *Discretionary accruals as a proxy for EM measured by using Jones model;* ***EMMOJO=*** *Discretionary accruals as a proxy for EM measured by using modifies Jones model;* ***FLID$_{it}$=*** *Forward-looking information disclosure score of company i in year t, expressed as % of total FLI disclosed out of all items.* ***FSIZE=*** *Firm size, the natural log of firm's total assets.* ***FPROF=*** *profitability, measured by ROA (net income before tax divided by total assets).* ***FDIVID=*** *dividend ratio measured as cash dividend divided by net income for the same period.* ***FLEVER=*** *leverage ratio, measured by total long-term debt divided by total assets.* ***FISIN=*** *industry type, measured by the ISIN number, as stated by Jordanian Securities Depository Centre.* ***BSIZE=*** *board size, measured by the total numbers of board members.* ***BDUAL=*** *Board duality, a dummy variable, 1 if the CEO and chairman are the same person and 0 otherwise.* ***BMEET=*** *Board meeting, the number of meetings per year held by the board of directors.* ***BINDEP=*** *board independence, measured by the total number of outside directors.* ***MOWNE=*** *managerial ownership, measured by the percentage of total shares held by executive directors divided by the total number of shares.* ***FOWNE=*** *family ownership, measured by the proportion of total shares owned by the family; a dummy variable, 1 if a family or an individual holds 10% or more of equity and 0 otherwise.* ***INSTITU=*** *institutional ownership, measured by dummy variable, 1 if any institution-held shares and 0 otherwise.* ***BLOCKH=*** *blockholder ownership, measured by a dummy variable, 1 if the firm has an external stockholder owning 5% or more of the outstanding shares and 0 otherwise.*

******. Correlation is significant at the 0.01, **. Correlation is significant at the 0.05, *. Correlation is significant at the 0.10***

Table 5.3: Correlation Matrix for Second Model.

variables	EMMOJO	FLID	FSIZE	FPROF	FDIVI	FLEVE	FISIN	BSIZE	BDUAL	BMEET	BINPEN	MOWNE	FOWNE	INSTIT	BLOCK
EMMOJO	**1.000**														
FLID	**-0.022**	**1.000**													
FSIZE	**-0.080****	**0.018**	**1.000**												
FPROF	**-0.011**	**0.032**	**0.013**	**1.000**											
FDIVID	**0.008**	**0.071***	**0.068****	**0.371****	**1.000**										
FLEVER	**-0.011***	**0.542****	**0.032**	**-0.156****	**0.034**	**1.000**									
FISIN	**0.027**	**-0.008**	**0.049***	**-0.021****	**0.029**	**-0.023**	**1.000**								
BSIZE	**-0.101****	**-0.010**	**0.271****	**0.017**	**0.040**	**-0.026**	**0.040**	**1.000**							
BDUAL	**0.036**	**0.048**	**-0.019**	**-0.068****	**0.009**	**-0.001**	**-0.102****	**-0.061***	**1.000**						
BMEET	**-0.035**	**0.029**	**0.062***	**0.052***	**-0.029**	**-0.027**	**-0.084****	**0.007**	**0.022**	**1.000**					
BINDEP	**-0.006****	**0.028**	**0.049***	**-0.007**	**0.062***	**0.047***	**0.009**	**0.415****	**0.139****	**-0.081****	**1.000**				
MOWNE	**-0.015**	**-0.007**	**-0.066***	**-0.015**	**-0.025**	**0.036**	**-0.063***	**-0.117****	**0.239****	**0.016**	**0.083**	**1.000**			
FOWNE	**-0.010**	**-0.010**	**0.001**	**-0.040**	**-0.017**	**-0.034**	**0.034**	**-0.014**	**0.013**	**0.006**	**-0.048**	**-0.009**	**1.000**		
INSTITU	**-0.009**	**-0.073***	**0.033**	**0.052***	**0.021**	**-0.083****	**0.024**	**0.055***	**-0.140****	**-0.049***	**0.011**	**-0.170**	**-0.041**	**1.000**	
BLOCKH	**-0.025**	**0.033**	**0.046**	**-0.082****	**-0.053***	**0.019**	**-0.022**	**-0.010**	**0.035**	**-0.025**	**0.023**	**0.027**	**-0.028**	**-0.009**	**1.000**

EMJOMO= *Discretionary accruals as a proxy for EM measured by using Jones model;* ***EMMOJO=*** *Discretionary accruals as a proxy for EM measured by using modifies Jones model;* ***FLID$_{it}$=*** *Forward-looking information disclosure score of company i in year t, expressed as % of total FLI disclosed out of all items.* ***FSIZE=*** *Firm size, the natural log of firm's total assets.* ***FPROF=*** *profitability, measured by ROA (net income before tax divided by total assets).* ***FDIVID=*** *dividend ratio measured as cash dividend divided by net income for the same period.* ***FLEVER=*** *leverage ratio, measured by total long-term debt divided by total assets.* ***FISIN=*** *industry type, measured by the ISIN number, as stated by Jordanian Securities Depository Centre.* ***BSIZE=*** *board size, measured by the total numbers of board members.* ***BDUAL=*** *Board duality, a dummy variable, 1 if the CEO and chairman are the same person and 0 otherwise.* ***BMEET=*** *Board meeting, the number of meetings per year held by the board of directors.* ***BINDEP=*** *board independence, measured by the total number of outside directors.* ***MOWNE=*** *managerial ownership, measured by the percentage of total shares held by executive directors divided by the total number of shares.* ***FOWNE=*** *family ownership, measured by the proportion of total shares owned by the family; a dummy variable, 1 if a family or an individual holds 10% or more of equity and 0 otherwise.* ***INSTITU=*** *institutional ownership, measured by dummy variable, 1 if any institution-held shares and 0 otherwise.* ***BLOCKH=*** *blockholder ownership, measured by a dummy variable, 1 if the firm has an external stockholder owning 5% or more of the outstanding shares and 0 otherwise.*

******. Correlation is significant at the 0.01, **. Correlation is significant at the 0.05, *. Correlation is significant at the 0.10***

Table 5.4: VIF Test Results.

Variable	VIF	1/VIF
FLEVER	1.48	0.677918
FLID	1.43	0.701338
FPROF	1.20	0.830574
FDIVID	1.20	0.834394
MOWNE	1.10	0.909320
BDUAIL	1.10	0.909339
BSIZE	1.09	0.913442
FSIZE	1.09	0.913587
INSTITU	1.06	0.945746
BOLCKH	1.05	0.948349
FISIN	1.03	0.947968
BMEET	1.02	0.977192
BINDEP	1.01	0.991238
FOWNER	1.01	0.992831
MEAN VIF		**1.13**

5.4. MULTIVARIATE ANALYSIS

This section describes the panel regression analysis, the most common method of multivariate analysis. In order to test the study's hypotheses, the relationship between FLID and EM practices is examined with cross-sectional panel regressions (e.g. Campbell and Mínguez-Vera 2008; Peni and Vähämaa 2010). Panel data is considered an appropriate model for time-series studies because it distinguishes between various companies and time-series data, thus allowing researchers to remove any unobservable heterogeneity among the study's sample (Himmelberg et al. 1999). However, some econometric issues that are related to panel data need to be considered. First, the Breusch and Pagan LM test was used to evaluate the model fit of both panel and pooled models. The result of the test is highly significant (*P-Value = 0.000*), meaning that panel data is more appropriate (Gujarati 2008). However, panel data models can be classified into two methods, fixed and random effects, which helps in capturing the impact of companies and time-specific heterogeneities. The Hausman test performed to determine whether the random or fixed method is more appropriate. The outcome was not significant (*P-Value = 0.2973*) and hence the study could reject the null hypotheses (fixed effects) in favour of using the random effect method.

The Pesaran CD test was employed to check whether this model has serial correlation. The test result was not statistically significant (*P-Value = 0.3635*), meaning that there is no serial correlation across entities. Furthermore, the Modified Wald test outcome (*P-Value = 0.6018*) indicated no heteroscedasticity in the study's model (see Appendices 5A and B).

The results of the random-effects panel regression analysis are presented in Table 5.5. The dependent variable is DA as a proxy for EM, while the independent variable is the level of FLID. The firm's characteristics (size, profitability, leverage, dividend, industry type) and internal corporate governance (board size, duality, board meeting, board independence, family ownership, managerial ownership, blockholder ownership, and institution ownership)

are included in the regression models as control variables. The estimates are reported in two panels: in Panel A, the regression outcomes where the DA are measured with the original Jones model are reported; in Panel B shows the outcomes of the regressions where the DA are measured with the modified Jones model. As can be noted from Table 5.5, regression analysis reveals that the values of R^2 overall for the two models are relatively small, 18.2% and 18.7%. The R^2 value indicates that the combination of the independent variables demonstrate 18.2% and 18.7% of variation in the dependent variable. Nevertheless, it is worth mentioning that low R^2 values are normal in this type of accrual regressions (Xie et al. 2003a; Geiger and North 2006; Davidson III et al. 2007; Jenkins and Velury 2008; Peni and Vähämaa 2010). Table 5.5 also shows that the P-Value is highly significant *(0.001)* in the two panels, implying that this model is highly significant and thus has a good explanatory power of disclosure.

The results of regression coefficients are presented in the same, Table 5.5, showing the impact of the level of FLID on EM practices. As expected, the regression results show that the coefficients of the level of FLID are negatively and significantly related to DA as proxy for EM, based on the Jones and modified Jones models *(coef. = -.0531565, z = -2.13, p < 0.033) (coef. = -.051607, z = -2.09, p < 0.037)* respectively. These results confirm that the EM practices in Jordanian companies with higher levels of FLID are less than in those with a lower level. This result supports hypotheses H1, which proposes that there is a negative and significant relationship between the level of FLID and EM practices. Hence, H1 is accepted.

This finding is consistent with previous studies (e.g. Lobo and Zhou 2001; Katmun 2012; MeilaniPurwanti 2013). For example, Lobo and Zhou (2001) and Katmun (2012) found that companies that disclose more information are less likely to be involved in EM behaviour. Agency theory suggests that a problem arises when both the agent and principal seek to maximize their own interests, which are not aligned. Asymmetry information is one of the

key factors leading to the agency problem of conflicting interests. Pursuant to agency theory, a company may use different methods, such as a compensation scheme or voluntary disclosure, to reduce conflicting interests between managers and owners as well as other stakeholders (Sun et al. 2010; An et al. 2011). In this regard, Li et al. (2008) stated that voluntary disclosure can reduce opportunistic action since it provides a more intensive monitoring tool for management. Consequently, there is a negative and significant relationship between corporate disclosure and EM behaviour. Thus, Jordanian companies that disclose more information are usually involved in EM and vice versa. Furthermore, the findings of the current study are consistent with the signalling theory's assumption of a long-term perspective, suggesting that companies with a high level of voluntary disclosure are not only concerned about increasing current profits and managers' wealth, but are looking to create and improve a strong future relationship with shareholders (Singhvi and Desai 1971). Therefore, such companies will act in an accountable way when reporting financial information. This finding is not surprising since the Jordanian economy is private sector oriented; the owner-largest shareholder in Jordan, typically a founder or his immediate family usually involve in company management directly or indirectly and effects most of the manager's decisions.

Overall, since Davidson et al. (2004) view EM as one form of agency cost and Jensen and Meckling (1976) view voluntary disclosure as one of the mechanisms mitigating agency cost, the present study employs agency theory and signalling theory to explain the negative relationship between the level of FLID and EM practices.

With regard to the coefficients of the control variables, company size is significantly and negatively related to DA *(coef. = -3.77e-11, z = -1.69, p < 0.092) (coef. = -3.77e-11, z = -1.76, p < 0.078)*. This finding indicates that large firms tend to report lower levels of DA than smaller firms do. Consistent with this notion is that smaller firms are subject to less

supervision from authority and consequently have more opportunity to engage in EM practices (Klein 2002; Xie et al. 2003a; Kim et al. 2012; González and García-Meca 2014). Xie et al. (2003a) and González and García-Meca (2014) argued that smaller firms tend to show higher discretionary accruals because they might be working in a business environment that is subject to less pressure and regulatory supervision.

With respect to the coefficient of a firm's leverage ratio, the results *(coef. = .0678708, z = 2.88, p < 0.004) (coef. = .0686484, z = 2.95, p < 0.003)* show a significant and positive relationship with DA. This suggests that Jordanian companies with higher leverage ratios report higher DA. A possible explanation for this relationship is that companies with higher leverage ratios have more motivation to report higher levels of EM, either to evade violation of lending contracts or to avoid special adverse effects on their debt rating (DeFond and Jiambalvo 1994; Ali et al. 2010). These findings are similar to research that found a positive and significant association between the leverage ratio and EM practices (e.g. Prencipe et al. 2008; Jiraporn and DaDalt 2009; González and García-Meca 2014; Wasiuzzaman et al. 2015). This result supports the perspective of agency theory that companies with higher leverage ratio are more likely to practice EM in order to avoid agency costs.

The coefficient of board size is negatively and significantly *(coef. = -.0034116, z = -1.96, p < 0.049) (coef. = -.0032643, z = -1.92, p < 0.054)* associated with the magnitude of EM. This finding suggests that companies with a larger board size are more likely to report lower EM. This result is in accordance with the notion that larger boards of directors are more active in controlling and monitoring opportunistic managerial behaviour (Zahra and Pearce 1989). This finding is also consistent with previous studies, which found that board size is negatively linked to the level of EM practices (Xie et al. 2003a; Peasnell et al. 2005; Yu 2006; Abed et al. 2012; González and García-Meca 2014). The results indicate that, in smaller boards, the dominance of blockholders or executive managers is expected, while

members from different backgrounds are normally found in larger boards. Therefore, a larger board size has better supervision of managers' behaviour.

Conversely, several studies conducted in Asia, such as Taiwan, Indonesia and Malaysia, documented that the size of the board of directors is positively and significantly correlated with the level of EM. For example, Kao and Chen (2004) and Rahman and Ali (2006) concluded that the size of the board is positively and significantly associated with EM. In spite of the comparable level of development of these countries with that of Jordan, boards in Jordan have essentially different characteristics, reflecting culture, political and economic aims and practices of corporate goverance.

Concerning board duality, there is a positive and significant relationship *(coef. = .0226021, z = 2.18, p < 0.030) (coef. = .0190903, z = 1.88, p < 0.060)* between this and the level of EM. The results indicate that the monitoring ability of the board of directors is less if the CEO is also chairman of the board (Gulzar 2011). This finding is in line with agency theory: the separation of CEO and chairman increases the board's independence from management, which leads to better monitoring and overseeing (Jensen 1993). This result is in line with other studies, such as by Klein (2002) and Sarkar et al. (2008), who found that EM measured by DA is positively associated with CEO duality. The findings of this study support the agency theory perspective that a CEO with excessive power over the board can easily manipulate earnings.

The coefficient of board independence is significantly and negatively *(coef. = -.0130739, z = -2.77, p < 0.006) (coef. = -.0121338, z = -2.62, p < 0.009)* associated with EM practices. This finding implies that companies with a higher proportion of outside directors have a greater likelihood of reporting lower DA, and is thereby consistent with agency theory that assumes that a board's independence is determined by independent directors. Previous studies also found that a board with a higher proportion of outside directors is better able to control

EM practices (Klein 2002; Xie et al. 2003a; Davidson et al. 2005; Dimitropoulos and Asteriou 2010; Riro 2013; González and García-Meca 2014). These findings indicate that board's characteristics is considered as monitoring mechanism in constraining EM practices in Jordanian companies.

In relation to managerial ownership structure, the assumption of agency theory is that more insider ownership offers a better mechanism for corporate governance, which leads to enhanced quality of financial reporting (Sánchez and Meca 2005). From the analysis of the regression, it is evident that the coefficient of managerial ownership is negatively and significantly *(coef. = -.0756744, z = -1.69, p < 0.071) (coef. = -.0798562, z = -1.67, p < 0.073)* related to DA. This finding confirms that the managerial ownership among Jordanian companies is considered as an influential factor on EM. One of the explanation for this negative relationship is that; family or identifiable group own the majority of Jordanian companies, meaning that managers and owners may have a stronger relationship. This relationship helps in aligning managers' interests with those of shareholders. Thus, managerial ownership can be seen as a mechanism to constrain EM activity among Jordanian companies. The results are consistent with Peasnell et al. (2005) and Alves (2012), who found that a higher level of managerial ownership is related to a low level of EM, agreeing with agency theory.

The coefficient of blockholder ownership is found to be significantly and positively *(coef. = .010589, z = 1.82, p < 0.067) (coef. = .012917, z = 1.85, p < 0.065)* associated with EM. These findings are in line with the notion that a majority of stockholders may connive with executives against a minority of shareholders in order to increase their own interests (Shleifer and Vishny 1997). The result confirms the work of Zhong et al. (2007), who found a positive relationship between blockholder ownership and the level of DA.

None of the coefficients of control variables (profitability, dividend, industry type, board meeting numbers, institutional ownership and family ownership) is statistically significantly related to DA, suggesting that these variables do not affect the magnitude of DA. The company profitability coefficient is insignificant, consistent with findings of Sun et al. (2010) who reported an insignificant relationship between a firm's profitability and EM. The result of the coefficient of board meeting numbers is also consistent with previous studies (Ebrahim 2007; Habbash 2010) which found an insignificant association between the numbers of meetings and EM practices. The insignificance of the coefficient of family and institutional ownership, these findings are in line with González and García-Meca (2014), who found no relationship between family-controlled companies and the value of DA. Chung et al. (2002) examined the association between institutional ownership and EM and their findings indicate that institutional ownership has no significant effect on EM.

Table 5.5 Panel A: Association between the level of FLID and EM practices, based on original Jones model (1991).

Dependent Variable: EM
Method: Random-effects GLS regression.
Sample: 201
Group variable: Company
Number of groups: 6
Number of observations: 1206

EMJOMO	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
FLID	-.0531565	.0250026	-2.13	0.033**	-.1021606	-.004152
[3]FSIZE	-3.77e-11	2.14e-11	-1.69	0.092*	-7.93e-11	5.95e-12
FPROF	-.0202059	.0289686	-0.70	0.485	-.0769833	.0365715
FDIVID	.00756	.0115475	0.65	0.513	-.0150727	.0301927
FLEVER	.0678708	.0235362	2.88	0.004***	.0217407	.114001
FISIN	6.92e-12	8.45e-12	0.82	0.413	-9.65e-12	2.35e-11
BSIZE	-.0034116	.0017367	-1.96	0.049**	-.0068154	-7.76e-06
BDUAL	.0226021	.0103837	2.18	0.030**	.0022505	.0429537
BMEET	-.0017308	.0017332	-1.00	0.318	-.0051279	.0016663
BINDEP	-.0130739	.0047264	-2.77	0.006***	-.0223374	-.003810
MOWNE	-.0756744	.0474862	-1.69	0.071*	-.1687456	.0173968
FOWNE	-.0000682	.0001155	-0.59	0.555	-.0002946	.0001582
INSTITU	-.0036966	.0155865	-0.24	0.813	-.0342455	.0268523
BLOCKH	.010589	.0071064	1.82	0.067*	-.0028694	.0249871
_ cons	.1162854	.0377028	3.08	0.002	.0423894	.1901815
R Sq. value	0.182					
P. value	0.0000					

[3] Following previous studies company's size is measured by using the natural logarithm of total assets at the year-end (Aljifri and Hussainey 2007; Samaha et al. 2012; Wang and Hussainey 2013).

Panel B: Association between the level of FLID and EM practices, based on modified Jones model (1995).

EMMOJO	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
FLID	-.051607	.0246873	-2.09	0.037**	-.0999933	-.0032208
FSIZE	-3.77e-11	2.14e-11	-1.76	0.078*	-7.97e-11	4.24e-12
FPROF	-.0245732	.0285813	-0.86	0.390	-.0805915	.0314451
FDIVID	.0037929	.011389	0.33	0.739	-.018529	.0261149
FLEVER	.0686484	.0232395	2.95	0.003***	.0230998	.1141969
FISIN	6.92e-12	8.22e-12	0.84	0.400	-9.19e-12	2.30e-11
BSIZE	-.0032643	.0016957	-1.92	0.054**	-.0065878	.0000593
BDUAL	.0190903	.0101466	1.88	0.060*	-.0007968	.0389773
BMEET	-.0016189	.0017013	-0.95	0.341	-.0049533	.0017155
BINDEP	-.0121338	.0046385	-2.62	0.009***	-.0212251	-.0030424
MOWNE	-.0798562	.0464742	-1.67	0.073*	-.160944	.0212317
FOWNE	-.00007	.0001141	-0.61	0.540	-.0002936	.0001536
INSTITUT	-.0002161	.0152067	-0.01	0.989	-.0300207	.0295886
BLOCKH	.012917	.0069969	1.85	0.065**	-.0007967	.0266307
_ cons	.1105494	.0367691	3.01	0.003	.0384833	.1826155
R Sq. value	0.187					
P. value	0.0001					

EMJOMO= *Discretionary accruals as a proxy for EM measured by using Jones model;* ***EMMOJO=*** *Discretionary accruals as a proxy for EM measured by using modifies Jones model;* $\boldsymbol{FLID_{it}}$ *= Forward-looking information disclosure score of company i in year t, expressed as % of total FLI disclosed out of all items.* ***FSIZE****= Firm size, the natural log of firm's total assets.* ***FPROF****= profitability, measured by ROA (net income before tax divided by total assets).* ***FDIVID****= dividend ratio measured as cash dividend divided by net income for the same period.* ***FLEVER****= leverage ratio, measured by total long-term debt divided by total assets.* ***FISIN****= industry type, measured by the ISIN number, as stated by Jordanian Securities Depository Centre.* ***BSIZE****= board size, measured by the total numbers of board members.* ***BDUAL****= Board duality, a dummy variable, 1 if the CEO and chairman are the same person and 0 otherwise.* ***BMEET****= Board meeting, the number of meetings per year held by the board of directors.* ***BINDEP****= board independence, measured by the total number of outside directors.* ***MOWNE****= managerial ownership, measured by the percentage of total shares held by executive directors divided by the total number of shares.* ***FOWNE****= family ownership, measured by the proportion of total shares owned by the family; a dummy variable, 1 if a family or an individual holds 10% or more of equity and 0 otherwise.* ***INSTITU****= institutional ownership, measured by dummy variable, 1 if any institution-held shares and 0 otherwise.* ***BLOCKH****= blockholder ownership, measured by a dummy variable, 1 if the firm has an external stockholder owning 5% or more of the outstanding shares and 0 otherwise.*

******. Coefficient is significant at the 0.01, **. Coefficient is significant at the 0.05, *. Coefficient is significant at the 0.10***

5.5. ALTERNATIVE MEASUREMENT OF DISCRETIONARY ACCRUALS

Both Jones models are applied in the current study as primary models, since the findings of previous EM studies reveal that they have greater explanatory power than other models (Iqbal et al. 2009; Chen et al. 2010; Choi et al. 2013; Islam et al. 2014). However, based on previous studies (Kothari et al. 2005; Sun et al. 2010; Katmun 2012), the Performance-Matched Kothari (2005) model (PM) was chosen as a secondary model for its better explanatory power than other models in measuring EM, to examine whether alternative measurement of DA affects the primary results or not. The PM model is generally considered one of the most effective and useful techniques for detecting DA (e.g. Kothari et al. 2005; Chang and Sun 2010; Katmun 2012). This study uses the absolute value of DA rather than signed DA, because it is interested in capturing the extent of EM, and using signed DA does not alter the outcomes of the analysis (Raman and Shahrur 2008; Dimitropoulos and Asteriou 2010). The absolute value of the residual obtained from the PM as the dependent variable is applied as a different measure of EM practices. The results of the coefficient of FLID and other control variables on DA, based on the PM model, are presented in Table 5.6. The regression analysis reveals that the overall R^2 value is around 11%, which is comparable to the results obtained by (Xie et al. 2003a; Dimitropoulos and Asteriou 2010). Although the R^2 value is lower than that obtained from the main models (Table 5.5 panels A and B), the result of the test is highly significant (*P-Value = 0.001*).

