Determinants and Consequences of the Quality of Forward-Looking Information Disclosure: The Case of Indian Listed Companies.

By

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Abstract

This study aims to examine the determinants and consequences of the Quality of Forward-looking Information Disclosure (QFLID) among non-financial Indian listed companies. Following objectives are accomplished in this study: Firstly, to investigate the association between Corporate Governance mechanisms (CG) and QFLID. Secondly, to investigate the impact of QFLID on Firm Value (FV) and lastly, to investigate the impact of QFLID on the Accuracy of Analysts' Earnings Forecast (ACUAF). The study uses a sample of 2120 observations of non-financial companies listed on the Bombay Stock Exchange (BSE) from 2006 to 2015. To measure QFLID, this study adopted a multidimensional framework designed by Beretta & Bozzolan (2008). Both the quantity and the richness dimensions are considered in this framework.

Regarding the first objective, the results indicate that board size, frequency of board meetings, board independence, female presence on the board, frequency of audit committee meetings, independence of the audit committee and female presence on the audit committee have positive associations with the QFLID. These results are in line with the perspectives of the agency, signalling and resource-dependence theories. However, the study found that CEO duality, blockholder ownership, institutional ownership, promoters' ownership, audit committee size and audit committee financial expertise have no relationship with the QFLID.

To achieve the second objective, the empirical results found that QFLID is positively and significantly associated with FV, which is consistent with the agency and signalling theory perspectives. Thus, firms with high QFLID increase FV more than those with a low QFLID.

Concerning the third objective, the analyses indicate that QFLID is positively associated with ACUAF, meaning that firms with high QFLID increase ACUAF as compared to those with low QFLID. This result supports the signalling theory, suggesting that managers increase FLID as it reduces information asymmetry and improves ACUAF.

The current study also conducted a series of tests to check the robustness of the main results. The findings of these additional and robustness tests provide evidence that the essential findings of this study are robust and unchanged.

Statement of Copyright

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Acknowledgement

"In the name of Allah, most Gracious, most merciful"

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Dedication

This work is dedicated to the memory of my father who passed away during my MSc studies; may Allah bless him, Amiin. To my beloved Mother, my brothers, my sisters, my wife, my son, my daughter, my friends and everyone who have shared this dream with me.

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Abbreviations

ACUAF	Accuracy of Analyst's Earnings Forecast
AEPS	Actual Earnings Per Share
ACSIZE	Audit Committee Size
ACFEXP	Audit Committee Financial Expertise
ACM	Audit Committee Meetings
BSIZE	Board Size.
BI	Board Independence.
BSE	Bombay Stock Exchange.
BloOwn	Blockholder Ownership.
LM	Breusch-Pagan Lagrange multiplier
CICA	Canadian Institute of Chartered Accountants
BD	CEO Duality.
CEO	Chief Executive Officer.
COV	Coverage
CG	Corporate Governance
CSR	Corporate Social Responsibility.
DEP	Depth
DISAF	Dispersion of Analysts' Earnings Forecast
DIS	Dispersion
ES	Economic Sign
ECB	European Central Bank
ED	Estimated Disclosure
FASB	Financial Accounting Standards Board.
GROW	Firm Growth Ratio
FV	Firm Value
CSIZE	Firm's Size.
LEVE	Firm's Leverage Ratio.
LIQU	Firm's Liquidity.

PROF	Firm's Profitability.
FLID	Forward-Looking Information Disclosures.
FBM	Frequency of Board Meeting
FPB	Female Presence on the Board
FPAC	Female Presence on the Audit Committee
GAAP	Generally Accepted Accounting Principles.
H	Hypothesis.
IAC	Independence of the Audit Committee
ICGC	Indian Corporate Governance Code
ISE	Istanbul Stock Exchange
FISIN	International Securities Identification Number.
IAS	International Accounting Standards.
IASB	International Accounting Standards Board.
IFRS	International Financial Reporting Standards.
InsOwn	Institutional Ownership.
ICAEW	Institute of Chartered Accountants of England and Wales
ICAI	Institute of Chartered Accountants of India
ICWAI	Institute of Cost and Work Accountants of India
ISA	International Standards on Auditing
IV	Instrumental Variables.
IndTyp	Industry type
MC	Market Capitalisation
MD&A	Management Disclosure and Analysis
MAF	Median Analysts' Forecast of Earnings
NSE	National Stock Exchange
NYSE	New York Stock Exchange.
OLS	Ordinary Least Squares.
OD	Observed Disclosure
OTL	Outlook Profile
ProOwn	Promoters Ownership
QFLID	Quality of Forward-looking Information Disclosures.

QD	Quantity Dimension
Q-Q plot	Quantile-Quantile Test.
R&D	Research and Development costs.
ROA	Return on Assets.
RQD	Relative Quantity Disclosure
RCN	Richness Dimension
ε	Residual Values.
α β	Regression Parameters.
STRQD	Standardised Quantity Disclosure
S&P	Standard and Poor's (American Stock Market Index).
SEBI	Security Exchange Board of India
SP	Share Price
TOM	Type of Measure
TQ ratio	Tobin's Q ratio
2SLS	Two-Stage Regression.
VIF	Variance Inflation Factor.
WID	Width

Chapter One: Introduction

This chapter covers the introduction of the current study. It is split into six sections. Section 1.1 provides a brief overview and background of the research. Section 1.2 explains the study motivations. Section 1.3 sheds light on the research aim and objectives. Section 1.4 outlines the research methodology. Section 1.5 addresses the contribution of the study and Section 1.6 reports the structure of the thesis.

1.1 Research Overview

Corporate disclosure is a significant research area that has attracted many accountancy researchers since the beginning of the 1960s (Hussainey & Al-Najjar, 2012). It plays a vital role in mitigating the issue of information asymmetry among all parties and reducing agency costs. Annual reports of a company are comprised of two disclosure types: Mandatory and Voluntary. Mandatory disclosure is compulsory for companies as multiple regulations and laws force companies to disclose a minimum amount of information that has to be revealed to users. Voluntary disclosure is further information that is reported by the company in their annual report, which exceeds the compulsory information. Although voluntary disclosure is information that is not legally required, it helps companies to promote a better image and also helps them to increase stakeholders' confidence (Alnabsha, Abdou, Ntim, & Elamer, 2017; Meek, Roberts, & Gray, 1995a).

Voluntary disclosure consists of two types: backward-looking information and forward-looking information disclosure (FLID) (Aljifri & Hussainey, 2007). FLID is an essential element of voluntary disclosure (Hassanein & Hussainey, 2015; Menicucci, 2013a). FLID contains information regarding a company's future forecast (Aljifri & Hussainey, 2007). It helps investors to evaluate a company's future performance and increases their capability to

make rational investment decisions (Kieso, Weygandt, & Warfield, 2010). FLID also deals with non-financial information, such as uncertainties and risks. FLID has been defined in the literature by a number of authors. For instance, Hussainey (2004, p. 38) defines FLID as "information on predictions related to current and future plans to assist users of financial statement and other shareholders about firm's future performance". FLID is defined as "information or any forecast that assists to make assessments about the future; it comprises estimates of opportunities, management's strategy and risks and predictions data" (Celik, Ecer, & Karabacak, 2006, p. 200). Similarly, FLID is defined as "information on future estimates that help users to evaluate company's future performance" (Menicucci, 2013c, p. 1668). Likewise, FLID is defined as "corporate forecasts based on the future of the firm and provide valuable financial information to its owners who are concerned about its future performance " (Alkhatib, 2014, p. 858).

Recently, several official