The coefficient of the level of FLID is negatively and significantly *(coef. = -.044843, z = -1.84, p < 0.066)* associated with EM practices. This result is consistent with the primary results reported in Table 5.5 panels A and B, suggesting that companies which disclose a high level of FLID report lower levels of EM. In respect of the control variables, the leverage ratio coefficient is positively and significantly *(coef. = .0579144, z = 2.53, p < 0.012)* related to DA, implying that companies with a higher leverage ratio are more likely to engage in EM

actions. This result is in line with the earlier results presented in the Table 5.5 panels A and B, and is similar to previous studies that found a positive relationship between the leverage ratio and EM practices (Prencipe et al. 2008; Jiraporn and DaDalt 2009; González and García-Meca 2014).

The coefficient of board size is negatively and significantly *(coef. = -.003206, z = -1.73, p < 0.083)* associated to the degree of EM. This finding suggests that companies with large boards are more likely to report lower EM, consistent with the primary results. On the other hand, the coefficient of board duality is positively and significantly *(coef. = .0168839, z = 1.67, p < 0.094)* related to DA. In the light of the above discussion, the results of the effect of FLID and some of control variables on EM using the PM model (as an alternative measure for EM), are consistent with the main findings presented in Table 5.5 panels A and B. This suggests that the main results are reliable and robust under different types of EM measurement and are not affected by the different measurements of DA.

Table 5.6: Association between the level of FLID and EM practices based on Performance-Matched Kothari (2005) Model.

Dependent Variable: EM
Method: Random-effects GLS regression.
Sample: 201
Group variable: Company
Number of groups: 6
Number of observations: 1206

EMPM	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
FLID	-.044843	.0243548	-1.84	0.066*	-.0925775	.0028915
FZISE	-3.43e-11	2.47e-11	-1.39	0.166	-8.27e-11	1.42e-11
FPROF	-.0155894	.0281464	-0.55	0.580	-.0707554	.0395766
FDIVID	.0008055	.0112311	0.07	0.943	-.021207	.022818
FLEVER	.0579144	.0229227	2.53	0.012***	.0129867	.1028421
FISIN	1.20e-11	8.02e-12	1.50	0.135	-3.73e-12	2.77e-11
BSIZE	-.003206	.0018486	-1.73	0.083*	-.0068291	.0004171
BDUAL	.0168839	.0100854	1.67	0.094*	-.0028832	.036651
BMEET	-.0008686	.0016749	-0.52	0.604	-.0041513	.0024142
BINDEP	.0007639	.0035659	0.21	0.830	-.0062252	.0077529
MOWNE	-.0542585	.0457951	-1.18	0.236	-.1440154	.0354983
FOWNE	-.0000901	.0001125	-0.80	0.424	-.0003106	.0001305
INSTITU	-.0038281	.0148836	-0.26	0.797	-.0329994	.0253432
BLOCKH	.0091849	.0068872	1.33	0.182	-.0043138	.0226836
_ cons	.0789629	.0357584	2.21	0.027	.0088778	.1490481
R Sq. value	0.113					
P. value	0.001					

EMPM= *Discretionary accruals as a proxy for EM measured using performance-matched Kothari model.* ***$FLID_{it}$=*** *Forward-looking information disclosure score of company i in year t, expressed as % of total FLI disclosed out of all items.* ***FSIZE****= Firm size, the natural log of firm's total assets.* ***FPROF****= profitability, measured by ROA (net income before tax divided by total assets).* ***FDIVID****= dividend ratio measured as cash dividend divided by net income for the same period.* ***FLEVER****= leverage ratio, measured by total long-term debt divided by total assets.* ***FISIN****= industry type, measured by the ISIN number, as stated by Jordanian Securities Depository Centre.* ***BSIZE****= board size, measured by the total numbers of board members.* ***BDUAL****= Board duality, a dummy variable, 1 if the CEO and chairman are the same person and 0 otherwise.* ***BMEET****= Board meeting, the number of meetings per year held by the board of directors.* ***BINDEP****= board independence, measured by the total number of outside directors.* ***MOWNE****= managerial ownership, measured by the percentage of total shares held by executive directors divided by the total number of shares.* ***FOWNE****= family ownership, measured by the proportion of total shares owned by the family; a dummy variable, 1 if a family or an individual holds 10% or more of equity and 0 otherwise.* ***INSTITU****= institutional ownership, measured by dummy variable, 1 if any institution-held shares and 0 otherwise.* ***BLOCKH****= blockholder ownership, measured by a dummy variable, 1 if the firm has an external stockholder owning 5% or more of the outstanding shares and 0 otherwise.*

******. Coefficient is significant at the 0.01, **. Coefficient is significant at the 0.05, *. Coefficient is significant at the 0.10***

5.6. DEALING WITH ENDOGENEITY

The endogeneity problem occurs when independent variables are connected to error terms (Reeb et al. 2012). Endogeneity has three main components: omitted variable, measurement error and simultaneity (Brown and Hillegeist 2007; Reeb et al. 2012; Choi et al. 2013). Previous studies have reported that models of corporate disclosure and EM suffer from this problem (Lobo and Zhou 2001; Cornett et al. 2008; Choi et al. 2010; Choi et al. 2013). The common form of endogeneity in the relationship between voluntary disclosure and EM is that of simultaneity, which arises when both variables are determined either by external factors such as legal effects, rules and regulations concerning the market for corporate control, or by internal aspects such as managers' overall policies (McKnight and Weir 2009; Choi et al. 2010). Al Farooque et al. (2010) reported that the interaction between the dependent variable and explanatory variables may arise in one of three circumstances: first, direct association, where independent variables may have a positive or negative significant relationship to the dependent variable; second, reverse causality, where the dependent variable is positively or negatively related to independent variables; and third, a bi-directional or simultaneity relationship, where both dependent and independent variables are positively or negatively associated at the same time (simultaneously). Consequently, ignoring the simultaneity problem might lead to inconsistent, inefficient and biased inferences when addressing the association between voluntary disclosure and EM (McKnight and Weir 2009). In order to address the endogeneity problem, two options have been suggested for solving the bias. The first uses instrumental variables (IV) (Hermalin and Weisbach 1991; Himmelberg et al. 1999; Coles et al. 2008; McKnight and Weir 2009; Choi et al. 2010) and the second a simultaneous system equation (Hermalin and Weisbach 1991; Cornett et al. 2008; Coles et al. 2008; Al Farooque et al. 2010). Himmelberg et al. (1999) and Coles et al. (2008) have used both options and obtained similar results. This study addresses this problem by using the lagged

values of the endogenous independent variable FLID as an IV to examine whether the simultaneity problem affects the association between FLID and EM.

Both Durbin and Hausman tests were run to check whether bias for the endogenous and independent variables exists (Gujarati 2008). The tests gave X^2 of *13.68 % and 13.79% (P= 0.0002, P=0.0002)* respectively, which suggests that the null hypothesis of no endogeneity between FLID as the independent variable and EM as the dependent variable is rejected. Thus, the presence of this problem might be affecting the results, making ineffective, biased and inconsistent. Therefore, the instrumental variable two-stage regression model is used to control for the endogeneity (simultaneity) problem. The results of the two-stage (2SLS) regression of FLID on EM are presented in Table 5.7 panels A and B. After controlling for the simultaneity, the coefficient of FLID is significant and negatively *(coef. = -.078956, z = -2.68, p < 0.007) (coef. -.0766124, z = -2.65, p < 0.008)* related to EM practices. These results suggest that companies with a higher level of FLID tend to report less EM. This finding is in line with results of the panel regression random effect model reported in Table 5.5, panels A and B, although the level of significance is higher than in the previous results. Furthermore, this result is consistent with the findings of Jaggi et al. (2009) and Choi et al. (2010) who found a negative simultaneity relation between quality of financial reporting and EM. Regarding the control variables, the results show similar outcomes, which suggests that these results are consistent with the main findings in Table 5.5 panels A and B. However, some coefficient values show a lower level of significance, although the direction and significance of the association with EM remain the same.

In summary, the instrumental variable two-stage model results are consistent with the primary results presented in Table 5.5 panels A and B, showing that the simultaneity problem between FLID and EM does not affect the main results of FLID and other control variables on EM actions.

Table 5.7 Panel A: Instrumental variables Two-Stage regression model based on Jones model (1991) (using linear regression model).

EMJOMO	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
LFLID	-.078956	.0294212	-2.68	0.007***	-.1366205	-.0212915
FSIZE	-3.77e-11	2.14e-11	-1.76	0.078*	-7.97e-11	4.24e-12
FPROF	-.0220118	.0288726	-0.76	0.446	-.0786587	.0346351
FDIVID	.0034032	.0113925	0.30	0.765	-.0189484	.0257548
FLEVER	.0718027	.024028	2.99	0.003***	.0246608	.1189445
FISIN	6.80e-12	6.19e-12	1.10	0.273	-5.35e-12	1.90e-11
BSIZE	-.0041379	.001368	-3.02	0.003***	-.0068219	-.0014538
BDUAL	.0131983	.0083063	1.59	0.112	-.0030982	.0294948
BMEET	-.0017366	.0015155	-1.15	0.252	-.0047099	.0012367
BINDEP	-.0140927	.0041219	-3.42	0.001***	-.0221797	-.0060057
MOWNE	-.0476752	.0390719	-1.22	0.223	-.1243326	.0289822
FOWNE	-.0000769	.0001181	-0.65	0.515	-.0003087	.0001549
INSTITU	-.0017934	.0121045	-0.15	0.882	-.025542	.0219552
BLOCKH	.011109	.0066954	1.66	0.097*	-.0020272	.0242451
_ cons	.1239826	.0294231	4.84	0.000	.0662557	.1817095
R Sq. value	0.1168					
P. value	0.0039					

Panel B: Instrumental variables Two-Stage (2SLS) regression model based on modified Jones Model (1995) (using linear regression model).

EMMOJO	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
LFLID	-.0766124	028945	-2.65	0.008***	-.1333436	-.0198812
FSIZE	-3.67e-11	2.17e-11	-1.69	0.092*	-7.93e-11	5.95e-12
FPROF	-.016051	.0293374	-0.55	0.584	-.0736097	.0415078
FDIVID	.0070739	.0115759	0.61	0.541	-.0156374	.0297853
FLEVER	.0717716	.0244147	2.94	0.003***	.0238709	.1196723
FISIN	6.85e-12	6.29e-12	1.09	0.277	-5.50e-12	1.92e-11
BSIZE	-.0043286	.0013901	-3.11	0.002***	-.0070558	-.0016014
BDUAL	.0179856	.00844	2.13	0.033**	.0014268	.0345445
BMEET	-.0018328	.0015399	-1.19	0.234	-.004854	.0011884
BINDEP	-.0150453	.0041882	-3.59	0.000***	-.0232624	-.0068281
MOWNE	-.0583563	.0397008	-1.47	0.142	-.1362476	.0195351
FOWNE	-.0000749	.00012	-0.62	0.533	-.0003104	.0001606
INSTITUT	-.0058797	.0122994	-0.48	0.633	-.0300106	.0182511
BLOCKH	.0091682	.0068032	1.35	0.178	-.0041794	.0225158
_ cons	.1297682	.0298967	4.34	0.000	.0711121	.1884243
R Sq. value	0.1149					
P. value	0.0045					

5.7. SUMMARY

This chapter reports the empirical results on the relationship between FLID and EM in the non-financial Jordanian companies, 2008 to 2013. The literature suggested two viewpoints on the association between FLID and EM: managerial opportunism and long-term perspectives (e.g. Choi et al. 2013).

Managerial opportunism suggests that companies might be strategically using FLID to cover their opportunistic EM actions. In such cases, FLID is used as an entrenchment instrument to hide this opportunistic performance and to defend companies' managers against shareholders' potential attention and reaction. In line with this view, several empirical studies have shown a positive and significant relationship between voluntary disclosure and EM (Kasznik 1999; Jog and McConomy 2003; Prior et al. 2008).

On the other hand, the long-term perspective suggests that companies with a high level of voluntary disclosure are not only concerned about increasing current profits and managers' wealth but are also looking to create and improve a strong future relationship with shareholders. Therefore, such companies will act in an accountable way when reporting financial information. Empirical studies confirm a negative relationship between voluntary disclosure and EM (Lobo and Zhou 2001; Jo and Kim 2007; Hribar and Yang 2010; Katmun 2012; Yadollah et al. 2012).

Two measurements for EM are used in this chapter to examine the association between FLID and EM practices, the Jones and modified Jones models. Further analysis is performed by using the PM model to compare and confirm that the main results are consistent and robust. In general, the results are in line with the long-term viewpoint, which proposes a negative relationship between FLID and EM.

The results presented in this chapter are thus in line with agency and signalling theories (the long-term perspective), which suggest that FLID is essential in reducing information asymmetry between managers and shareholders, when the interests of the two groups conflict, and implying that Jordanian companies that disclose a high level of FLID are more focused in their relationships with stakeholders and less likely to engage in EM practices.

CHAPTER SIX: CEOS' CHARACTERISTICS AND FLID: RESULTS AND DISCUSSION

6.1. INTRODUCTION

This chapter provides the findings of the data analysis based on the study methods detailed in the methodology chapter. Tests are performed to achieve the following research objective:

To investigate the relationship between CEOs' personal characteristics and the level of FLID among non-financial Jordanian companies.

The chapter is organized as follows: section 6.2 discusses the descriptive statistics, while section 6.3 deals with the multicollinearity problem. Section 6.4 summarizes and critically discusses the examination of the hypotheses, and section 6.5 the additional analysis. Section 6.6 is a concluding discussion.

6.2. DESCRIPTIVE STATISTICS

Table 6.1 shows key descriptive statistical analysis for all variables in the full sample. The descriptive statistics reveal that the minimum value of FLID rate is 0% and the maximum is 78%, which indicates a considerable dispersion. The mean value of 31.14% shows a low level of FLID across the companies. These results are closer to the findings of Aljifri and Hussainey (2007), who found that the minimum and maximum values of FLID among UAE companies are 0% and 70% respectively. However, these figures are higher than those of Wang and Hussainey's (2013) UK study, which reports values of 0%, and 45%. The mean value is less than those reported by Sartawi et al. (2014), who found that the average value of voluntary disclosure among industrial and service sectors in Jordanian companies over the year 2012 was 49% and 44% respectively. This study used the median value of 33% as a benchmark to classify the high and low levels of FLID, similar to Menicucci (2013) figure of 32.5% for Italian listed companies. However, this figure is higher than those of Al-Shammari

and Al-Sultan (2010); Chau and Gray (2010); Mathuva (2012); Uyar and Kilic (2012) and Bozanic et al. (2013b), who found that average values of FLID scores in Kuwait, Hong Kong, Nairobi Securities Exchange, Turkish and US companies of 19%, 16.42%, 18.2%, 17.8%, and 31.4% respectively. Conversely, the median figure of the present study is lower than the averages of 50.46%, 47%, 44%, and 63% reported for Finnish, Bangladeshi, Turkish and Jordanian companies respectively (Nalikka 2009; Rouf and Al Harun 2011; Uyar et al. 2013; Sartawi et al. 2014). As mentioned previously, the government of Jordan has introduced several accounting reforms with the aim of introducing new securities exchange laws and corporate disclosure practices. This comparison implies that Jordanian companies follow these reforms and they are more likely to have a higher level of FLID compared with those of other countries. In other words, the findings indicate that Jordanian companies are more likely to improve the quality of their financial reports by extending the level of FLID. Concerning the CEO's age, the mean value is 51.11 with minimum and maximum ages of 26 and 84 years. These findings are quite similar to Sartawi et al. (2014), who reported that the minimum and maximum ages of directors of Jordanian companies are 28 and 83 years respectively. In the present study, the median value age is 51 years, similar to the UK findings of Andriosopoulos et al. (2013) who report an average of CEO age is 54 years. Following previous studies, for example Lin et al. (2014), this study has used the median age as a cut-off point to classify older and younger CEOs. However, this figure is inconsistent with Davidson III et al. (2007), who documented that the mean value of CEO's age in US companies is 62. In addition, the descriptive results show that 95% of the sample companies are managed by male CEOs and 5% are managed by female CEOs. This is an interesting finding, similar to the 5% obtained in Ireland, New Zealand and the United Arab Emirates (Grant Thornton International Business Report 2012), and quite close to the percentages for the USA and UK (6% females in both countries), but higher than the 3% in Japan, Brazil and

Botswana. This finding is expected since the majority of Jordanian companies are owned by families. As in this study, Sartawi et al. (2014) found that the percentage of female directors of Jordanian companies is 5%. Table 6.1 also shows that 43.54% and 29% of CEOs were overconfident about their company's performance based on net buyer and financial leverage ratio respectively. This result is higher than the average of 11% reported for a sample of 572 companies listed in the Fortune 500 over the period 2000-2004 (Hribar and Yang 2010) and 400 UK companies (Andriosopoulos et al. 2013). However, the average reported in this study is less than the average 44% reported by Hribar and Yang (2015). The company size values vary widely from .93e+03 to 3.23e+09. The descriptive results reveal that profitability varies from -85.90% (loss) to 95% (profit), with standard deviation of 12.17%. The mean value of industry type indicates that 36.18% of the companies in the study operate in the industrial sector. Table 6.1 also shows that the average value of dividend ratio is 18.82%, with minimum and maximum values of 0 and 0.9751 respectively. Correspondingly, the median value is 0 with standard deviation of 30.77%.

Concerning the other control variables, board size has a mean value 8.011, which is consistent with other studies (Peasnell et al. 2005; Sartawi et al. 2014). However, the maximum board size is 19 members, which indicates that, in general, Jordanian firms do not follow the corporate governance, code number (15), which recommends that board size should be no more than 13 members. A dummy variable of board duality has a mean of 20.5%. This figure is lower than the average reported by Chau and Gray (2010), who found that the mean value among Hong Kong listed companies is 54%. Numbers of meeting and board independence have mean values of 7.572 and 2.020 respectively. Concerning ownership structure, managerial and family ownership have 3.5% and 61.2% mean values respectively, while institutions and blockholders are 35.5% and 48.92%.

Table 6.1: Descriptive Statistics of FLID and CEOs characteristics.

Variable	N	Minim	Maxim	Mean	Median	STAN-DEV
FLID	1206	0.000	0.780	0.311	0.330	0.1844
CAGE	1206	26	84	51.11	51.00	11.266
CGEND	1206	0	1	0.953	1	0.2105
COVE	1206	0	1	0.4354	0.000	0.4911
FLEVER	1206	0.0002	0.97808	0.2950135	0.240055	0.2320937
[4]FSIZE	1206	.93e+03	3.23e+09	5.55e+07	1.87e+07	1.57e+08
FPROF	1206	-0.85904	0.9500	0.0012302	0.01109	.1217121
FDIVID	1206	0	0.9751	0.1882211	0	0.307755
FISIN	1206	1	201	.3631841	101	.481111
BSIZE	1206	3	19	8.011	7	2.4494
BDUAL	1206	0	1	.2056	0	.40433
BMEET	1206	3	28	7.5729	7	2.1378
BINDEP	1206	0	8	2.0207	2	1.2345
MOWNE	1206	0	.7185	.03528	0	.08595
FOWNE	1206	0	.9450	0.6127	.15472	.27206
INSTITU	1206	0	1	.35547	.3320	.76537
BLOCKH	1206	0	1	.48922	0	.50009

***FLID$_{it}$**= Forward-looking disclosure index of the company i in the year t, expressed as % total FLID out of all items. **CAGE**= CEO's age, measured by the difference between the CEO's date of birth and years of the study period. **CGEND**= CEO's gender, 1 CEO male, and 0 if female. **COVER**= CEO overconfidence, measured by net buyer method; the proportion of CEO share ownership, options, and stock exercise. **FLEVER=** leverage ratio used as another proxy for CEO overconfidence, measured by total long-term debt divided by total assets. **FSIZE**= Firm size, the natural logarithm of firm's total assets. **FPROF**= profitability, measured by ROI (net income before tax divided be total assets). **FDIVID**= dividends ratio measured as cash dividends divided by net income for the same period. **FISIN**= industry type, measured by using the ISIN number, as stated by Jordanian Securities Depository Centre. **BSIZE**= board size, measured by the total numbers of the board. **BDUAL**= Board duality, a dummy variable that takes the value 1if the CEO and chairman are the same person and 0 otherwise. **BMEET**= Board meeting, the number of meetings per year held by the board of directors. **BINDEP**= board independence, measured by the total number of outside directors. **MOWNE**= managerial ownership, measured by the percentage of total shares held by executive directors divided by the total number of shares. **FOWNE**= family ownership, measured by the proportion of total shares owned by the family, a dummy variable 1 if a family or an individual holds 10% or more of equity 0 otherwise. **INSTITU** = institution ownership, measured by dummy variable 1if any institution held shares and 0 otherwise. **BLOCKH**= block-holders ownership, measured by a dummy variable that 1 if the firm has an external stockholder owning 5% or more of the outstanding shares, and the value of 0 otherwise.*

[4] Following previous studies company's size is measured by using the natural logarithm of total assets at the year-end (Aljifri and Hussainey 2007; Samaha et al. 2012; Wang and Hussainey 2013).

6.3. MULTICOLLINEARITY

Before conducting the regression analysis, the present study tested whether there was a multicollinearity problem in the model used to examine the effect of CEOs' personal characteristics on FLID. As described in the previous chapter (section 5.3), the correlation coefficients matrix and VIF with tolerance values were used. There has been no agreement among researchers regarding the cut-off correlation percentage (Alsaeed 2006). For example, Gujarati (2003, 2008), suggests that the coefficient of ± 80% is considered as a starting point while Tabachnick and Fidell (2001) accept ± 70%. Table 6.2 shows that the highest correlation is between board independence and board size with a coefficient of 41.50%. The correlation matrix indicates that no Pearson's coefficient is more than 70%. Therefore, there is no multicollinearity problem among the explanatory variables (Tabachnick and Fidell 2001; Gujarati 2008). Table 6.3 shows the VIF coefficients of each independent variable, and the range from 1.36 to 1.01 is below 10 (Gujarati (2003, 2008), confirming that the multicollinearity problem does not exist among the independent variables in this study.

Table 6.2: Pearson Correlation Matrix: CEOs' Characteristics and all Control Variables.

variables	CAGE	CGEND	COVER	FSIZE	FPROF	FDIVID	FLEVE	FISIN	BSIZE	BDUAL	BMEET	BINPEN	MOWNE	FOWNE	INSTIT	BLOCK
CAGE	**1.000**															
CGEND	**0.073****	**1.000**														
COVER	**-0.148****	**-0.018**	**1.000**													
FSIZE	**0.020**	**0.025**	**0.017**	**1.000**												
FPROF	**0.016**	**-0.008**	**-0.007**	**0.013**	**1.000**											
FDIVID	**0.092****	**-0.024**	**0.117****	**0.068****	**0.371****	**1.000**										
FLEVER	**-0.152****	**0.082****	**0.206****	**0.032**	**-0.156****	**0.034**	**1.000**									
FISIN	**-0.012**	**-0.137****	**0.009**	**0.049***	**-0.021****	**0.029**	**-0.023**	**1.000**								
BSIZE	**-0.012**	**-0.047**	**0.005**	**0.271****	**0.017**	**0.040**	**0.026**	**0.040**	**1.000**							
BDUAL	**0.010**	**0.005**	**-0.077****	**-0.019**	**-0.068****	**0.009**	**-0.001**	**-0.102****	**-0.061***	**1.000**						
BMEET	**-0.024**	**0.022**	**-0.012**	**0.062***	**0.052***	**-0.029**	**-0.027**	**-0.084****	**0.007**	**0.022**	**1.000**					
BINDEP	**0.034**	**-0.130****	**0.012**	**0.049***	**-0.007**	**0.062***	**0.047***	**0.009**	**0.415****	**0.139****	**-0.081****	**1.000**				
MOWNE	**-0.038**	**-0.030**	**-0.032**	**-0.066***	**-0.015**	**-0.025**	**0.036**	**-0.063***	**-0.117****	**0.239****	**0.016**	**0.083**	**1.000**			
FOWNE	**-0.034**	**0.007**	**0.035**	**0.001**	**-0.040**	**-0.017**	**-0.034**	**0.034**	**-0.014**	**-0.013**	**0.006**	**-0.048**	**-0.009**	**1.000**		
INSTITU	**0.042**	**0.064***	**-0.033**	**0.033**	**0.052***	**0.021**	**-0.083****	**0.024**	**0.055***	**-0.139****	**-0.049***	**0.011**	**-0.170**	**-0.041**	**1.000**	
BLOCKH	**0.008**	**0.011**	**0.006**	**0.046**	**-0.082****	**-0.053***	**0.019**	**-0.022**	**-0.010**	**0.035**	**-0.025**	**0.023**	**0.027**	**-0.028**	**-0.009**	**1.000**

***CAGE**= CEO's age, measured by the difference between the CEO's date of birth and year of the study period. **CGEND**= CEO's gender, take value 1if CEO male, and 0 if female. **COVER**= CEO overconfidence, the proportion of CEO share ownership, options, and stock exercise. **FSIZE**= Firm size, the natural logarithm of firm's total assets. **FPROF**= profitability, measured by ROI (net income before tax divided be total assets). **FDIVID**= dividends ratio measured as cash dividends divided by net income for the same period. **FLEVER**= leverage ratio used as another proxy for CEO overconfidence, measured by total long-term debt divided by total assets. **FISIN**= industry type, measured by using the ISIN code, as stated by Jordanian Securities Depository Centre. **BSIZE**= board size, measured by the total numbers of the board. **BDUAL**= Board duality, a dummy variable that takes the value of one if the CEO and chairperson are the same person and zero if otherwise. **BMEET**= Board meeting, the number of meetings per year held by the board of directors. **BINDEP**= board independence, measured by the total number of outside directors. **MOWNE**= managerial ownership. Measured by the percentage of total shares held by executive directors divided by the total number of shares. **FOWNE**= family ownership, Measured by the proportion of total shares owned by the family, a dummy variable would take one if a family or an individual holds 10% or more of equity and the value zero if otherwise. **INSTITU** = institutional ownership, measured by dummy variable would take one if any institutional held shares and zero if otherwise. **BLOCKH**= block-holders ownership, measured by a dummy variable that takes the value of one if the firm has an external stockholder owning 5% or more of the outstanding shares, and the value of zero if otherwise.*

******. Correlation is significant at the 0.01, **. Correlation is significant at the 0.05, *. Correlation is significant at the 0.10***

Table 6.3: VIF test results.

Variable	VIF	1/VIF
BSIZE	1.36	0.735871
BINDEP	1.31	0.765823
FPROF	1.22	0.816691
FDIVID	1.22	0.887376
BDUAIL	1.13	0.909320
FLEVER	1.12	0.892108
MOWNE	1.12	0.896686
FSIZE	1.10	0.909160
COVER	1.10	0.912060
CAGE	1.07	0.936515
FOWNER	1.06	0.942859
CGEND	1.04	0.958167
FISIN	1.04	0.960483
BMEET	1.03	0.970041
INSTITU	1.01	0.987370
BLOCKH	1.01	0.990753
MEAN VIF		**1.12**

6.4. MULTIVARIATE ANALYSIS

The current study used panel data to examine the influence of CEOs' personal characteristics on the level of FLID. As explained in the previous chapter, panel data models can be either random or fixed effect to capture the impact of companies and time-specific heterogeneities. The study performed Hausman test; the test outcome is not statistically significant (*P-Value = 81.09%*), so random effect models are preferred (see Appendix 6A). The Pesaran CD test was employed to check whether the model has a serial correlation, and the result is not statistically significant (*P-Value = 52.34%*). The Modified Wald test outcome (*P-Value = 63.57%*) indicated no heteroscedasticity in the study's model.

In Table 6.4, the estimates are presented in two panels: panel A reports the results for the regressions where overconfidence is measured using the net buyer method, and panel B the leverage ratio. The combination of the independent variables R^2 demonstrates 25.69%, and 23.45% of variation on the dependent variable respectively. R^2 values are higher than the 18% reported by (Hribar and Yang 2015). The P-Value is highly significant at the level ($P < 0.001$), implying that the model has good explanatory power of disclosure (see Appendix 6B). The results reported in both panels of Table 6.4 support hypothesis H2, which proposes a negative significant relationship between CEO's age and the level of FLID. The coefficient of age is negatively and significantly (*coef. = -.0015846, z = -3.19, p < 0.001*) (*coef. = -.0011973, z = -2.48, p < 0.013*) related to the level of FLID based on the net buyer and leverage ratio methods respectively. This finding is consistent with Bamber et al. (2010), that older managers are more likely to be conservative in disclosing voluntary information than younger CEOs, and less likely to issue forecasts. FLID constitutes one of the key components of a company's information disclosure, therefore making more FLID will provide stakeholders with greater and value-relevant information to assist them in making rational decisions (Qu et al. 2015). This result is consistent with signalling theory's long-term

perspective, suggesting that managers are more likely to disclose more FLID to interested parties in order to decrease information asymmetry and increase their confidence in the company's future performance (Singhvi and Desai 1971). This finding is also in line with suggestions that the desire to keep their position will result in a greater likelihood of information disclosure by younger CEOs (Hu and Kumar 2004), and with several studies that reported a significant negative association between the CEO's age and other factors such as investment decisions (Serfling 2012; Yim 2013). The results of this study indicate that older managers tend to avoid risks more than younger managers, whereas younger managers tend to reveal their capability to the stakeholders.

The significantly positive coefficient at level (*coef. = .0610475, z = 2.11, p < 0.035) (coef. = .0415782, z = 2.69, p < 0.007)* of the CEO's gender indicates that companies managed by male CEOs tend to disclose more FLID than companies managed by female CEOs. This result supports H3, which proposes a positive and significant relationship between the level of FLID and the persence of male CEOs, and corroborate findings that gender deversity has an impact on the decision-making process (e.g. Siciliano 1996; Erhardt et al. 2003; Sartawi et al. 2014). It confirms that gender diversity is considered as one of the attributes affecting corporate voluntary disclosure in annual reports (Gibbins et al. 1990; Nalikka 2009). It might also be consistent with signalling theory, that managers are more likely to disclose more and certain information to investors to signal that they are better than other managers, for the purpose of enhancing their reputation (Campbell et al. 2001).

With regard to the coefficient of CEOs' overconfidence, the study introduces empirical evidence that overconfidence has a positive and significant (*coef. = .0239732, z = 2.11, p < 0.034) (coef. = .1918623, z = 8.06, p < 0.000)* effect on the level of FLID, based on net buyer and leverage ratio methods respectively. A possible explanation is that, overconfident managers are likely to be more optimistic about future circumstances. Thus, the results of the

two panels support H4, which proposes a positive significant relationship between CEOs' overconfidence and the level of FLID. This suggests that confident managers are risk takers (Malmendier and Tate 2005a), agreeing with Francis et al. (2008a) and Demerjian et al. (2012), who found a positive relationship between the CEO's reputation and managerial talent as proxies for overconfidence, and financial reporting quality measured by the level of voluntary disclosure. It also corroborates the result of Hribar and Yang (2010), who found a positive relationship between CEO's overconfidence and voluntary forecasts. The results of the current study are consistent with agency theory: managers know that owners will attempt to control their activities through bonding and monitoring actions, so may be motivated to convince stockholders that they are acting optimally; disclosures may be a means of achieving this. Thus, agency theory explains why managers voluntarily disclose more information (Watson et al. 2002). Furthermore, according to signalling theory, managers of high quality companies are more likely to distinguish themselves from lower quality companies through voluntary disclosures (An et al. 2011). In this regard, Salama et al. (2006) suggested that disclosure may help improve a company's reputation in the market and enhance relations with the community, regulatory agencies, media and non-governmental organizations. This is consistent with stakeholder theory: voluntary disclosure is considered as a strategic initiative for companies to discharge their accountability, and in consequence reduce information asymmetry and help to build a good relationship with stakeholders (Lundholm and Van Winkle 2006; An et al. 2011).

The findings reveal that the main motivations for managers of Jordanian companies to disclose more FLID are to provide shareholders with greater and value-relevant information to assist them in making rational decisions. Consequently, more FLID reduces information asymmetry and helps to build a good relationship with stakeholders. Furthermore, these findings indicate that managers of high quality non-financial Jordanian companies are more

likely to distinguish themselves from lower quality companies through voluntary disclosures. Therefore, Both agency and signalling theories may provide a sensible explanation for FLID practices in Jordanian companies.

With regard to the control variables, the regression results show that dividend ratio has a highly significant and positive association (*coef. = .0586593, z = 3.14, p < 0.002) (coef. = .0502298, z = 2.78, p < 0.005)* with the level of FLID. This result is similar to that of Basiddiq and Hussainey (2012) and Wang and Hussainey (2013), who reported a positive relationship between dividend ratio and FLID. It suggests that firms with higher levels of FLID are more inclined to pay larger dividends. Jordanian companies with a higher dividend ratio tend to use FLID and dividend payments as alternative methods to convey important information to investors. This finding suggests that Jordanian companies were found to disclose more dividend ratio than other types of ratios (e.g. liquidity ratios, leverage ratio) since a dividend ratio could be a sign of high performance and may attract more investors to the company. In a developing country like Jordan, management with a high dividend ratio are more likely to disclose more information than management with a low dividend ratio. This finding is consistent with signalling theory which argues that firms will be more liable to signal their act to investors when their performance is good (Watson 2002).

With regard to institutional ownership, the coefficient of this variable is significant and negatively (*coef. = -.0591668, z = -2.33, p < 0.020) (coef. = -.0482082, z = -1.95, p < 0.052)* related to the level of FLID. In general,

However, the other control variables (company size, profitability, industry type, board characteristics, managerial ownership, family ownership and blockholder ownership) show no significant relationship with the level of FLID. Regression results have not shown any relationship between these variables and level of FLID, consistent with several studies, although several found an insignificant relationship between the level of FLID and

profitability (e.g. Aljifri 2008; Mathuva 2012; Sartawi et al. 2014). This result suggests that profitable firms are not motivated to disclose more information voluntarily because their investors are already satisfied (Wallace and Naser 1996). The results of this study are also consistent with previous studies in failing to find any evidence of a relationship between the level of FLID and industry type, board characteristics and ownership structure (e.g. Wallace et al. 1994; Owusu-Ansah 1998; Akhtaruddin 2005; Al-Shammari and Al-Sultan 2010; Sartawi et al. 2014). The findings of this study confirm that family ownership and block holders did not affect the level of FLID, since the majority of family owners and block holders in Jordanian companies have one or more representatives on the board of directors.

Table 6.4 Panel A: Association between CEOs' characteristics and the level of FLID with overconfidence measured by net buyer method.

Dependent Variable: FLID
Method: Random-effects GLS regression.
Sample: 201
Group variable: Company
Number of groups: 6
Number of observations: 1206

FLID	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
CAGE	-.0015846	.0004963	-3.19	0.001***	-.0025574	-.0006118
CGEND	.0610475	.0288725	2.11	0.035**	.0044585	.1176366
COVER	.0239732	.0113501	2.11	0.034**	.0017274	.046219
[5]FSIZE	3.43e-11	4.18e-11	0.82	0.411	-4.75e-11	1.16e-10
FPROF	.0322521	.0461889	0.70	0.485	-.0582765	.1227807
FDIVID	.0586593	.0186536	3.14	0.002***	.0220989	.0952197
FISIN	1.44e-12	1.39e-11	0.10	0.918	-2.59e-11	2.88e-11
BDSIZE	-.0027823	.0031498	-0.88	0.377	-.0089557	.0033911
BDUAL	.0075602	.0171493	0.44	0.659	-.0260518	.0411721
BMEET	.0014005	.0028072	0.50	0.618	-.0041014	.0069024
BINDEP	.0069712	.0060892	1.14	0.252	-.0049633	.0189058
MOWNE	.0520774	.0774298	0.67	0.501	-.0996822	.203837

[5] Following previous studies company's size is measured by using the natural logarithm of total assets at the year-end (Aljifri and Hussainey 2007; Samaha et al. 2012; Wang and Hussainey 2013).

FOWNE	-.0000245	.0001852	-0.13	0.895	-.0003875	.0003385
INISTITU	-.0591668	.0254134	-2.33	0.020**	-.1089762	-.0093573
BLOCKH	-.0047866	.0117347	-0.41	0.683	-.0277862	.0182131
_ cons	.3490898	.0736177	4.74	0.000	.2048017	.4933778
R Sq. value	0.2569					
P. value	0.000					

Panel B: Association between CEOs' characteristics and FLID with overconfidence measured by the leverage ratio.

FLID	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
CAGE	-.0011973	.0004832	-2.48	0.013***	-.0021443	-.0002503
CGEND	.0415782	.0154479	2.69	0.007***	.0113008	.0718556
COVER	.1918623	.0237966	8.06	0.000***	.1452217	.2385028
FSIZE	2.78e-11	4.07e-11	0.68	0.494	-5.19e-11	1.08e-10
FPROF	.0867602	.0457343	1.90	0.058**	-.0028774	.1763977
FDIVID	.0502298	.0180364	2.78	0.005***	.0148792	.0855805
FISIN	9.16e-13	1.35e-11	0.07	0.946	-2.56e-11	2.74e-11
BDSIZE	-.0029124	.0030699	-0.95	0.343	-.0089292	.0031044
BDUAL	.0079785	.0167	0.48	0.633	-.0247529	.0407099
BMEET	.0016117	.0027355	0.59	0.556	-.0037498	.0069731
BINDEP	.0042051	.0059202	0.71	0.478	-.0073982	.0158085
MOWNE	.0419184	.0754199	0.56	0.578	-.105902	.1897387
FOWNE	.0000534	.0001805	0.30	0.767	-.0003003	.0004071
INISTITU	-.0482082	.0247651	-1.95	0.052**	-.096747	.0003306
BLOCKH	-.0252158	.0138679	-1.82	0.069*	-.0523964	.0019649
_ cons	.3452598	.0649729	5.31	0.000	.2179153	.4726044
R Sq. value	0.2345					
P. value	0.000					

6.5. ADDITIONAL ANALYSIS

6.5.1. ALTERNATIVE MEASUREMENT OF CEO OVERCONFIDENCE

The net buyer and leverage ratio were applied as primary proxies for CEO' overconfidence (Malmendier and Tate 2005a; Billett and Qian 2008; Hackbarth 2008), and the current study has examined whether the primary findings are robust to using less noisy proxies for overconfidence by employing another proxy (Hribar and Yang 2015). Previous studies have demonstrated that companies' investment decisions are associated with managerial overconfidence (Malmendier and Tate 2008; Ben-David et al. 2010; Campbell et al. 2011) and that overconfident CEOs are more likely to overinvest in capital projects (Malmendier and Tate 2005a; Ben-David et al. 2010). Following Campbell et al. (2011) and Ahmed and Duellman (2013), this study measures CEOs' overconfidence as a dummy variable which takes the value 1 if the company's capital expenditure scaled by the lagged value of total assets in a current period is higher than the median of company expenditure scaled by the lagged value of total assets for the industry type in the same year; otherwise, 0. This measurement is based on the result of Malmendier and Tate (2005a), that managers who are overconfident are more likely to overinvest in capital-intensive projects; and the results of Ben-David et al. (2010) that in companies where executives are overconfident, there is greater capital expenditure.

The results of random-effects panel regression analysis of CEOs' personal characteristics and the control variables on the level of FLID are presented in Table 6.5. Regression analysis shows that the value of R^2 is around 38%, which is similar to the findings of (Bamber et al. 2010) and higher than that reported in Table 6.4, which uses net buyer and leverage ratio as proxies for overconfidence. The P-Value is highly significant at the level 1%.

The coefficient of age shows a highly negative and significant relationship with the level of FLID (*coef. = -.0017858, z = -3.61, p < 0.001*). These results are in line with the main results presented in Table 6.4, suggesting that companies with younger CEOs are more likely to provide more FLID than those with older CEOs. The result is consistent with the findings of (Bamber et al. 2010). The coefficient of CEOs gender is positively and significantly (*coef. = .581859, z = 2.01, p < 0.044)* associated with the level of FLID, implying that companies managed by males tend to disclose more FLID than companies managed by females. This finding supports the primary results in Table 6.4 and is consistent with previous studies (Erhardt et al. 2003; Sartawi et al. 2014).

The results confirm the initial analysis that the degree of overconfidence has a significant positive effect (*coef. = .0279078, z = 2.46, p < 0.014*) on the level of FLID, suggesting that overconfident managers are risk takers. These results also confirm the main results presented in Table 6.4 and are consistent with previous studies (Hribar and Yang 2015). In respect to the control variables' coefficients, the findings presented in Table 6.5 reveal the same direction and significance as the main results in Table 6.4.

Based on the above discussion, the coefficients of CEOs' personal characteristics on the level of FLID, using capital expenditure as an alternative measurement of overconfidence, are in line with the main results presented in Table 6.4. This suggests that the primary findings are consistent and robust with different types of CEO overconfidence measurements, and are not affected by the different proxies of overconfidence.

Table 6.5: Association between CEOs' personal characteristics and FLID with overconfidence measured by capital expenditure.

Dependent Variable: FLID
Method: Random-effects GLS regression.
Sample: 201
Group variable: Company
Number of groups: 6
Number of observations: 1206

FLID	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
CAGE	-.0017858	.0004942	-3.61	0.001***	-.0027545	-.0008172
CGEND	.0581859	.0288881	2.01	0.044**	.0015663	.1148055
COVER	.0279078	.0113407	2.46	0.014**	.0056803	.0501352
FSIZE	4.56e-11	4.20e-11	1.08	0.278	-3.68e-11	1.28e-10
FPROF	.0269114	.0460657	0.58	0.559	-.0633757	.1171984
FDIVID	.0649896	.0184398	3.52	0.000***	.0288483	.1011309
FISIN	-3.27e-12	1.41e-11	-0.23	0.817	-3.09e-11	2.44e-11
BDSIZE	-.0032706	.0031589	-1.04	0.300	-.0094619	.0029206
BDUAL	.0016278	.0172478	0.09	0.925	-.0321773	.0354329
BMEET	.0011094	.0028129	0.39	0.693	-.0044037	.0066225
BINDEP	.0076598	.0060978	1.26	0.209	-.0042918	.0196113
MOWNE	.0477655	.0774987	0.62	0.538	-.1041291	.1996601
FOWNE	-.0000157	.0001849	-0.08	0.932	-.0003781	.0003467
INISTITU	-.0597762	.0254667	2.23	0.019***	-.10969	-.0098624
BLOCKH	-.0045131	.0117363	-0.38	0.701	-.0275158	.0184895
_ cons	.3772139	.0734716	5.13	0.000	.2332122	.5212157
R Sq. value	0.388					
P. value	0.0001					

***FLID$_{it}$**= Forward-looking disclosure index of the company i in the year t, expressed as % total FLID out of all items. **CAGE**= CEO's age, measured by the difference between the CEO's date of birth and years of the study period. **CGEND**= CEO's gender, take value one if CEO male, and 0 if CEO female. **COVER**= CEO overconfidence, dummy variable, measured by using capital expenditures, takes the value of one if the company's capital expenditures scaled by lagged total assets in a given year is higher than the median level of company' expenditures scaled by lagged total assets for the company's industry type in that year, otherwise takes the value of zero. **FSIZE**= Firm size, the natural logarithm of firm's total assets. **FPROF**= profitability, measured by ROI (net income before tax divided be total assets). **FDIVID**= dividends ratio measured as cash dividends divided by net income for the same period. **FLEVER**= leverage ratio used as another proxy for CEO overconfidence, measured by total long-term debt divided by total assets. **FISIN**= industry type, measured by using the ISIN number, as stated by Jordanian Securities Depository Centre. **BSIZE**= board size, measured by the total numbers of the board members. **BDUAL**= Board duality, a dummy variable that takes the value of one if the CEO and chairperson are the same person and zero if otherwise. **BMEET**= Board meeting, the number of meetings per year held by the board of directors. **BINDEP**= board independence, measured by the total number of outside directors. **MOWNE**= managerial ownership. Measured by the percentage of total shares held by executive directors divided by the total number of shares. **FOWNE**= family ownership, Measured by the proportion of total shares owned by the family, a dummy variable would take one if a family or an individual holds 10% or more of equity and the value zero if otherwise. **INSTITUT** = institutional ownership, measured by dummy variable would take one if any institutional held shares and zero if otherwise. **BLOCKH**= block-holders ownership, measured by a dummy variable that takes the value of one if the firm has an external stockholder owning 5% or more of the outstanding shares, and the value of zero if otherwise.*

******. Coefficient is significant at the 0.01. **. Coefficient is significant at the 0.05 *. Coefficient is significant at the 0.10***

6.5.2. DEALING WITH ENDOGENEITY

In order to address the endogeneity bias problem, the literature suggests two options; the use of instrumental variables (IV) (Hermalin and Weisbach 1991; Himmelberg et al. 1999; Coles et al. 2008; McKnight and Weir 2009; Choi et al. 2010) and a simultaneous system equation (Hermalin and Weisbach 1991; Cornett et al. 2008; Coles et al. 2008; Al Farooque et al. 2010), as reported in the previous chapter.

Again, this study used both Durbin and Hausman tests to check for bias in the endogenous and independent variables (Gujarati 2008). The tests gave an X^2 of 5.52 % and 5.85% (*P< 0.0169, P< 0.0179)* respectively, which suggests that the null hypothesis is rejected. Both instrumental variable and two-stage regression were therefore used to control for the endogeneity and simultaneity problems. The results of the two-stage regression of FLID on CEOs' characteristics are presented in Table 6.6, panels A and B.

The coefficient of FLID is negatively and significantly *(coef. = -.0025205, z = -2.40, p < 0.016) (coef. = -.0026513, z = -2.53, p < 0.011)* related to the CEO's age. This result is in line with those of the panel regression random effect model reported in Table 6.4. In addition, the level of significance is higher than with the main results. The coefficient of CEO's gender is significant and positively associated with FLID *(coef. = .3024688, z = 6.64, p < 0.001) (coef. = .2287371, z = -2.53, p < 0.000)*. The two-stage regression analysis shows quite similar results to the panel regression in Table 6.4, corroborating the results of Lin et al. (2014), who found a positive and simultaneous relation between CEO characteristics and internal control quality. The coefficient of FLID is significant and positively *(coef. = .1060139, z = 4.70, p < 0.001) (coef. = .1545815, z = 2.97, p < 0.003)* related to overconfidence, which suggests that these results are consistent with the main findings in Table 6.4. Regarding the control variables, the findings reported in Table 6.6 show similar results to those reported in Table 6.4, although, some values reveal greater significance in

Table 6.6; nevertheless, the direction and significance of the association with FLID remain the same. In summary, the instrumental variable two-stage model results are consistent with the primary results presented in Table 6.4, implying that the simultaneity problem between FLID and CEO characteristics does not affect the main results of FLID and other control variables.

Table 6.6 Panel A: Instrumental variable two-stage regression model (using linear regression model) CEO overconfidence measured by using net buyer method.

Dependent Variable: FLID
Method: Random-effects GLS regression.
Sample: 201
Group variable: Company
Number of groups: 6
Number of observations: 1206

FLID	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
LACAGE	-.0025205	.0010484	-2.40	0.016***	-.0045753	-.0004657
LACGEND	.3024688	.0455752	6.64	0.001***	.213143	.3917946
LACOVER	.1060139	.0225793	4.70	0.001***	.0617593	.1502684
FSIZE	2.37e-10	3.64e-11	6.51	0.001***	1.66e-10	3.09e-10
FPROF	-.067299	.0409973	-1.64	0.101*	-.1477503	.0131524
FDIVID	.0727807	.0169273	4.30	0.000***	.0395633	.1059981
FISIN	6.92e-12	8.45e-12	0.82	0.413	-9.65e-12	2.35e-11
BDSIZE	.0040664	.0020405	1.99	0.047**	.0000623	.0080705
BDUAL	.0140643	.0118778	1.18	0.237	-.0092443	.0373728
BMEET	-.0011452	.0020891	-0.55	0.584	-.0052447	.0029544
BINDEP	.005462	.0040991	1.33	0.183	-.0025819	.0135059
MOWNE	-.0587541	.0549102	-1.07	0.285	-.1665075	.0489993
FOWNE	-.0479093	.0190686	-2.51	0.012***	-.0853288	-.0104898
INISTITU	-.0467553	.0169309	-2.76	0.006***	-.0799797	-.0135309
BLOCKH	-.0008176	.0091672	-0.09	0.929	-.0188069	.0171718
_ cons	.2858471	.0256788	11.13	0.000	.2354562	.3362381
R Sq. value	0.781					
P. value	0.000					

Panel B: CEO Overconfidence measured using leverage ratio method.

FLID	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
LACAGE	-.0026513	.0010487	-2.53	0.011***	-.0047066	-.0005959
LACGEND	.2287371	.0472767	4.84	0.000***	.1360765	.3213977
LACOVER	.1545815	.0521344	2.97	0.003***	.0523999	.256763
FSIZE	2.32e-10	3.93e-11	5.91	0.000***	1.55e-10	3.09e-10
FPROF	-.0173048	.0442269	-0.39	0.696	-.1040938	.0694842
FDIVID	.0744217	.0182607	4.08	0.000***	.0385876	.1102558
FISIN	6.92e-12	8.22e-12	0.84	0.400	-9.19e-12	2.30e-11
BDSIZE	.0051425	.0022012	2.34	0.020**	.0008229	.009462
BDUAL	.0187075	.0128135	1.46	0.145	-.0064372	.0438521
BMEET	-.002104	.0022537	-0.93	0.351	-.0065265	.0023184
BINDEP	.0032182	.004422	0.73	0.467	-.0054593	.0118958
MOWNE	-.0742387	.0592357	-1.25	0.210	-.1904804	.0420031
FOWNE	-.0730847	.0205708	-3.55	0.000***	-.1134519	-.0327174
INISTITU	-.045036	.0182646	-2.47	0.014***	-.0808777	-.0091943
BLOCKH	.0067907	.0098894	0.69	0.492	-.0126158	.0261972
_ cons	.2746264	.0277016	9.91	0.000	.2202659	.328987
R Sq. value	0.755					
P. value	0.000					

6.6. SUMMARY

This chapter examines the effect of CEOs' personal characteristics on the level of FLID in Jordanian listed companies, 2008 to 2013. Males manage 95% of companies in the study's sample, and the overall results indicate that CEO gender and overconfidence have a positive and significant association with the level of FLID among non-financial Jordanian companies. The regression further shows a significant negative association between the level of FLID and the CEO's age, suggesting that older CEOs of non-financial Jordanian companies are less likely to issue forecasts than younger CEOs. This finding is consistent with agency and signalling theory. According to agency theory, managers make voluntary disclosures to mitigate the agency problem by reducing the information asymmetry and to demonstrate that they are managing the company effectively (Barako et al. 2006). Signalling theory suggests that disclosing more voluntary information helps managers to discriminate their action from others (Campbell et al. 2001); enhancing their reputation and maintaining their position will result in a greater likelihood of more information disclosure by younger CEOs (Hu and Kumar 2004).

The study found a positive association between the level of FLID and the dividend ratio of the company. However, the regression analysis reveals that the coefficients of institutional and blockholder ownership are negatively and significantly related to the level of FLID.

CHAPTER SEVEN: CEOS' CHARACTERISTICS AND EM PRACTICES: RESULTS AND DISCUSSION

7.1. INTRODUCTION

This chapter aims to achieve the third objective regarding the impact of CEOs' personal characteristics on EM practices.

It is structured as follows: Section 7.2 discusses the descriptive statistics and section 7.3 presents the results of multicollineraity tests. Section 7.4 outlines and critically analyses the findings in relation to the above objective. Section 7.5 provides a summary of the chapter.

7.2. DESCRIPTIVE STATISTICS

Table 7.1 shows the key descriptive statistical analysis (mean, median, standard deviation, maximum and minimum values) for all variables related to the study sample. The dependent variable EM is the absolute DA values measured by the two Jones models and the Kothari model. The descriptive statistics reveal that the respective minimum values of EM are 0.000, 0.001 and 0.008 and the maximum values 0.870, 0.925 and 0.826, indicating a considerable spread in the rates. The respective mean values are 0.098, 0.097 and 0.095 (i.e DA around 9%), similar to the findings of Al-Fayoumi et al. (2010), and ALghamdi and Ali (2012), who documented average values of DA in Jordanian and Saudi listed companies respectively, both around 10%. However, the results imply that the magnitude of EM in Jordan may be greater than that found by Klein (2002), Katmun (2012) and Ugbede et al. (2013), for US, UK and Malaysian companies, with an average absolute value of DA of 7%, 6.5%, and 7.5% respectively. Nevertheless, it is less than the results of Roodposhti and Chashmi (2010) and González and García-Meca (2014), who found the mean value of DA among companies listed on the Tehran Stock Exchange and Latin American companies to be 16% and 11% respectively. This study's median values of 0.061, 0.060 and 0.059 (SD 0.114, 0.112, 0.110)

employed as a benchmark to distinguish between high and low levels of EM. The descriptive statistical analysis for the independent and control variables were discussed in Chapter 6 (see section 6.2).

Table 7.1: Descriptive Statistics of EM practices and CEOs' personal characteristics.

Variable	N	Minim	Maxim	Mean	Median	STAN-DEV
EMJOM	1206	.0000195	.870591	.0988983	.0614999	.1146811
EMMJO	1206	.0001612	.92508	.0973779	.0606376	.112734
EMKOM	1206	.0000821	.8267049	.0954769	.0591708	.1102237
CGEND	1206	0	1	.9519071	1	.2140512
CAGE	1206	26	84	51.11	51.00	11.266
COVER	1206	0	1	0.4054	0.000	0.4911
[6]FSIZE	1206	.93e+03	3.23e+09	5.55e+07	1.87e+07	1.57e+08
FPROF	1206	-0.85904	0.9500	0.0012302	0.01109	.1217121
FDIVID	1206	0	0.9751	0.1882211	0	0.307755
FLEVER	1206	0.0002	0.97808	0.2950135	0.240055	0.2320937
FISIN	1206	1	201	.3631841	101	.481111
BSIZE	1206	3	19	8.011	7	2.4494
BDUAL	1206	0	1	.2056	0	.40433
BMEET	1206	3	28	7.5729	7	2.1378
BINDEP	1206	0	8	2.0207	2	1.2345
MOWNE	1206	0	.7185	.03528	0	.08595
FOWNE	1206	0	.9450	0.6127	.15472	.27206
INSTITU	1206	0	1	.35547	.3320	.76537
BLOCKH	1206	0	1	.48922	0	.50009

***EMJOM**= the absolute value of discretionary accruals as a measure of the degree of EM by using original Jones model. **EMMJO**= the absolute value of discretionary accruals as a measure of the degree of EM by using modified Jones model. **EMKOM**= the absolute value of discretionary accruals as a measure of the degree of EM by using Kothari model. **CGEND**= CEO's gender, take value one if CEO male and 0 if CEO female. **CAGE**= CEO's age, measured by the difference between the CEO's date of birth and years of the study period. **COVER**= CEO overconfidence, the proportion of CEO share ownership, options, and stock exercise. Measured by Net Buyer method. **FSIZE**= Firm size, the natural logarithm of firm's total assets. **FPROF**= profitability, measured by ROI (net income before tax divided be total assets). **FDIVID**= dividends ratio measured as cash dividends divided by net income for the same period. **FLEVER**= leverage ratio used as another*

[6]Following previous studies company's size is measured by using the natural logarithm of total assets at the year-end (Aljifri and Hussainey 2007; Samaha et al. 2012; Wang and Hussainey 2013).

proxy for CEO overconfidence, measured by total long-term debt divided by total assets. ***FISIN****= industry type, measured by using the ISIN number, as stated by Jordanian Securities Depository Centre.* ***BSIZE****= board size, measured by the total numbers of the board members.* ***BDUAL****= Board duality, a dummy variable that takes the value of one if the CEO and chairperson are the same person and zero if otherwise.* ***BMEET****= Board meeting, the number of meetings per year held by the board of directors.* ***BINDEP****= board independence, measured by the total number of outside directors.* ***MOWNE****= managerial ownership, measured by the percentage of total shares held by executive directors divided by the total number of shares.* ***FOWNE****= family ownership, measured by the proportion of total shares owned by the family, a dummy variable would take one if a family or an individual holds 10% or more of equity and the value zero if otherwise.* ***INSTITU*** *= institutional ownership, measured by dummy variable would take one if any institutional held shares and zero if otherwise.* ***BLOCKH****= block-holders ownership, measured by a dummy variable that takes the value of one if the firm has an external stockholder owning 5% or more of the outstanding shares, and the value of zero if otherwise.*

7.3. MULTICOLLINEARITY

This section examines the correlation between the absolute value of DA as a proxy for EM and all explanatory and control variables, applying the Pearson and Spearman correlation matrix to inspect the association between dependent, independent and control variables for multicollinearity (e.g. Rahman and Ali 2006; Abdel-Fattah 2008).

Tables 7.2, 7.3 and 7.4 show that the highest correlation is between the board size and board independence, with a coefficient of 41.5%. Therefore, the problem of multicollinearity does not exist among the data set used in these models. Table 7.5 shows the VIF coefficients of each independent variable. According to Gujarati (2003, 2008), the multicollinearity problem does not exist if the VIF is less than 10; it can be seen from Table 7.5 that the maximum value of VIF is 1.36 and the mean 1.12, confirming that multicollinearity does not exist among the independent variables and that the results are free from the effects of multicollinearity.

Table 7.2: Correlation Matrix First Model.

Variables	EMMJO	CGEND	CAGE	COVER	FSIZE	FPROF	FDIVI	FLEVE	FISIN	BSIZE	BDUAL	BMEET	BINPEN	MOWNE	FOWNE	INSTIT	BLOCK
EMMJO	**1.000**																
CGEND	**0.018**	**1.000**															
CAGE	**0.007**	**0.073****	**1.000**														
COVER	**0.055**	**-0.018**	**-0.148****	**1.000**													
FSIZE	**-0.080****	**0.025**	**0.020**	**0.017**	**1.000**												
FPROF	**-0.011**	**0.008**	**-0.001**	**-0.007**	**0.013**	**1.000**											
FDIVID	**0.008**	**-0.024**	**0.092****	**0.117****	**0.068****	**0.371****	**1.000**										
FLEVER	**-0.011***	**0.082****	**-0.152****	**0.206****	**0.032**	**-0.156****	**0.034**	**1.000**									
FISIN	**0.027**	**-0.037****	**-0.012**	**0.009**	**0.049***	**-0.021****	**0.029**	**-0.023**	**1.000**								
BSIZE	**-0.101****	**-0.047**	**-0.012**	**0.005**	**0.271****	**0.017**	**0.040**	**0.026**	**0.040**	**1.000**							
BDUAL	**0.036**	**0.005**	**0.010**	**-0.077****	**-0.019**	**-0.068****	**0.009**	**-0.001**	**-0.102****	**-0.061***	**1.000**						
BMEET	**-0.035**	**-0.022**	**0.024**	**-0.012**	**0.062***	**0.052***	**-0.029**	**-0.027**	**-0.084****	**0.007**	**0.022**	**1.000**					
BINDEP	**-0.006****	**0.130****	**-0.034**	**0.012**	**0.049***	**-0.007**	**0.062***	**0.047***	**0.009**	**0.415****	**0.139****	**-0.081****	**1.000**				
MOWNE	**-0.015**	**-0.030**	**-0.038**	**-0.032**	**-0.066***	**-0.015**	**-0.025**	**0.036**	**-0.063***	**-0.117****	**0.239****	**0.016**	**0.083**	**1.000**			
FOWNE	**-0.010**	**-0.007**	**0.034**	**0.035**	**0.001**	**-0.040**	**-0.017**	**-0.034**	**0.034**	**-0.014**	**-0.013**	**0.006**	**-0.048**	**-0.009**	**1.000**		
INSTITU	**-0.009**	**0.064***	**0.042**	**-0.033**	**0.033**	**0.052***	**0.021**	**-0.083****	**0.024**	**0.055***	**-0.139****	**-0.049***	**0.011**	**-0.170**	**-0.041**	**1.000**	
BLOCKH	**-0.025**	**0.011**	**0.008**	**0.006**	**0.046**	**-0.082****	**-0.053***	**0.019**	**-0.022**	**-0.010**	**0.035**	**-0.025**	**0.023**	**0.027**	**-0.028**	**-0.009**	**1.000**

***EMMJO**= the absolute value of discretionary accruals as a measure of the degree of EM by using modified Jones model. **CAGE**= CEO's age, measured by the difference between the CEO's date of birth and years of the study period. **CGEND**= CEO's gender, take value one if CEO male, and 0 if CEO female. **COVER**= CEO overconfidence, the proportion of CEO share ownership, options, and stock exercise. **FSIZE**= Firm size, the natural logarithm of firm's total assets. **FPROF**= profitability, measured by ROI (net income before tax divided be total assets). **FDIVID**= dividends ratio measured as cash dividends divided by net income for the same period. **FLEVER**= leverage ratio used as another proxy for CEO overconfidence, measured by total long-term debt divided by total assets. **FISIN**= industry type, measured by using the ISIN code, as stated by Jordanian Securities Depository Centre. **BSIZE**= board size, measured by the total numbers of the board. **BDUAL**= Board duality, a dummy variable that takes the value of one if the CEO and chairperson are the same person and zero if otherwise. **BMEET**= Board meeting, the number of meetings per year held by the board of directors. **BINDEP**= board independence, measured by the total number of outside directors. **MOWNE**= managerial ownership. Measured by the percentage of total shares held by executive directors divided by the total number of shares. **FOWNE**= family ownership, measured by the proportion of total shares owned by the family, a dummy variable would take one if a family or an individual holds 10% or more of equity and the value zero if otherwise. **INSTITU** = institutional ownership, measured by dummy variable would take one if any institutional held shares and zero if otherwise. **BLOCKH**= block-holders ownership, measured by a dummy variable that takes the value of one if the firm has an external stockholder owning 5% or more of the outstanding shares, and the value of zero if otherwise.*

******. Correlation is significant at the 0.01, **. Correlation is significant at the 0.05, *. Correlation is significant at the 0.10***

Table 7.3: Correlation Matrix Second Model.

Variables	EMJM	CGEND	CAGE	COVER	FSIZE	FPROF	FDIVI	FLEVE	FISIN	BSIZE	BDUAL	BMEET	BINPEN	MOWNE	FOWNE	INSTIT	BLOCK
EMJM	1.000																
CGEND	0.023	1.000															
CAGE	-0.003	0.073**	1.000														
COVER	0.045	-0.018	-0.148**	1.000													
FSIZE	-0.078**	0.025	0.020	0.017	1.000												
FPROF	-0.003	0.008	-0.001	-0.007	0.013	1.000											
FDIVID	0.019	-0.024	0.092**	0.117**	0.068**	0.371**	1.000										
FLEVER	-0.012**	0.082**	-0.152**	0.206**	0.032	-0.156**	0.034	1.000									
FISIN	0.026	-0.037**	-0.012	0.009	0.049*	-0.021**	0.029	-0.023	1.000								
BSIZE	-0.103**	-0.047	-0.012	0.005	0.271**	0.017	0.040	0.026	0.040	1.000							
BDUAL	0.052	0.005	0.010	-0.077**	-0.019	-0.068**	0.009	-0.001	-0.102**	-0.061*	1.000						
BMEET	-0.035	-0.022	0.024	-0.012	0.062*	0.052*	-0.029	-0.027	-0.084**	0.007	0.022	1.000					
BINDEP	-0.006**	0.130**	-0.034	0.012	0.049*	-0.007	0.062*	0.047*	0.009	0.415**	0.139**	-0.081**	1.000				
MOWNE	-0.017	-0.030	-0.038	-0.032	-0.066*	-0.015	-0.025	0.036	-0.063*	-0.117**	0.239**	0.016	0.083	1.000			
FOWNE	-0.011	-0.007	0.034	0.035	0.001	-0.040	-0.017	-0.034	0.034	-0.014	-0.013	0.006	-0.048	-0.009	1.000		
INSTITU	-0.019	0.064*	0.042	-0.033	0.033	0.052*	0.021	-0.083**	0.024	0.055*	-0.139**	-0.049*	0.011	-0.170	-0.041	1.000	
BLOCKH	-0.031	0.011	0.008	0.006	0.046	-0.082**	-0.053*	0.019	-0.022	-0.010	0.035	-0.025	0.023	0.027	-0.028	-0.009	1.000

Table 7.4: Correlation Matrix Third Model.

Variables	EMKOM	CGEND	CAGE	COVER	FSIZE	FPROF	FDIVI	FLEVE	FISIN	BSIZE	BDUAL	BMEET	BINPEN	MOWNE	FOWNE	INSTIT	BLOCK
EMKOM	1.000																
CGEND	0.020	1.000															
CAGE	-0.003	0.073**	1.000														
COVER	0.040	-0.018	-0.148**	1.000													
FSIZE	-0.061	0.025	0.020	0.017	1.000												
FPROF	-0.012	0.008	-0.016	-0.007	0.013	1.000											
FDIVID	0.003	-0.024	0.092**	0.117**	0.068**	0.371**	1.000										
FLEVER	-0.007	0.082**	-0.152**	0.206**	0.032	-0.156**	0.034	1.000									
FISIN	0.049	-0.137**	-0.012	0.009	0.049*	-0.021**	0.029	-0.023	1.000								
BSIZE	-0.094	-0.047	-0.012	0.005	0.271**	0.017	0.040	0.026	0.040	1.000							
BDUAL	0.044	0.005	0.010	-0.077**	-0.019	-0.068**	0.009	-0.001	-0.102**	-0.061*	1.000						
BMEET	-0.026	-0.022	0.024	-0.012	0.062*	0.052*	-0.029	-0.027	-0.084**	0.007	0.022	1.000					
BINDEP	-0.016	0.130**	-0.034	0.012	0.049*	-0.007	0.062*	0.047*	0.009	0.415**	0.139**	-0.081**	1.000				
MOWNE	-0.012	-0.030	-0.038	-0.032	-0.066*	-0.015	-0.025	0.036	-0.063*	-0.117**	0.239**	0.016	0.083	1.000			
FOWNE	-0.013	-0.007	0.034	0.035	0.001	-0.040	-0.017	-0.034	0.034	-0.014	-0.013	0.006	-0.048	-0.009	1.000		
INSTITU	-0.020	0.064*	0.042	-0.033	0.033	0.052*	0.021	-0.083**	0.024	0.055*	-0.139**	-0.049*	0.011	-0.170	-0.041	1.000	
BLOCKH	0.010	0.011	0.008	0.006	0.046	-0.082**	-0.053*	0.019	-0.022	-0.010	0.035	-0.025	0.023	0.027	-0.028	-0.009	1.000

Table 7.5: VIF Test Results.

Variable	VIF	1/VIF
BSIZE	1.36	0.735871
BINDEP	1.31	0.765823
FPROF	1.22	0.816691
FDIVID	1.22	0.887376
BDUAIL	1.13	0.909320
FLEVER	1.12	0.892108
MOWNE	1.12	0.896686
FSIZE	1.10	0.909160
COVER	1.10	0.912060
CGEND	1.07	0.936515
FOWNE	1.06	0.942859
FISIN	1.04	0.960483
BMEET	1.03	0.970041
INSTITU	1.01	0.987370
BLOCKH	1.01	0.990753
MEAN VIF		**1.12**

7.4. MULTIVARIATE ANALYSIS

The association between CEO's personal characteristics and EM practices is tested by cross-sectional panel regression (Campbell and Mínguez-Vera 2008; Peni and Vähämaa 2010). The rationale and procedure are the same as those described in the previous two chapters. The result of the panel regressions test is highly significant (*P-Value = 0.000*), indicating that panel data is more appropriate (Gujarati 2008). However, the outcome of the Hausman test is not statistically significant (*P-Value = 0.3581*), so the study cannot reject the null hypothesis of random effects. Consequently, it estimates random effect models (see Appendix 7A and B).

The Pesaran CD result is not statistically significant (*P-Value = 0.3835*) meaning that there is no serial correlation across entities. The outcome of the Modified Wald test (*P-Value = 0.6218*) indicated no heteroscedasticity. The estimated results of the random-effects panel regression analysis are presented in the Table 7.6. The estimates are presented in three panels, corresponding to the three models used. The respective values of overall R^2 for the three models are relatively small (22%, 23% and 19%). These values indicate that the combination of the independent variables demonstrate 22%, 23% and 19% of variation of the dependent variable. Nevertheless, it should be noted that low R^2 vaules are typical in this type of accruals regression (Xie et al. 2003a; Geiger and North 2006; Davidson III et al. 2007; Jenkins and Velury 2008; Peni and Vähämaa 2010). Table 7.6 also shows that the P-Value is highly significant at the level (*0.001, 0.003 and 0.005*) in the three panels, implying that this model is highly significant and has a good explanatory power of disclosure.

The results of the regression coefficients are also presented in Table 7.6, showing the impact of CEOs' characteristics on EM practices. No relationship is observed between age and EM practices and the coefficients, although positive, are insignificant in all three models *(coef.*

= .0001485, z = 0.48, p < 0.629) (coef. = 0.0000145, z = 0.01, p < 0.962) (coef. = .0000173, z = 0.06, p < 0.954). This result is inconsistent with that of Davidson III et al. (2007), who investigated whether the CEO's age and career horizon affect EM practices and found that companies with older CEOs, whose retirement period is fast approaching, are associated with EM upwards behaviour. They suggested that retiring executives are likely to be motivated to increase profits in their last years. The result of this study does not support hypothesis H5; which proposes apositive relationship between the CEO's age and EM peactices, hence, the formulated hypothesis must be rejected.

Similarly, the estimated results of regressions analysis indicated no relationship between CEO gender and EM practices. The estimated coefficients appear statistically insignificant *(coef. = .0088579, z = 0.52, p < 0.600) (coef. = .012633, z = 0.73, p < 0.462) (coef. = .0116059, z = 0.70, p < 0.482).* This result is consistent with previous studies (Geiger and North 2006; Jiang et al. 2008; Matsunaga and Yeung 2008; Peni and Vähämaa 2010; Hili and Affess 2012). A possible explanation for the lack of a significant relationship is simply the extremely small number of female CEOs in Jordanian companies. Thus, H6 is rejected.

With regard to the relationship between CEOs' overconfidence and EM practices, the regression results indicate that the coefficient of overconfidence is positively and significantly (*coef. = .0165582, z = 2.30, p < 0.02) (coef. = .0143235, z = 1.96, p < 0.05*) related to DA at a high level in the two Jones models. However, the Kothari (2005) model shows that overconfidence has a positive and significant *(coef. = .0124519, z = 1.77, p < 0.07)* relationship with EM, lower than in the Jones models. These results confirm that overconfident managers are more likely to engage in EM behaviour than those managers who feel less confident; this may be because overconfident CEOs are less under the influence of stakeholders and that individual characteristics work against regulators' attempts to mitigate EM practices (Banerjee et al. 2013; Hsieh et al. 2014). This result supports hypothesis H7,

which states that there is a positive and significant relationship between CEOs' overconfidence and EM practices. Hence, H7 is accepted.

This finding is consistent with previous literature (e.g. Hribar and Yang 2010; Schrand and Zechman 2012; Hsieh et al. 2014; Hribar and Yang 2015). For example, Schrand and Zechman (2012) found a positive relation between overconfidence and financial reporting fraud. Hribar and Yang (2010) also found a positively relationship, suggesting that over-confident CEOs are more inclined to practice EM. Furthermore, this result supports the notion that overconfident CEOs are more likely to be risk takers (Malmendier and Tate 2005a). These results corroborate the study by Lewis et al. (2014), which suggests that "differences in environmental strategy can be explained by CEOs' characteristics". The findings indicate that overconfident managers are more likely to issue further optimistic management forecasts, which will put them in a risky position in meeting future forecasts; consequently, they become involved in EM practices (Hribar and Yang 2010; Schrand and Zechman 2012). The result of the current study is consistent with the central assumption of agency theory that "all individual action is driven by self-interest and that individuals will employ accounting choices in an opportunistic behaviour to achieve their objectives" (An et al. 2011).

The study's analysis includes some control variables such as firm size. The regression results indicate that firm size has a significant and negative (*coef. = -4.33e-11, z = -1.69, p < 0.090) (coef. = .0286263, z = -1.73, p < 0.084*) association with EM practices, supporting the notion that small firms are subject to less pressure from authority, and consequently managers have more incentive to engage in EM practices. This result suggests that large Jordanian companies are less likely be involvd in EM activity than small ones. One possible explanation for this, is that large Jordanian companies are subject to more pressure from the authority. Consequently, they follow corporate governance principles better than small ones

do. This finding is consistent with many other studies (Clarkson et al. 1994; Cahan and Hossain 1996; Adams and Hossain 1998; Eng and Mak 2003; Kent and Ung 2003; Gul and Leung 2004; Haniffa and Cooke 2005; Celik et al. 2006; Clarkson et al. 2006; Lim et al. 2007; Kelton and Yang 2008).

In relation to board size, the coefficient of this variable is negatively and significantly *(coef. = -.0036771, z = -1.92, p < 0.055) (coef. = -.0037374, z = -1.90, p < 0.057) (coef. = -.0030855, z = -1.66, p < 0.097)* associated with the level of EM, suggesting that companies with large boards are more likely to report lower EM. This result is consistent with the notion that large boards of directors are more active in controlling and monitoring opportunistic managerial behaviour (Zahra and Pearce 1989). It is also consistent with previous studies which found that board size is powerfully and negatively linked to the levels of EM practices (Xie et al. 2003a; Peasnell et al. 2005; Yu 2006; Abed et al. 2012; González and García-Meca 2014). An acceptable explanation is that in smaller boards, the dominance of blockholders or executive managers is expected, while a variety of members from different positions is normally found only in larger boards. Therefore, larger boards have better supervision of managers' behaviour.

Conversely, several studies conducted in Asia, specifically Taiwan, Indonesia and Malaysia, show a significant and positive association between the size of the board of directors and the level of EM (e.g. Kao and Chen 2004; Rahman and Ali 2006). In spite of these countries' comparable level of development with Jordan, Jordanian boards have essentially different characteristics, including culture, political and economic aims, and practices of corporate goverance.

In respect to the board duality, the regression results show a positive and significant *(coef. = .0179888, z = 1.72, p < 0.086) (coef. = .0215515, z = 2.01, p < 0.044) (coef. = .0170918, z = 1.69, p < 0.092)* relationship with the level of EM. The results indicate that the monitoring

ability of the board of directors is less if the CEO is also chairman of the board (Gulzar 2011). This finding is in line with agency theory, which suggests that separation of the roles of CEO and chairman of the board of directors increases the board's independence from management, leading to better monitoring and overseeing (Jensen 1993). This result is consistent with previous studies such as Klein (2002) and Sarkar et al. (2008), who found that DA as a proxy for EM are positively associated with CEO duality. The findings of the current study support the agency theory view that CEOs with excessive power over their boards can easily manipulate earnings.

Conversely, none of the coefficients of control variables (profitability, dividends ratio, leverage ratio, industry type, board meetings, board independence and ownership structure) has a significant influence on EM practices, regression results showing no relationship. These findings are similar to previous studies that found no relationship between EM practices and different company characteristics and corporate governance factors (e.g. Chung et al. 2002; Ebrahim 2007; Habbash 2010; Sun et al. 2010; Hamad and Abu-Nassar 2013; González and García-Meca 2014).

Table 7.6: Panel A: Association between CEOs' personal characteristics and EM measured by Modified Jones (1995) Model.

Dependent Variable: EMMJO
Method: Random-effects GLS regression.
Sample: 201
Group variable: Company
Number of groups: 6
Number of observations: 1206

EMMOJ	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
CAGE	.0001485	.0003076	0.48	0.629	-.0004545	.0007515
CGEND	.0088579	.0168892	0.52	0.600	-.0242443	.0419601
COVER	.0165582	.0071839	2.30	0.021***	.002478	.0306385
[7]FSIZE	-4.33e-11	2.55e-11	-1.69	0.090*	-9.34e-11	6.77e-12
FPROF	-.0114939	.0290234	-0.40	0.692	-.0683787	.0453909
FDIVID	.0025825	.0115583	0.22	0.823	-.0200713	.0252363
FLEVER	-.0039524	.0154366	-0.26	0.798	-.0342077	.0263028
FISIN	7.84e-12	8.43e-12	0.93	0.353	-8.69e-12	2.44e-11
BSIZE	-.0036771	.00192	-1.92	0.055**	-.0074402	.000086
BDUAL	.0179888	.010463	1.72	0.086*	-.0025182	.0384959
BMEET	-.0012704	.0017248	-0.74	0.461	-.0046509	.00211
BINDEP	.0022999	.00371	0.62	0.535	-.0049716	.0095713
MOWNE	-.0736546	.0473894	-1.55	0.120	-.166536	.0192268
FOWNE	-.0000659	.000115	-0.57	0.567	-.0002913	.0001595
INISTITU	-.0012786	.0154823	-0.08	0.934	-.0316235	.0290662
BLOCKH	-.0025194	.0064202	-0.39	0.695	-.0151028	.010064
_ cons	.0851672	.0446472	1.91	0.056	-.0023396	.172674
R Sq. value	0.221					
P. value	0.001					

[7] Following previous studies company's size is measured by using the natural logarithm of total assets at the year-end (Aljifri and Hussainey 2007; Samaha et al. 2012; Wang and Hussainey 2013).

Panel B: Association between CEOs' personal characteristics and EM measured by Jones (1991) Model.

EMJOM	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
CAGE	-3.24e-06	.0003125	-0.01	0.962	-.0006156	.0006092
CGEND	.012633	.0171897	0.73	0.462	-.0210583	.0463242
COVER	.0143235	.0072975	1.96	0.050**	.0000207	.0286263
FSIZE	.0286263	2.61e-11	-1.73	0.084*	-9.63e-11	6.01e-12
FPROF	-.0069187	.0294229	-0.24	0.814	-.0645866	.0507492
FDIVID	.006942	.006942	0.59	0.554	-.0160301	-.0160301
FLEVER	-.0030132	.0156829	-0.19	0.848	-.0337511	.0277248
FISIN	8.03e-12	8.67e-12	0.93	0.355	-8.97e-12	-8.97e-12
BSIZE	-.0037374	.0019669	-1.90	0.057**	-.0075924	.0001176
BDUAL	.0215515	.0107116	2.01	0.044**	.0005571	.0425459
BMEET	-.0014029	.0017574	-0.80	0.425	-.0048473	.0020415
BINDEP	.0018484	.0037993	0.49	0.627	-.0055981	.0092949
MOWNE	-.0792058	.0484283	-1.64	0.102*	-.1741234	.0157119
FOWNE	-.0000659	.0001165	-0.57	0.571	-.0002942	.0001624
INISTITU	-.004455	.015873	-0.28	0.779	-.0355654	.0266554
BLOCKH	-.0032494	.0065048	-0.50	0.617	-.0159985	.0094997
_ cons	.0934208	.0456787	2.05	0.041	.0038922	.1829495
R Sq. value	0.2370					
P. value	0.0003					

Panel C: Association between CEOs' personal characteristics and EM measured by Kothari (2005) model.

EMKOTH	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
CAGE	.0000173	.0003014	0.06	0.954	-.0005735	.0006082
CGEND	.0116059	.0164963	0.70	0.482	-.0207262	.0439379
COVER	.0124519	.0070373	1.77	0.077	-.001341	.0262448
FSIZE	-3.61e-11	2.48e-11	-1.45	0.146	-8.47e-11	1.26e-11
FPROF	-.0062556	.028517	-0.22	0.826	-.0621478	.0496366
FDIVID	.0004796	. .0113519	0.04	0.966	-.0217697	.0227288
FLEVER	-.0002119	.0151182	-0.01	0.989	-.0298431	.0294193
FISIN	1.27e-11	1.27e-11	1.27e-11	0.117	-3.17e-12	2.86e-11
BDSIZE	-.0030855	-.0030855	-1.66	0.097*	-.0067264	.0005554
BDUAL	.0170918	.0101326	1.69	0.092*	-.0027679	.0369514
BMEET	-.0008302	.0016819	-0.49	0.622	-.0041266	.0024662
BINDEP	.0006181	.0006181	0.17	0.863	-.0064207	.0076569
MOWNE	-.0522047	.0460126	-1.13	0.257	-.1423877	.0379783
FOWNE	-.0000929	.0001132	-0.82	0.412	-.0003147	.0001289
INISTITU	-.0045985	.0149627	-0.31	0.759	-.0339249	.0247278
BLOCKH	-.0020542	.0063139	-0.33	0.745	-.0144292	.0103208
_ cons	.0666381	.0432866	.0432866	0.124	-.0182021	.1514782
R Sq. value	0.196					
P. value	0.005					

7.4.1. TESTING ENDOGENEITY PROBLEM

Further analysis was conducted to check whether the endogeneity and simultaneity problems between dependent and independent variables might affect the relationship between EM practices and CEOs' personal characteristics. Following the method used by Hermalin and Weisbach (1991); Coles et al. (2008) and Choi et al. (2010), the current study used lagged values of CEO variables as an IV and lagged values of EM as dependent variables (Hazarika et al. 2012). The Durbin and Hausman tests show values of X^2 *(9.47% and 7.11%) (P=*

0.0309, P= 0.0413) respectively, which suggest that the proposal of no endogeneity between the independent and dependent variables is rejected. The presence of endogeneity and simultaneity between the dependent and independent variables may affect the findings of the study, so an IV and Two-Stage (2SLS) regression method was employed to control the effect of these problems.

The results of this regression of EM practices on CEOs' personal characteristics are presented in Table 7.7. After controlling for the simultaneity and endogeneity problems, the coefficient of EM practices is not significantly *(coef. = .0003764, z = 0.67, p < 0.504) (coef. = .0000638, z = 0.21, p < 0.834)* related to the lagged value of the CEO's age. This result is consistent with the primary results of the panel regression model presented in Table 7.6. In relation to CEO's gender, Table 7.7 panel A and B reports an insignificant relationship *(coef. = .0105425, z = 0.43, p < 0.665) (coef. = .0150012, z = 0.97, p < 0.332)* between the coefficient of EM and the lagged value of CEO's gender. This finding is in line with previous findings reported in Table 7.6.

With regard to the CEO's overconfidence, Table 7.7 shows that the coefficient of EM practices has a significant and positive *(coef. = .0283985, z = 1.94, p < 0.052) (coef. = .012633, z = 1.90, p < 0.058)* relationship with the lagged value of CEO's overconfidence. This result is similar to the primary result presented in Table 7.6. It also corroborates the findings of Hilary and Hsu (2011) who examined whether attribution bias is a reason for overconfidence in managerial forecasts, and found a positive and simultaneous relationship between overconfidence and the level of accurate forecasts. Although the level of significance is lower than in the previous findings, the direction remains the same.

With regard to the control variables, the two-stage regression findings reveal relatively similar findings, confirming the primary result presented in Table 7.6. Overall, this regression

and the instrumental variables model support the main findings in Table 7.6, suggesting that the simultaneity and endogeneity problems between EM practices and CEOs' characteristics did not affect the main results.

Table 7.7: Panel A: Instrumental variables Two-Stage (2SLS) regression model (using linear regression model) using lagged independent variables.

EMMOJ	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
LCAGE	.0003764	.0005632	0.67	0.504	-.0007274	.0014802
LCGEN	.0105425	.0243499	0.43	0.665	-.0371824	.0582674
LOVER	.0283985	.0146214	1.94	0.052**	-.000259	.057056
FSIZE	-4.25e-11	2.17e-11	-1.96	0.050**	-8.50e-11	4.05e-14
FPROF	-.0152426	.0294127	-0.52	0.604	-.0729492	.042464
FDIVID	.0055178	.0115251	0.48	0.632	-.017094	.0281297
FLEVER	-.0091316	.0145416	-0.63	0.530	-.0376617	.0193985
FISIN	8.35e-12	6.30e-12	1.32	0.185	-4.01e-12	2.07e-11
BSIZE	-.0047412	.0015383	-3.08	0.002***	-.0077593	-.001723
BDUAL	.0104164	.008492	1.23	0.220	-.0062446	.0270775
BMEET	-.0014152	.0015368	-0.92	0.357	-.0044304	.0016
BINDEP	.003563	.0029852	1.19	0.233	-.0022939	.0094198
MOWNE	-.0536106	.0397056	-1.35	0.177	-.1315116	.0242903
FOWNE	-.0000655	.0001196	-0.55	0.584	-.0003	.0001691
INISTITU	-.0038422	.012258	-0.31	0.754	-.0278919	.0202076
BLOCKH	-.0005672	.006607	.006607	0.932	-.0135298	.0123955
_ cons	.0904247	.0375897	2.41	0.016	.0166751	.1641744
R Sq. value	23.2%					
P. value	0.030					

Panel B: Instrumental variables Two-Stage (2SLS) regression model (using linear regression model) using lagged dependent variables.

LEMMOJ	Coefficient.	Std. Err.	Z	P IZI	[95%Conf.	Interval]
CAGE	.0000638	.0003037	0.21	0.834	-.0005316	.0006591
CGEND	.0150012	.0154538	0.97	0.332	-.0152877	.0452901
COVER	.012633	.0066641	1.90	0.058**	-.0004284	.0256944
FSIZE	-4.03e-11	2.16e-11	-1.86	0.063*	-8.27e-11	2.13e-12
FPROF	-.0119392	.0293346	-0.41	0.684	-.0694924	.045614
FDIVID	.0058648	.0114587	0.51	0.609	-.0166167	.0283464
FLEVER	-.0052877	.0142768	-0.37	0.711	-.0332982	.0227227
FISIN	7.08e-12	6.26e-12	1.13	0.258	-5.20e-12	1.94e-11
BSIZE	-.0048103	.0015373	-3.13	0.002***	-.0078264	-.0017943
BDUAL	.009979	.0084583	.0084583	0.238	-.0066159	.0265738
BMEET	-.0013439	.0015352	-0.88	-0.88	-.004356	.0016681
BINDEP	.0031734	.0029791	1.07	0.287	-.0026714	.0090183
MOWNE	-.0548541	-.054854	-1.38	0.167	-.132703	.0229948
FOWNE	-.0000551	.0001194	-0.46	0.645	-.0002894	.0001792
INISTITU	-.003613	.0122142	-0.30	0.767	-.0275767	.0203507
BLOCKH	-.0003734	.0066042	-0.06	0.955	-.0133305	.0125837
_ cons						
R Sq. value	19.3%					
P. value	0.037					

7.5. SUMMARY

In this chapter, the study objective to investigate the effect of CEOs' personal characteristics on EM practices is described. In particular, using a sample of 201 non-financial Jordanian listed companies for the fiscal years 2008 to 2013, with 1,206 company-year observations, the study focuses on the CEOs' age, gender and overconfidence. The empirical tests indicate that overconfidence has a positive and significant association with EM practices among non-financial Jordanian companies, consistent with the central assumption of agency theory that "all individual action is driven by self-interest and that individuals will employ accounting choices in an opportunistic behaviour to achieve their objectives" (An et al. 2011).

A possible explanation for these findings is that overconfident managers of non-financial Jordanian companies are more likely to issue further optimistic management forecasts, which will place them in a risky position in meeting forecasts for the future, and consequently lead to EM practices (Hribar and Yang 2010; Schrand and Zechman 2012; Hribar and Yang 2015). The results of our empirical analysis indicate that there is no relationship between the CEO's gender or age and EM practices among Jordanian companies.

Regarding the effect of a company's characteristics and corporate governance factors on EM practices, the coefficient of company size, board size and managerial ownership are found to be negatively and significantly related to discretionary accruals. However, the coefficient of board duality reveals that companies with high board duality are more likely to engage in EM practices.

CHAPTER EIGHT: SUMMARY AND CONCLUSIONS

8.1. INTRODUCTION

This study aims to achieve three objectives: i) To examine the relationship between the level of FLID and EM practices in non-financial Jordanian companies; ii) To investigate the effect of CEOs' personal characteristics on the level of FLID; and iii) To examine the effect of CEOs' personal characteristics on EM practices. In respect of the first objective, the literature related to voluntary disclosures and EM action provides two different perspectives: managerial opportunism and long-term perspective. The first view argued that firms with a higher level of voluntary disclosure are more likely to be involved in EM practices, and the proponents of this viewpoint found a positive relationship between these variables (Patten and Trompeter 2003; Prior et al. 2008; Heltzer 2011; Yip et al. 2011; Jiang and Xin 2012). On the other hand, proponents of the second perspective argued that companies with a higher level of voluntary disclosure are less likely to be involved in EM behaviour and found a negative relationship between them (Lobo and Zhou 2001; Hunton et al. 2006; Katmun 2012; Yadollah et al. 2012).

With regard to the second and third objectives, the literature reports that financial reporting practices vary predictably with particular individual characteristics of CEOs (Dikolli et al. 2012; Schrand and Zechman 2012; Davidson et al. 2013), and this is the reason for second and third objectives. To this end, annual reports published for the financial years 2008-2013 are used for primary data collection, supplemented by press releases and direct communication with analysts. However, the current study uses the assumptions of agency and signalling theories as the most relevant in understanding the link between EM, asymmetric information and voluntary disclosure.

This chapter is organized as follows. Section 8.2 reviews the study findings. Section 8.3 outlines potential limitations. Section 8.4 presents implications of the study, and section 8.5 suggests areas for future research.

8.2. THE RELATIONSHIP BETWEEN FLID AND EM PRACTICES

Chapter 5 presented the findings relating to the first study objective, employing both univariate and multivariate analysis. One hypothesis was identified to answer this objective, and the result suggests that the level of FLID affects the magnitude of EM. In particular, companies with a high level of FLID report a lower degree of EM. This supports H1, that there is a negative relationship between the level of FLID and EM practices, as the study findings indicate that the coefficients of the level of FLID are negatively and significantly related to EM practices. Companies with a high level of FLID are thus less likely to engage in EM practices. Agency theory predicts that agency problems arise when both the agent and principal seek to maximize their own interests, which are not aligned. Asymmetric information is a key factor leading to the agency problem of conflicting interests. Pursuant to agency theory, companies may use different methods, such as voluntary disclosure, to reduce conflicting interests between managers and owners as well as other stakeholders (Sun et al. 2010; An et al. 2011). Furthermore, the findings of the current study are consistent with signalling theory's assumption of a long-term perspective, which suggests that companies with a high level of voluntary disclosure are not only concerned about increasing current profits and managers' wealth, but are looking to create and improve a strong future relationship with shareholders (Singhvi and Desai 1971).

The use of the alternative measurement of DA based on the PM model revealed that the main findings are consistent and robust with the different measurements of EM. In respect of the endogeneity and simultaneity problems, tests showed the main findings to be consistent and

robust, unaffected by the endogeneity problem in the relationship between the level of FLID and EM practices.

8.3. THE RELATIONSHIP BETWEEN CEOS' PERSONAL CHARACTERISTICS AND THE LEVEL OF FLID

The second objective was addressed in Chapter six using both univariate and multivariate analysis. The study seeks to examine the effect of CEOs' personal characteristics (age, gender and overconfidence) on the level of FLID. The literature indicates that managers play a significant role in their company's voluntary disclosure decisions which might impact investors' choices (Bamber et al. 2010; Li 2010; Schleicher and Walker 2010). To achieve the objective, three hypotheses were formulated, the overall results suggesting that CEOs' personal characteristics do affect the level of FLID. Hypothesis H2, that there is a negative relationship between age and the level of FLID, is shown by the regression results to be true. Older managers tend to avoid risks more than younger ones, whereas the latter aim to signal their capability to shareholders. Hypothesis H3 predicted that there is a positive relationship between the presence of male CEO's and the level of FLID. The result reveals that they are positively and significantly related, suggesting that companies managed by male CEOs tend to disclose more FLID than those managed by females. Third, the findings based on the three measurements of CEOs' overconfidence provide empirical evidence that overconfidence has a significant effect on the level of FLID, supporting hypothesis H4, which has expected a positive relationship between CEO's overconfidence and the level of FLID.

The results of the study are consistent with agency theory: managers aware that owners will continue to control their activities through bonding and monitoring actions may have be motivated to convince stockholders that they are acting optimally; disclosures may been a means of achieving this. Thus, agency theory provides an explanation for managers voluntarily disclosing more information (Watson et al. 2002). Furthermore, according to

signalling theory, managers of high-quality companies are more likely to distinguish themselves from lower-quality companies through voluntary disclosures (An et al. 2011). Salama et al. (2006) suggested that disclosure might help to improve a company's reputation in the market and enhance relations with the community, regulatory agencies, media and non-governmental organizations. This is consistent with stakeholder theory: voluntary disclosure is considered as a strategic initiative for companies to discharge their accountability, and as a consequence reduce information asymmetry and help to build a good relationship with stakeholders (Lundholm and Van Winkle 2006; An et al. 2011).

To sum up, the study's findings suggest that managers of non-financial Jordanian companies are more likely to pay attention to the benefits of voluntary disclosure. Since the majority of non-financial Jordanian companies are owned by family, managers of these companies might be motivated to disclose more FLID than managers of non-family companies.

The use of the different measurement of CEOs' overconfidence has confirmed that the main findings are consistent and robust with the different proxies for overconfidence. In respect of the endogeneity and simultaneity problems, the study tested whether their existence affects the primary results. It was observed that the main results concerning FLID and CEOs characteristics are consistent and robust and are not affected by endogeneity and simultaneity.

8.4. THE RELATIONSHIP BETWEEN CEOS' PERSONAL CHARACTERISTICS AND EM PRACTICES

The third objective of this study is to investigate the effect of CEOs' personal characteristics on EM practices. In order to achieve this, three hypotheses were developed. H5 expects that the association between the CEO's age and EM practices will be negative. However, the regression results indicate that the coefficient of age and EM are not statistically significant;

therefore, the study does not confirm any relationship between CEOs' age and EM practices based on the three measurements of EM. Thus, the formulated hypothesis must be rejected.

H6 suggested a positive relationship between the presence of male CEOs and EM practices, but the estimated results of regression analysis indicated that there is no such relationship. The lack of a significant association may simply be because of the extremely small number of female CEOs in Jordanian companies. Thus, hypothesis H6 is rejected.

In respect to hypothesis H7, the results confirm it, that there is a positive relationship between CEOs' overconfidence and EM practices: companies with overconfident CEOs report a high level of EM. The result of the current study is consistent with the central assumption of agency theory that "all individual action is driven by self-interest and that individuals will employ accounting choices in an opportunistic behaviour to achieve their objectives" (An et al. 2011). Furthermore, this finding supports the notion that overconfident CEOs are more likely to be risk takers, as they are more likely to issue further optimistic management forecasts, which will put them in a precarious position in the future, and consequently lead to EM practices (Schrand and Zechman 2012). H7 is therefore accepted.

The use of the alternative measurement of EM has confirmed that the main findings are consistent and robust to the different proxies of EM practices. In respect of the endogeneity and simultaneity problems, the study has tested whether or not their existence affects the primary results; it was observed that the main results concerning EM and CEOs' characteristics are consistent and robust and are not affected by endogeneity or simultaneity.

8.5. THE STUDY'S IMPLICATIONS

The first purpose of the study is to investigate the relationship between the level of FLID and EM practices. The results indicate that companies with a higher level of FLID, according to their annual reports, are less likely to manipulate reported earnings. Accordingly, these

findings may have implications for various stakeholders in their efforts to constrain EM practices and improve the quality of monitoring tools. FLID is often seen as a potentially powerful instrument to constrain EM behaviour, so these findings may have practical implications for shareholders and market members to enhance their decision making when evaluating the reliability and quality of financial reports. In addition, the findings provide empirical evidence that enables managers in assessing their financial transparency and accountability, in turn helping firms to improve investors' perceptions of the quality of financial reporting. Therefore, managers should give priority to developing suitable and complete voluntary disclosures. The results reported in the study will assist managers wishing to understand more precisely how FLID affects EM actions. In addition, the findings may be used by boards of directors to assess the quality of financial reporting based on the level of FLID. The findings may also help to inform regulators and policy makers about the importance of FLID in protecting investors' rights. The current study provides empirical evidence that FLID is useful in constraining EM levels, and can help regulators and policy makers in developing future schemes and regulations in the financial reporting regulatory framework.

In addition, Financial analysts may use these findings to assess how the level of FLID will mitigate EM practices and thus affect capital market decisions. If the market perceives that companies with higher levels of FLID are associated with higher financial reporting quality, the reported financial statement may be observed as more reliable for investment decisions and credit assessment.

Again, the findings can be used as empirical support for stock market authorities to evaluate the current FLID requirements and their role in improving the quality of financial reports. From a research perspective, the findings are useful for academics interested in examining the

different aspects of FLID as one of the determinants of EM to control the effects of opportunistic behaviour.

Concerning the effect of CEOs' characteristics on the level of FLID and EM practices, the findings of the current study are useful for exploring which might be expected to affect the integrity of financial reporting. The empirical results illustrate how CEOs' characteristics affect the decision-making process and consequently financial reporting. The reported earnings should closely reflect the reality of the company's financial activity during the reporting period. Our findings may therefore be valuable to a number of users of financial information, and assist them in making the right decisions about a firm's future performance; corporate reported earnings help users to assess the company's future performance. For regulators, consideration of these characteristics could be relevant to on-going improvement of corporate governance and financial reporting. The findings are also important for boards of directors considering the benefits and costs of managers, because the manager's characteristics affect not only the company's performance but also influence financial reporting decisions. The findings may have implications for other emerging markets and financial companies.

8.6. LIMITATIONS OF THE STUDY

While a significant effort was made to ensure that the study objectives were met and the research questions answered, it should be mentioned that the study suffers from several limitations regarding scope, study period and data collection. First, one limitation is that the sample size is limited to the non-financial Jordanian companies publicly listed on the ASE. Financial companies were excluded from the study sample, as explained in Chapter 4 (see section 4.6.1); consequently, this issue may limit the generalization of the study findings. However, this is consistent with the literature (Naser et al. 2002; Al-Akra and Hutchinson 2013; Athanasakou and Hussainey 2014). The level of voluntary disclosure and transparency

varies significantly among countries (Patelli and Prencipe 2007), so our findings on methods of disclosure may not be appropriate for companies listed in other countries. However, previous studies have given strong evidence that may enable the generalization of this study's results to a large number of developing countries that have same the standards and regulations.

Secondly, the data used in this study was collected from sources such as financial reports, which are available to the public, and from other databases. Consequently, any problems or issues of significance, which affect the disclosure of data or accounting practice, will have a negative impact on the validity of the research findings.

Furthermore, the data is limited to the period 2008 to 2013, with 2008 being considered by economists as the year when the global financial crisis started. Thus, it is possible that the results may have been driven by changes in specific year(s) during or after the crisis.

Thirdly, although the accrual methods have been criticized in the literature for the likelihood of their misclassifying total accruals into components, DA and NDA, the low degree of detectability of DA by users of financial reports when used for EM makes it a suited instrument for implementing opportunistic accounting choices. The perspective of EM indicated in this study is related to opportunistic EM behaviour. However, managers may use EM to provide private information to a firm's shareholders regarding future returns, which in turn maximizes the firm's value. Therefore, the findings of this study are restricted to the assumption of opportunistic EM rather than the informative EM perspective. However, the literature on EM practices does not provide a clear technique for distinguishing between the informative and opportunistic perspectives.

Further limitations may be related to gathering and scoring procedures of the level of FLID index, which has been widely used in previous studies and has been followed by this study.

As discussed in the methodology chapter (see section 4.7.2.). The scoring procedures in the current study includes process that are considered to by subjective. However, every possible effort has been made to minimize subjective instruments.

Fourth, the study model may suffer from the omission of certain variables, resulting in factor bias correlated to both the level of FLID and EM. However, numerous steps have been taken to reduce the probability of correlated variables, including using different measurements, additional control variables, tests for endogeneity and random or fixed effects models.

Fifth, the methodology and results do not include proxy for other personal characteristics of CEOs, such as reputation, experience and being a founder of the company that may affect the decision-making process. However, there is a strong argument for considering overconfidence as a proxy for reputation (Francis et al. 2008a; Demerjian et al. 2012), especially as the study found no available data by which to measure CEOs' reputation. With regard to the CEO's experience, this study considered including it in the study model, but multicollinearity between this variable and CEO's age resulted in its being dropped. Also, the proportion of CEO founders proved to be very small (2.4%), so this variable was excluded from the research design. Finally, the choice of control variables may not be comprehensive, and there may be other factors that significantly affect the level of FLID, EM practices, and CEOs' characteristics. However, unavailability of data meant that factors such as audit committee characteristics were excluded from the study model. Previous studies have reported that state ownership also has an effect of the level of FLID and EM practices (Eng and Mak 2003; Ding et al. 2007; Huafang and Jianguo 2007), but again this variable was excluded since the Jordanian government has very few shares in listed companies (less than 2%) (JSC 2015). Finally, multicollinearity between a firm's profitability and its growth ratio (book to market value) resulted in firm's growth being dropped from the model.

8.7. SUGGESTIONS FOR FUTURE RESEARCH

There are several potential areas for future study on the association between FLID, EM practices and CEOs' characteristics. First, while this study has investigated the relationship between FLID and EM practices among non-financial companies, it would be interesting to examine this association among financial institutions, to achieve a comprehensive understanding of EM activities and the role of monitoring tools. Our findings reveal a significant association between CEOs' personal characteristics and the level of FLID among non-financial Jordanian companies, so it might be worthwhile to seek further evidence among financial companies. Future studies could also pay more attention to the relationship between FLID and EM practices among family and non-family companies, and exploring this issue could contribute substantially to the literature on FLID and EM activities.

Secondly, as noted in the previous section, the results of this study are based on the perception of EM as an opportunistic behaviour rather than looking at it from an informative perspective. In addition, the current study has used total DA as a proxy for EM in investigating the association between EM and the level of FLID. Therefore, an important avenue for future studies is to use different proxies for EM, such as short-term and long-term DA, as well as considering real EM activities.

Thirdly, the findings show that the level of FLID is negatively and significantly related to the incidence of EM practices. Thus, another avenue for future research is how the level of FLID and corporate governance attributes in constraining EM could take into account their joint and individual effects on the quality of financial reporting. Such considerations may contribute to an understanding of the effect of voluntary disclosures and corporate governance mechanisms on the quality of accounting reports.

Fourthly, the current study investigates the relationship between the level of FLID and EM practices. It would be attractive for future studies to consider whether other disclosure contexts, such as backward-looking disclosures and the cost of voluntary disclosures, affect EM practices.

Finally, while the study has tested for endogeneity between FLID, EM and CEOs' characteristics by using an instrumental variable, one possible avenue for future studies might be using a simultaneous system equation to control for endogeneity, as suggested by Coles et al. (2008) and Al Farooque et al. (2010).

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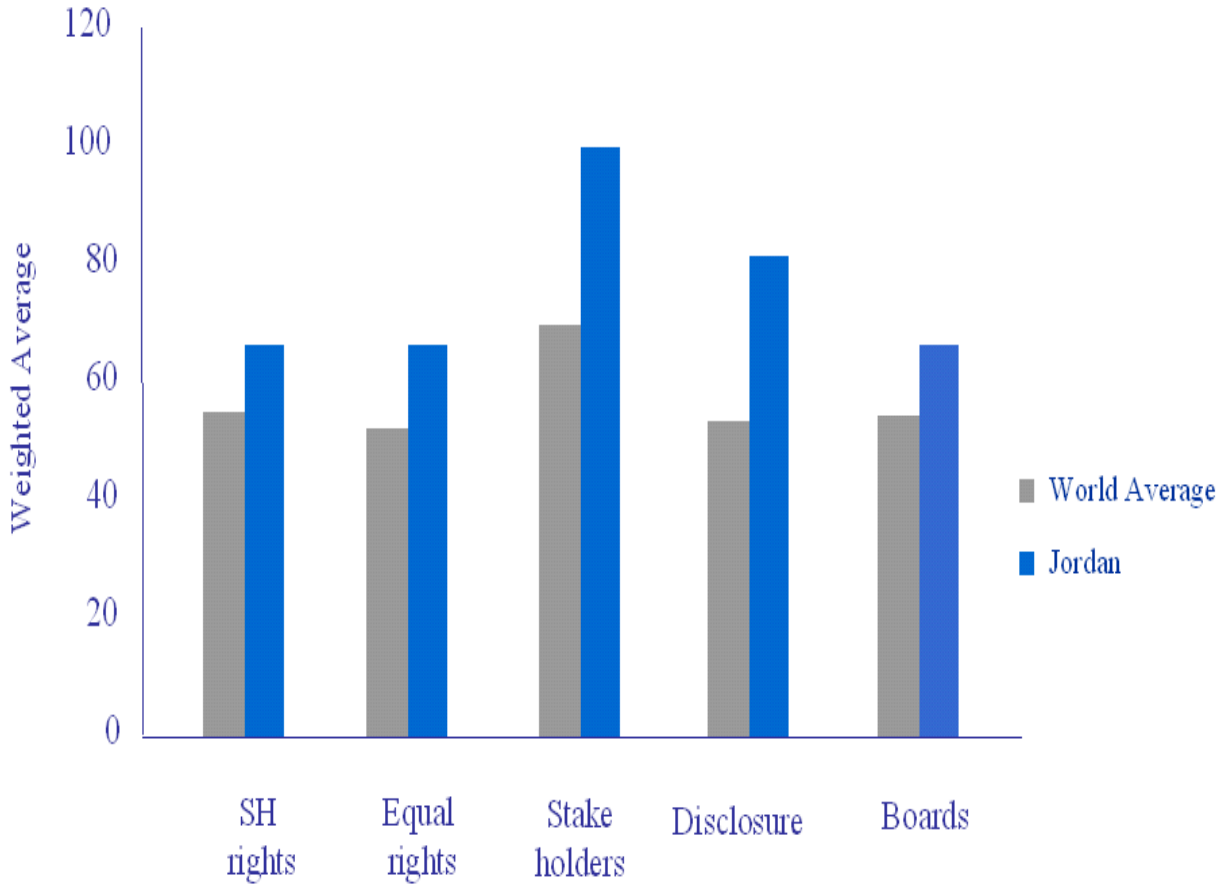
APPENDICES

Appendix 1A: Compliance with the Economic Cooperation and Development (OECD) principles; Jordan and the world



Source: Alwshah (2009, P. 22)

Appendix 1B: MENA countries: Financial development index, 2002-2003 (based on qualitative and quantitative data, scale 0-10*)

	Financial development Index	Banking Sector	**Non-Financial sector**	Regulation and Supervision	Monetary Sector and Policy	Financial Openness	Institutional Environment
Bahrain	7.7	7.3	5.0	9.3	7.8	8.0	8.9
Lebanon	7.0	8.7	3.3	7.7	8.3	7.0	5.2
Jordan	**6.9**	**7.1**	**6.3**	**8.7**	**6.5**	**8.0**	**5.4**
Kuwait	6.8	7.4	5.0	8.0	6.6	8.0	5.9
United Arab Emirates	6.6	7.9	5.0	6.7	5.8	8.0	5.9
Saudi Arabia	6.4	7.8	3.3	8.0	6.4	8.0	4.2
Pakistan	6.0	5.8	6.3	7.7	7.4	4.0	3.9
Oman	5.9	6.1	5.0	8.3	4.2	8.0	4.8
Qatar	5.7	6.8	0.7	6.7	5.7	8.0	6.3
Tunisia	5.6	7.7	4.7	5.3	4.5	5.0	5.0
Morocco	5.5	5.6	4.7	7.3	6.8	4.0	3.8
Egypt	5.4	6.0	6.3	5.3	5.6	6.0	3.2
Sudan	4.7	5.7	0.7	3.7	6.2	7.0	4.5
Djibouti	4.1	3.8	1.3	5.0	6.0	7.0	2.0
Yamen	3.9	4.1	0.7	3.3	5.0	9.0	2.2
Mauritania	3.5	3.8	0.7	3.0	3.9	5.0	4.5
Algeria	3.2	2.5	3.0	3.5	4.4	4.0	2.3
Iran	2.5	1.9	3.3	4.7	0.5	4.0	2.4
Syria	1.1	1.9	0.7	0.0	0.9	0.0	2.4
Libya	1.0	1.3	0.7	2.0	0.5	0.0	1.0
Average	5.0	5.5	3.3	5.7	5.1	5.9	4.2
Scale: Very Low = below 2.5, Low = 2.5-5.0, Medium = 5.0-6.0, High = 6.0-7.5, Very high = above 7.5							

Source: Creane et al. (2004, P. 13)

Appendix 2: List of 35 forward-looking Key words

Number	*Forward Key words*
1	Accelerate
2	Anticipate
3	Await
4	Coming financial year(s)
5	Coming months
6	Confidence (or confident)
7	Convince
8	Current financial year
9	Envisage
10	Estimate
11	Eventual
12	Expect
13	Forecast
14	Forthcoming
15	Hope
16	Intend (or intention)
17	Likely (or unlikely)
18	Look forward (or look ahead)
19	Next
20	Novel
21	Optimistic
22	Outlook
23	Planned (or planning)
24	Predict
25	Prospect
26	Remain
27	Renew
28	Scope for (or scope to)
29	Shall
30	Shortly
31	Should
32	Soon
33	Will
34	Well placed (or well positioned)
35	Year(s) ahead

Source: (Hussainey et al. 2003, P. 277).

Appendix 3: FLID categories and items

- **Financial FLID items**
  1. Income
  2. Profit.
  3. Loss.
  4. Cash flow.
  5. Capital.
  6. Return on equity.
  7. Sales.
  8. Capital expenditures.
  9. Production.
  10. Cost.
  11. Expenses.

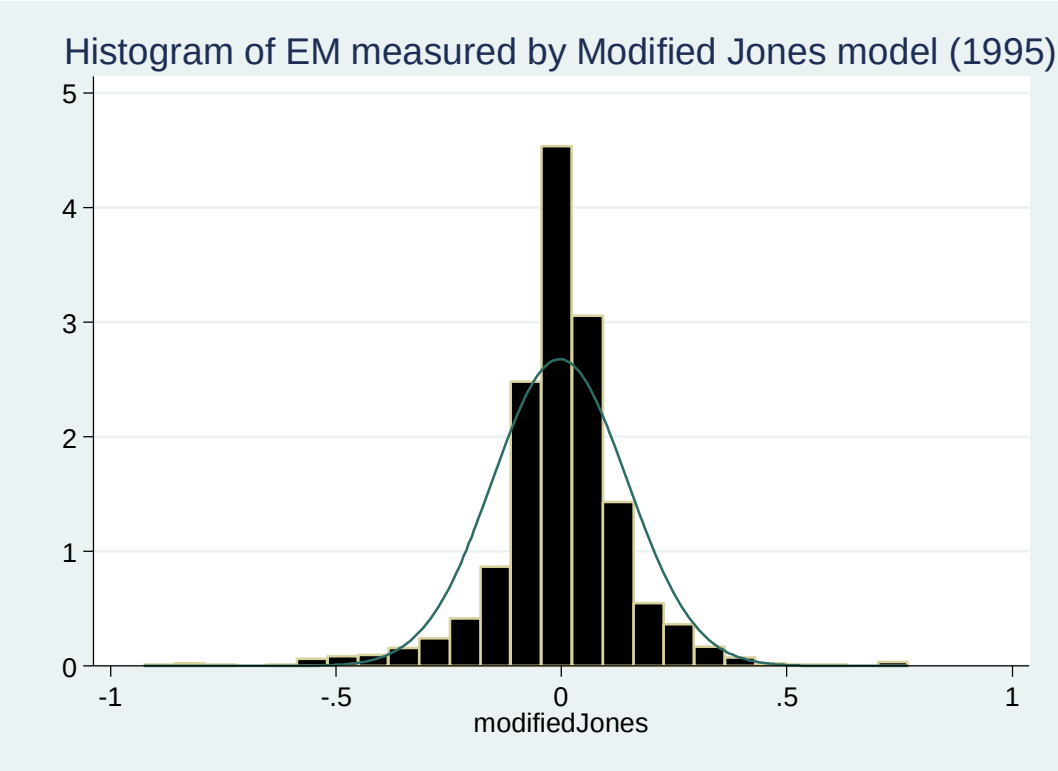
- **Non-financial FLI items**
  - **Strategies items**:
    1. Goals for performance.
    2. Mission.
    3. Objectives.

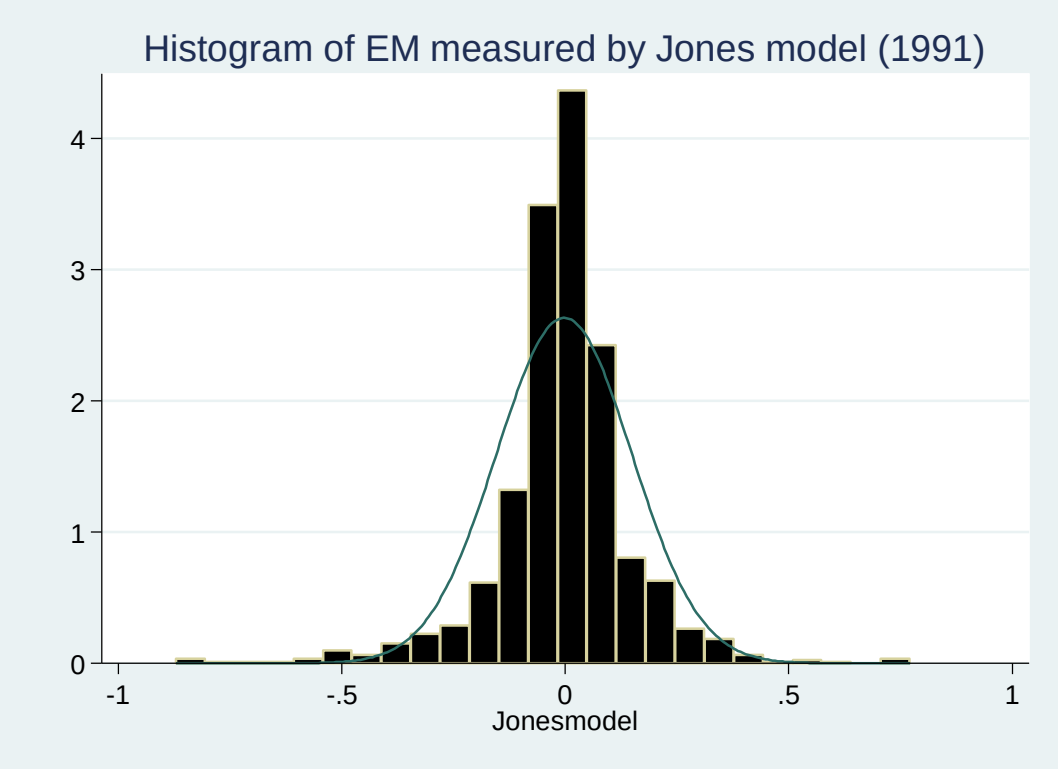
  - **Company structure**
    1. Financial structure.
    2. Change in ownership.
    3. Industry type.
    4. Human and intellectual capital.
    5. Mergers and acquisitions.
    6. Technological structure.

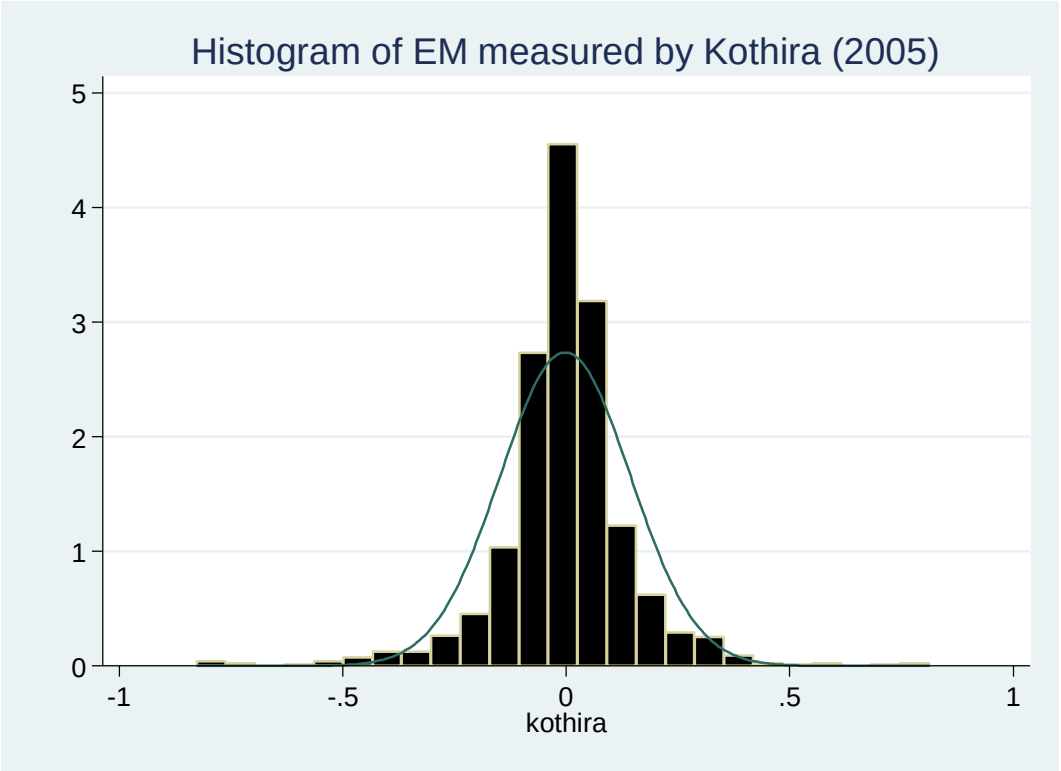
  - **Environment**
    1. Legal and regulatory.
    2. Political.
    3. Economic conditions.
    4. Social responsibility.
    5. Competitive position.
    6. Financial and non-financial resources.
    7. Risks.
    8. Relationship

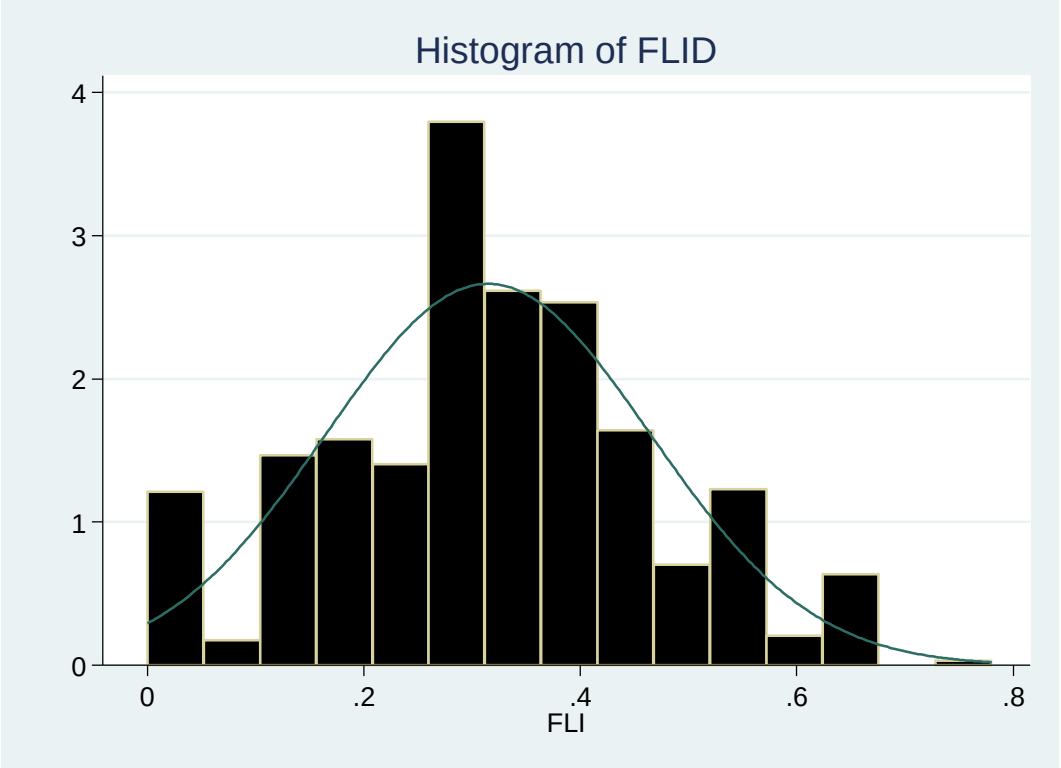
Source: Authors' development.

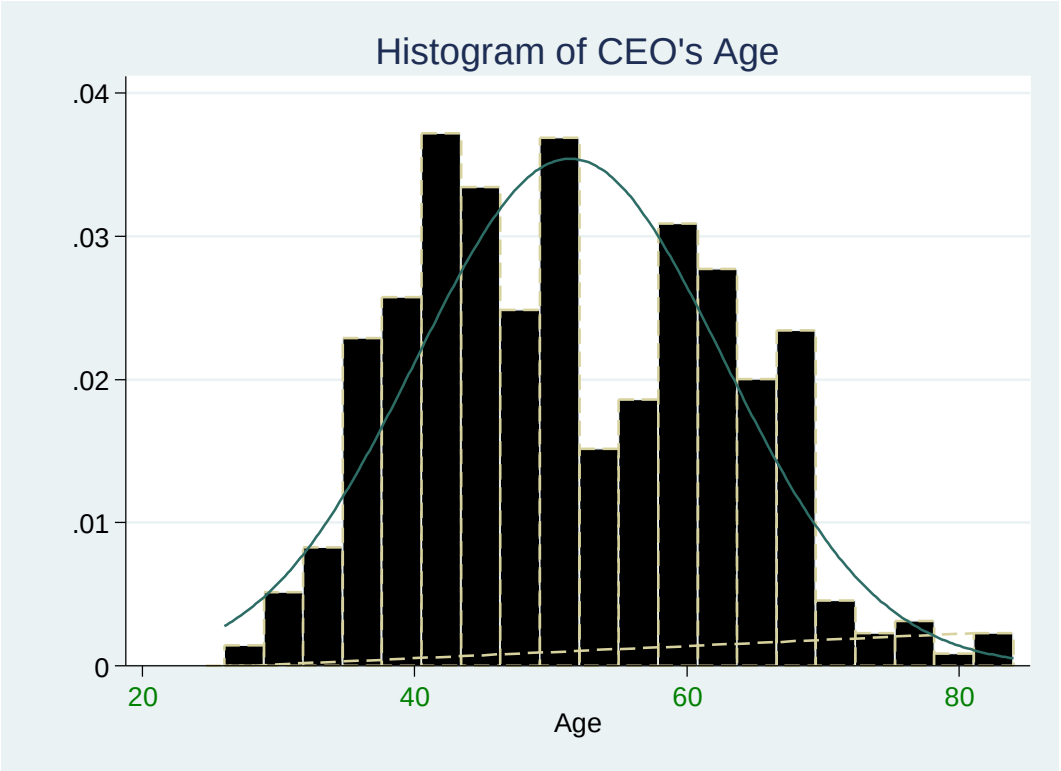
Appendix 4: Normality of Data Distribution

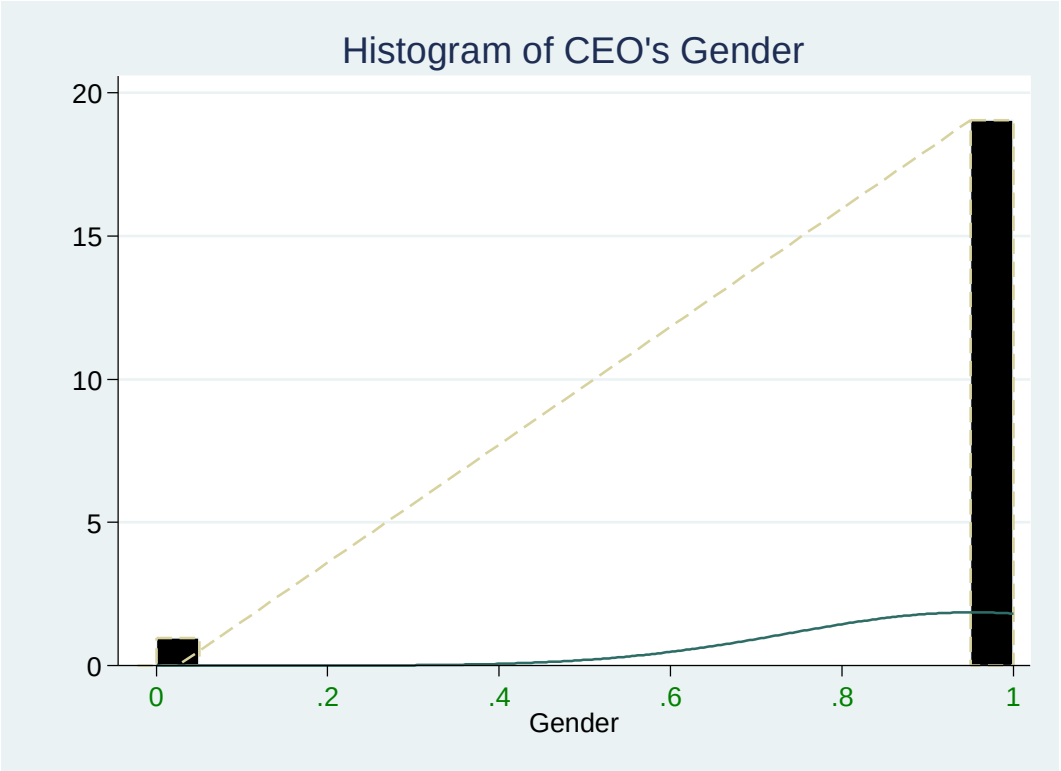


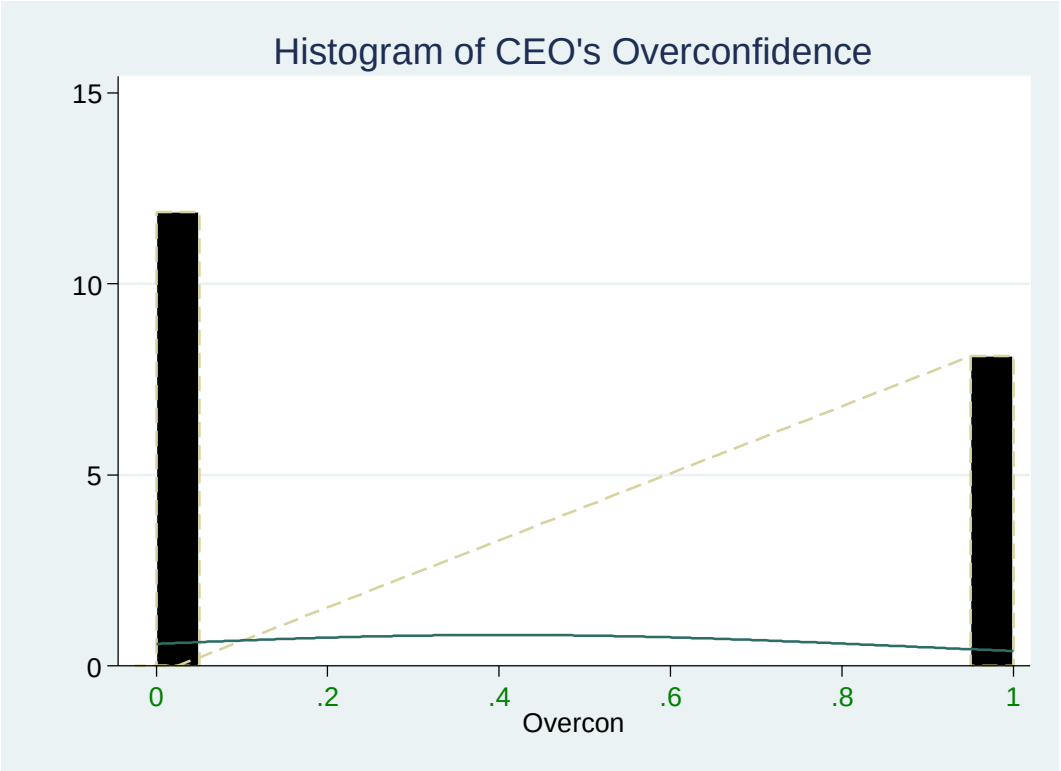


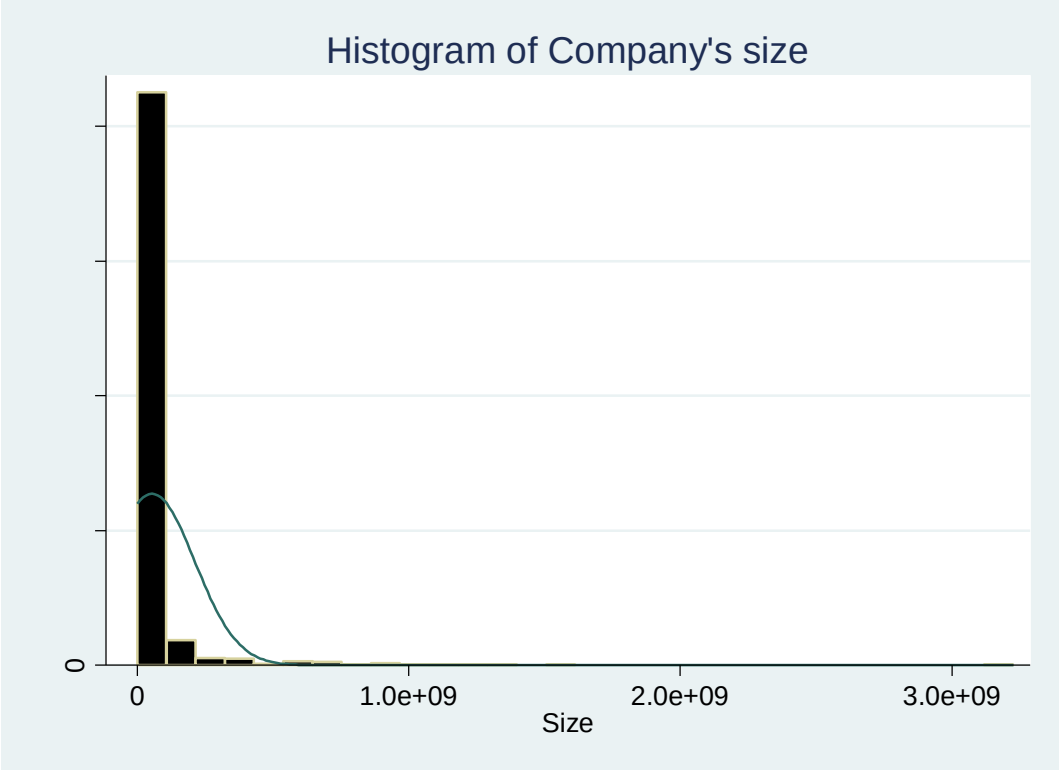

Histogram of EM measured by Kothira (2005)
5
4
3
2
1
0
-1
-.5
0
.5
1
kothira

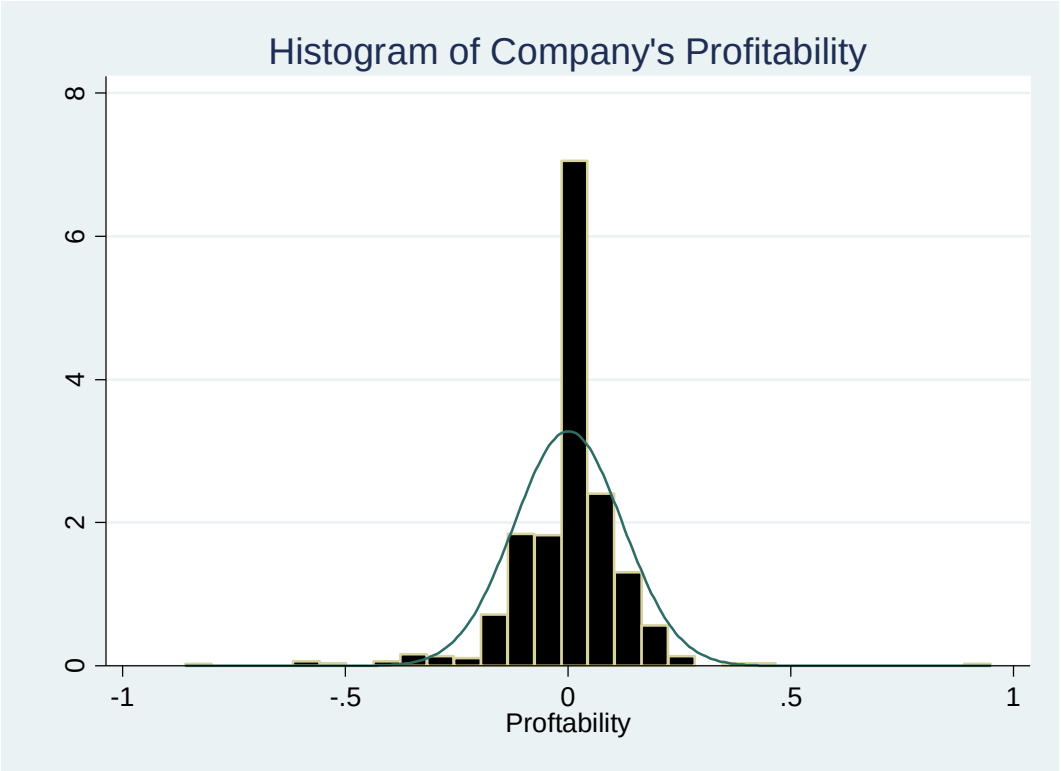

Histogram of FLID
4
3
2
1
0
0
.2
.4
.6
.8
FLI

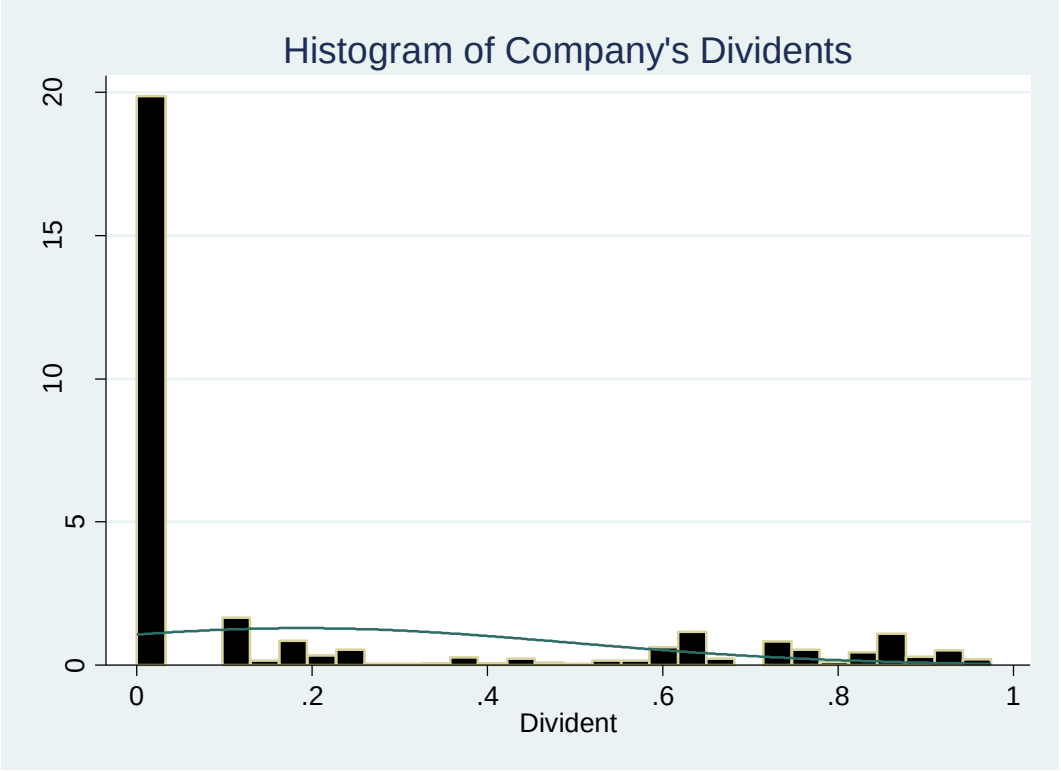

Histogram of CEO's Age
.04
.03
.02
.01
0
20
40
60
80
Age

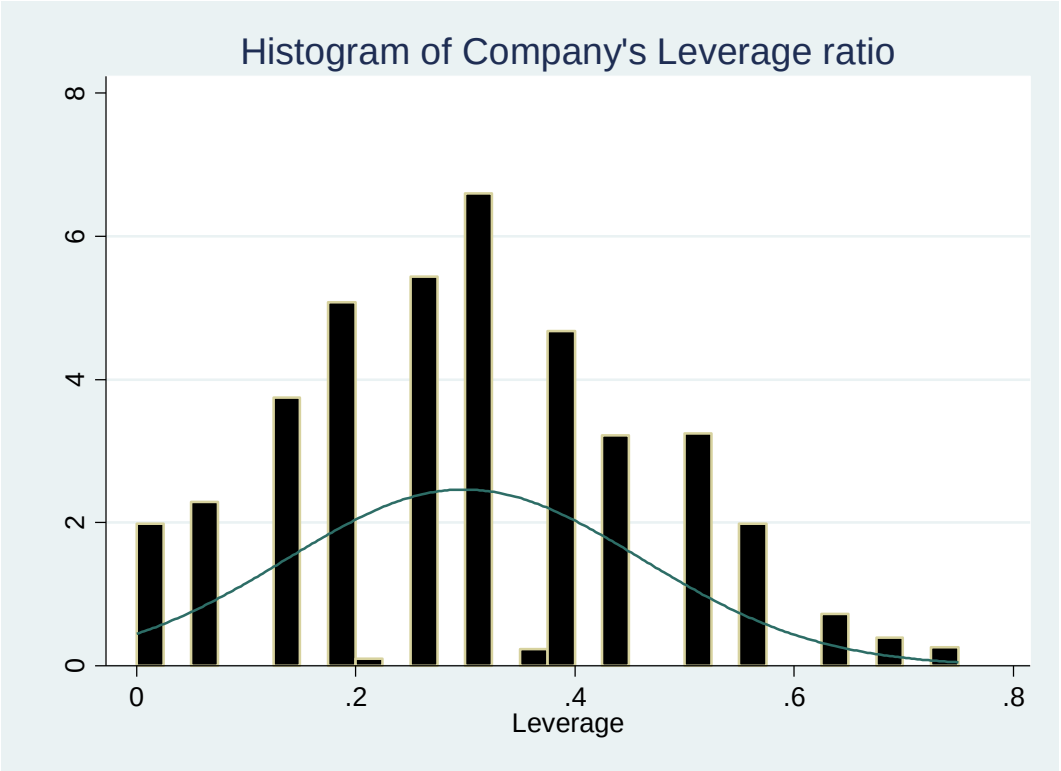

Histogram of CEO's Gender
20
15
10
5
0
0
.2
.4
.6
.8
1
Gender

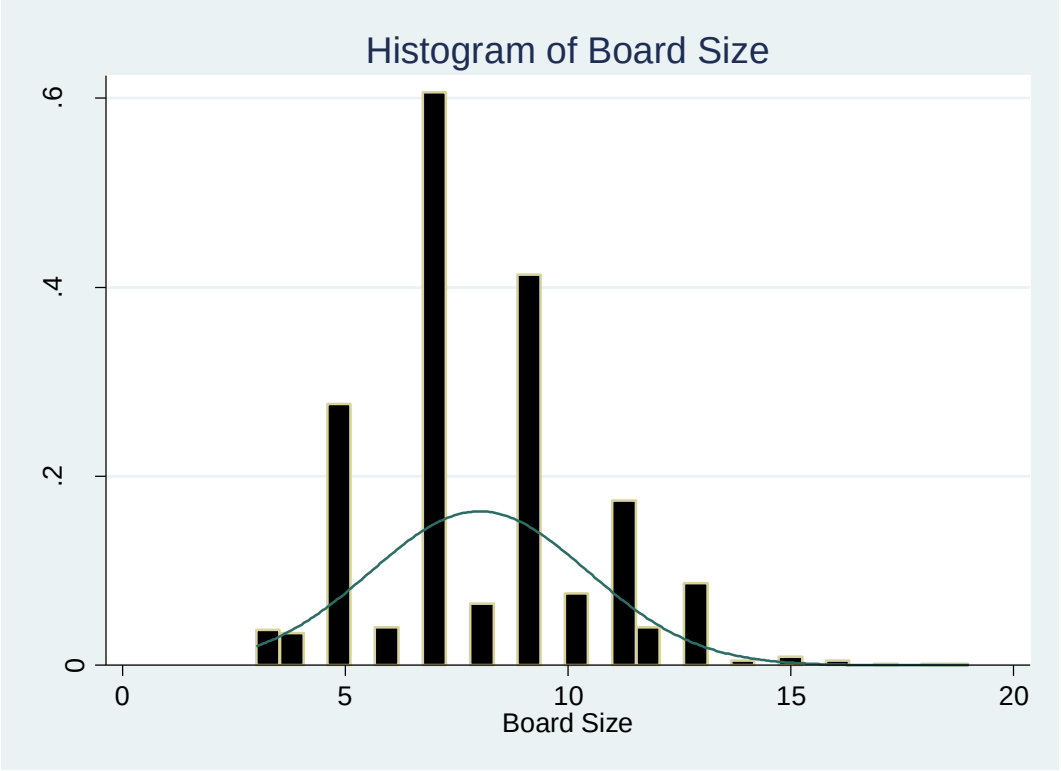

Histogram of CEO's Overconfidence
15
10
5
0
0
.2
.4
.6
.8
1
Overcon

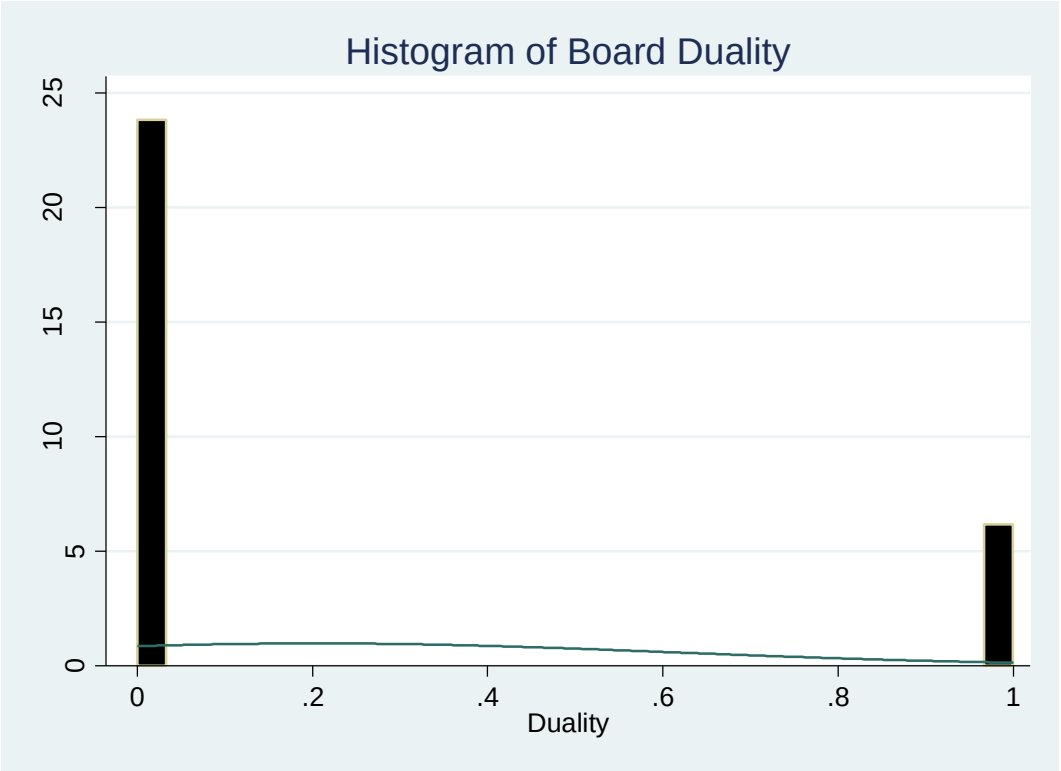

Histogram of Company's size
0
0
1.0e+09
2.0e+09
3.0e+09
Size

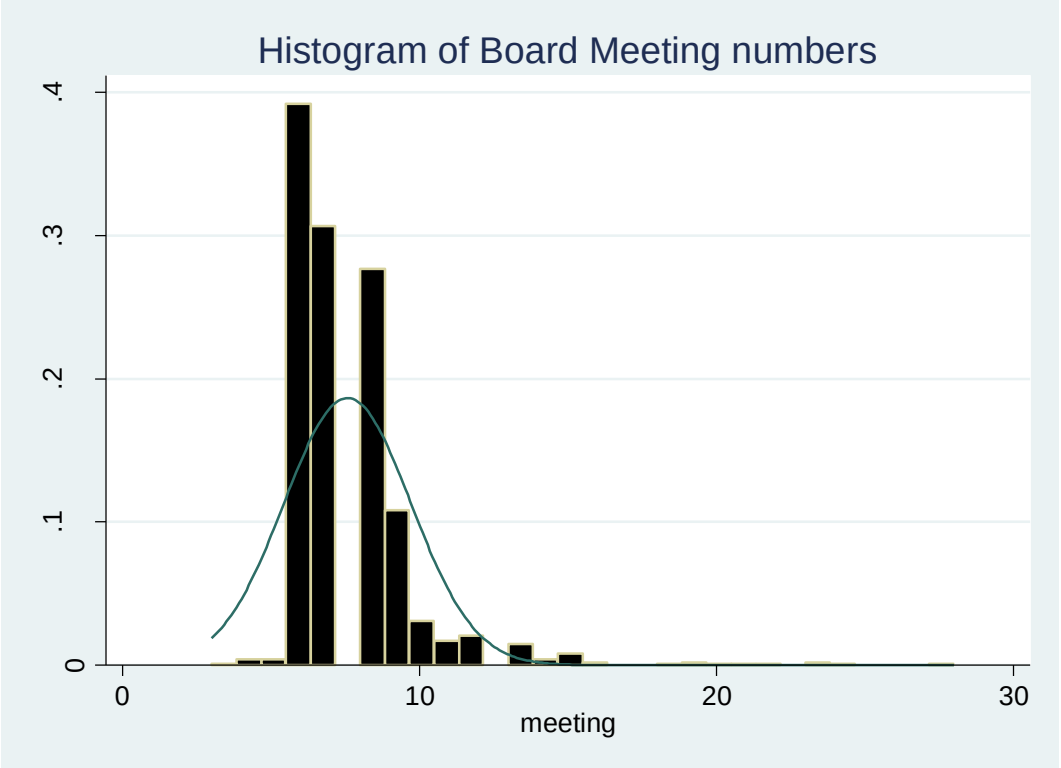

Histogram of Company's Profitability
0
2
4
6
8
-1
-.5
0
.5
1
Proftability

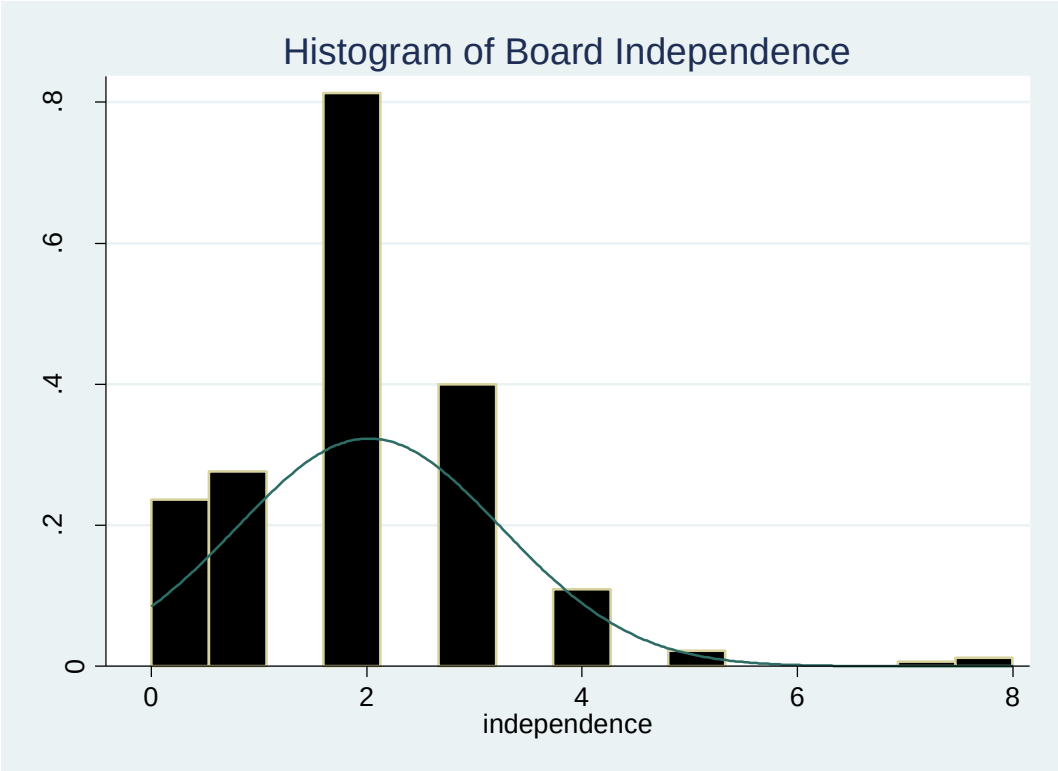

Histogram of Company's Dividents
0
5
10
15
20
0
.2
.4
.6
.8
1
Divident

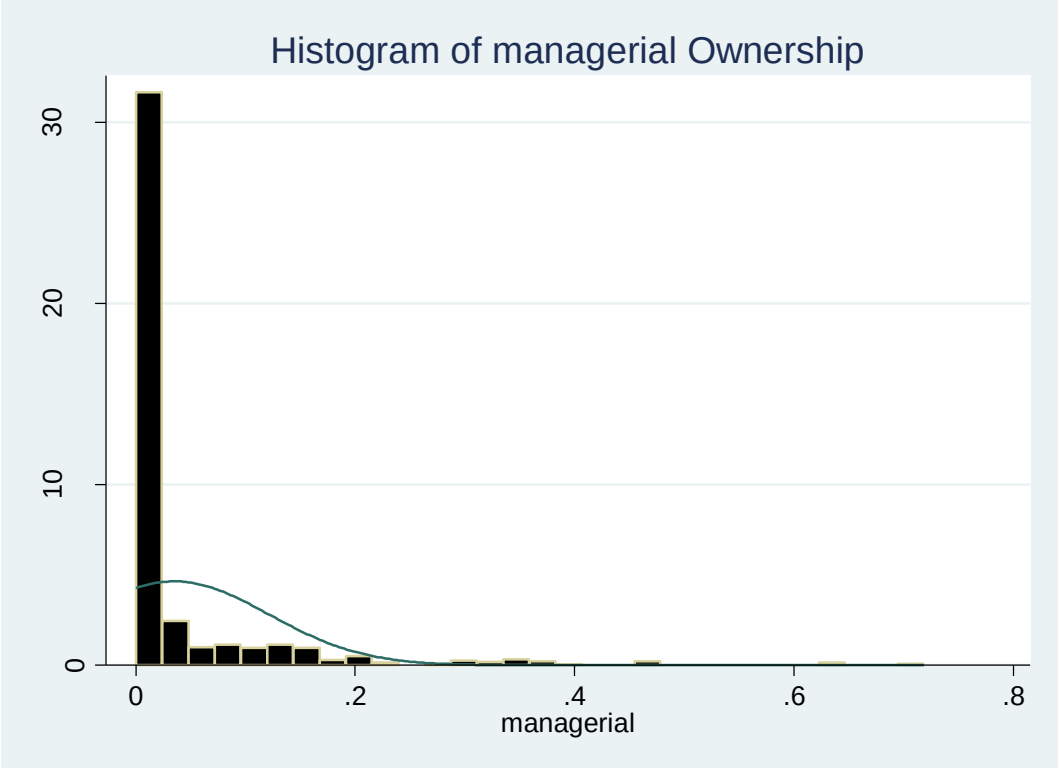

Histogram of Company's Leverage ratio
0
2
4
6
8
0
.2
.4
.6
.8
Leverage

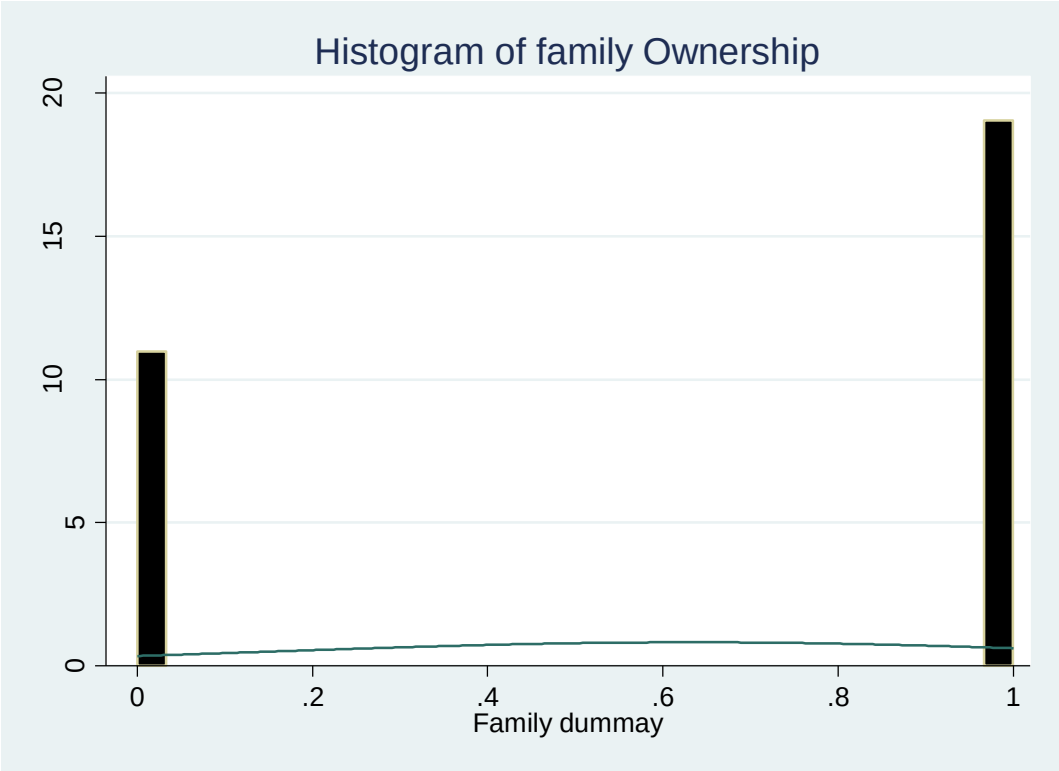

Histogram of Board Size
0
.2
.4
.6
0
5
10
15
20
Board Size

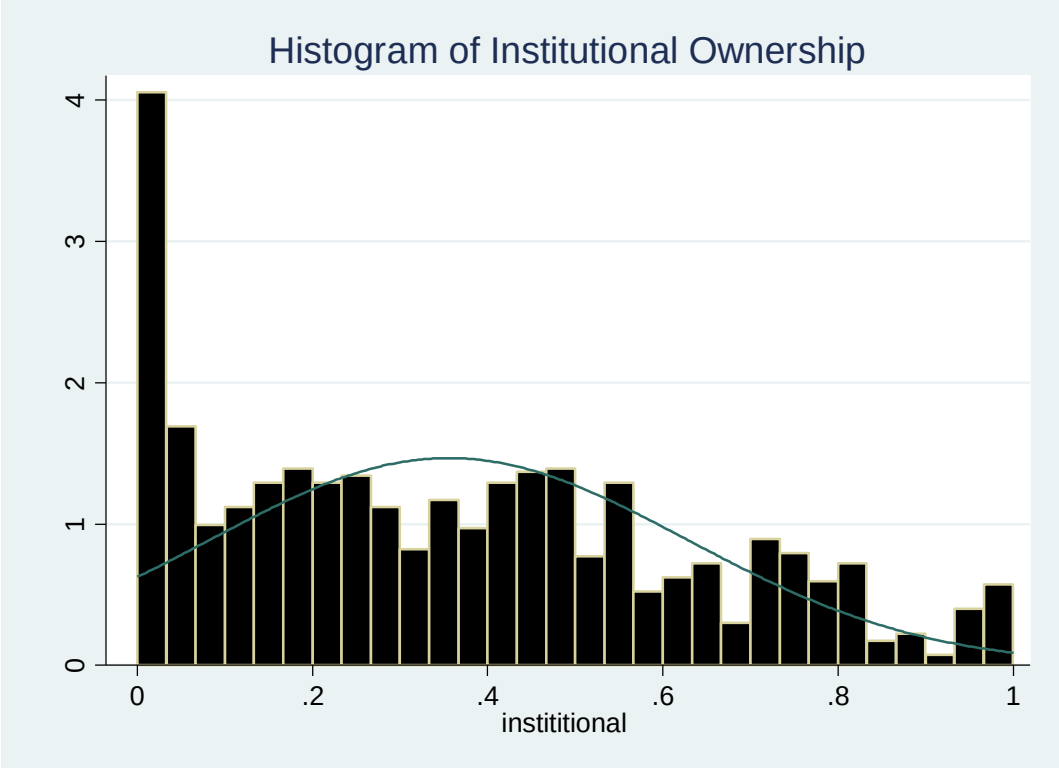

Histogram of Board Duality
0
5
10
15
20
25
0
.2
.4
.6
.8
1
Duality

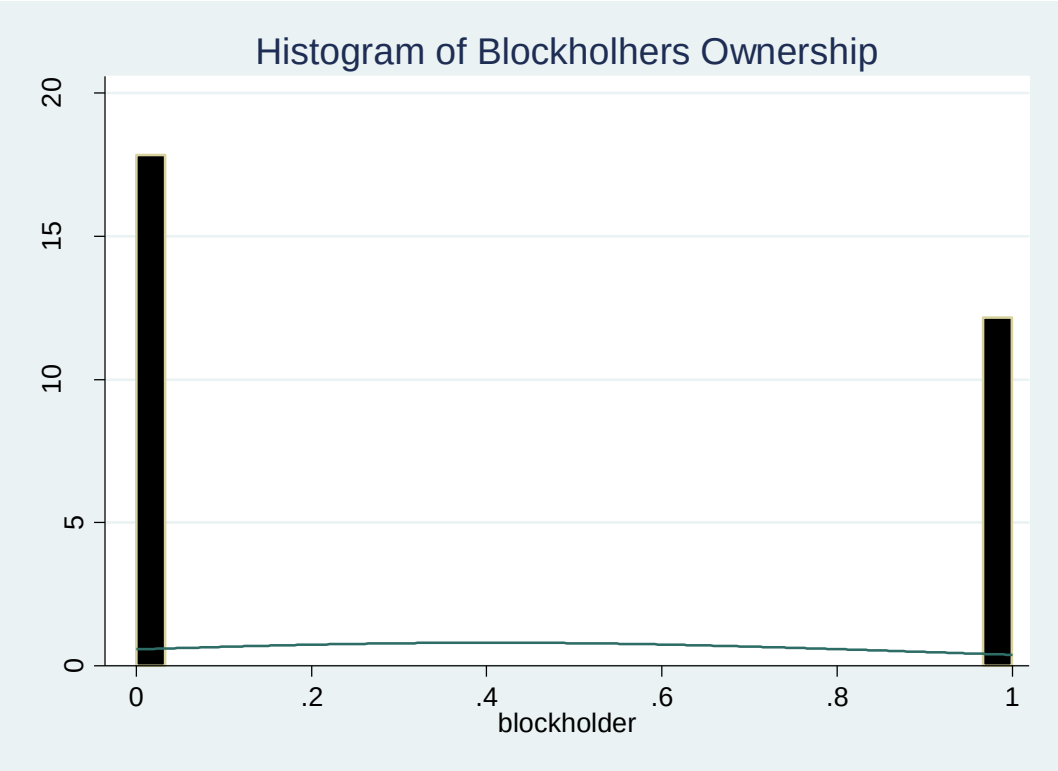

Histogram of Board Meeting numbers
0
.1
.2
.3
.4
0
10
20
30
meeting


Histogram of Board Independence
0
.2
.4
.6
.8
0
2
4
6
8
independence


Histogram of managerial Ownership
0
10
20
30
0
.2
.4
.6
.8
managerial


Histogram of family Ownership
0
5
10
15
20
0
.2
.4
.6
.8
1
Family dummay


Histogram of Institutional Ownership
0
1
2
3
4
0
.2
.4
.6
.8
1
instititional


Histogram of Blockholhers Ownership
0
5
10
15
20
0
.2
.4
.6
.8
1
blockholder

Appendix 5A: Hausman's test Results (FLID and EM)

```
. hausman Fixed .

Note: the rank of the differenced variance matrix (12) does not equal the number of coefficients being tested (13); be sure this
      is what you expect, or there may be problems computing the test.  Examine the output of your estimators for anything
      unexpected and possibly consider scaling your variables so that the coefficients are on a similar scale.

                 ---- Coefficients ----
                 (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
                 Fixed        Random         Difference          S.E.
-------------------------------------------------------------------------------
         fli     -.0357862     -.05053        .0147438        .008086
        size     -3.46e-11    -4.15e-11       6.90e-12        3.01e-11
proftability     -.0223717    -.0212412      -.0011305        .0116913
    divident      .0032217     .0033045      -.0000828        .0050222
    leverage      .0664863     .0685767      -.0020903        .0077308
   boardsize      .0041949    -.0038457       .0080406        .0034657
     duality      .0473417     .0175745       .0297672        .0170932
     meeting     -.0013421    -.0013223      -.0000198        .0015089
independence     -.0039744     .0025444      -.0065188        .0062034
  managerial      -.147249    -.0762749      -.0709742        .0598827
      family     -.0000666    -.0000625      -4.07e-06        .0000346
instititio~l      .0060999    -.0000987       .0061986        .0310735
 blockholder      .0135921     .0121208       .0014714        .0042159
-------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(12) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                           =       14.05
                 Prob>chi2 =      0.2973
```

Appendix 5B: Breusch and pagan test (FLID and EM)

```
. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        positivemj[Company,t] = Xb + u[Company] + e[Company,t]

        Estimated results:
                     |       Var     sd = sqrt(Var)
             ---------+------------------------------
           positi~mj |   .0127089        .112734
                   e |   .0105606       .1027646
                   u |   .0019851       .0445548

        Test:   Var(u) = 0
                            chi2(1) =    62.98
                          Prob > chi2 =     0.0000
```

Appendix 6A: Chapter Six, Hausman's test Results (CEO's characteristics and FLID)

```
. hausman Fixed .

Note: the rank of the differenced variance matrix (14) does not equal the number of coefficients being tested (15); be sure this is what you expect, or there may
        be problems computing the test.  Examine the output of your estimators for anything unexpected and possibly consider scaling your variables so that the
        coefficients are on a similar scale.

                 ---- Coefficients ----
              |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
              |     Fixed        Random       Difference          S.E.
--------------+----------------------------------------------------------------
          age |  -.0021095    -.0017834       -.0003261        .0002284
       gender |   .0859272     .0616937        .0242335        .0213139
      overcon |   .0015881     .0021977       -.0006096        .0054185
         size |   7.09e-11     3.18e-11        3.91e-11        3.87e-11
proftability |   .0088415     .0228969       -.0140554        .0152463
     divident |   .0366449     .0337286        .0029164        .0065189
     leverage |   .0820101     .0654116        .0165985        .0121503
    boardsize |  -.0000158     .0052781       -.0052939        .0068142
      duality |   .0026293      .011338       -.0087087        .0223516
 independent  |  -.0056368    -.0088597        .0032229        .0075849
      meeting |   .0016884     .0018662       -.0001777        .0019301
   managerial |  -.0017856     -.056921        .0551354        .0780095
instititio~l  |  -.0229651     -.033708        .0107429         .045445
 blockholder  |    .010867    -.0033445        .0142115        .0538677
      family  |   .0000551     1.59e-06        .0000535        .0000445
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                chi2(14) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                         =        9.31
              Prob>chi2 =      0.8109
```

Appendix 6B: Breusch and pagan test (CEO's characteristics and FLID)

```
. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        fli[Companies,t] = Xb + u[Companies] + e[Companies,t]

        Estimated results:
                     |       Var     sd = sqrt(Var)
             ---------+-----------------------------
                 fli |   .0224387        .1497957
                   e |   .0180472        .1343397
                   u |   .0038666        .0621819

        Test:   Var(u) = 0
                             chi2(1) =    78.27
                          Prob > chi2 =   0.0000
```

Appendix 7A: Chapter Seven, Breusch and pagan test (CEO's characteristics and EM)

```
. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        positivemj[Company,t] = Xb + u[Company] + e[Company,t]

        Estimated results:
                     |       Var     sd = sqrt(Var)
             ---------+------------------------------
             positi~mj|   .0127089        .112734
                     e|   .0106476       .1031872
                     u|   .0020265       .0450163

        Test:   Var(u) = 0
                            chi2(1) =    62.09
                          Prob > chi2 =   0.0000
```

Appendix 7B: Hausman's test Results (CEO's characteristics and EM)

```
. hausman Fixed .

Note: the rank of the differenced variance matrix (14) does not equal the number of coefficients being tested (15); be sure this is what you expect, or there may
        be problems computing the test.  Examine the output of your estimators for anything unexpected and possibly consider scaling your variables so that the
        coefficients are on a similar scale.

                   ---- Coefficients ----
                |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
                |    Fixed        Random       Difference          S.E.
----------------+----------------------------------------------------------------
            age |   .0002541     .0001485        .0001056          .00018
         gender |  -.0014894     .0088579       -.0103472        .0132363
        overcon |   .0174392     .0165582         .000881        .0043388
           size |  -3.51e-11    -4.33e-11        8.17e-12        3.02e-11
    proftability|  -.0110448    -.0114939        .0004491        .0119278
        divident |   .0019349     .0025825       -.0006476         .005055
       leverage |   .0061417    -.0039524        .0100942        .0094504
      boardsize |   .0044769    -.0036771         .008154        .0034808
        duality |    .048538     .0179888        .0305492        .0171613
    independence |  -.0045927     .0022999       -.0068925        .0062456
         meeting |   -.001327    -.0012704       -.0000565        .0015138
      managerial |  -.1478251    -.0736546       -.0741705        .0603231
          family |  -.0000675    -.0000659       -1.53e-06        .0000348
    instititio~l |   .0056643    -.0012786        .0069429        .0312038
    blockholders |  -.0054872    -.0025194       -.0029678        .0022376
------------------------------------------------------------------------------
                        b = consistent under Ho and Ha; obtained from xtreg
          B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                chi2(14) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                         =       15.30
              Prob>chi2 =      0.3581
```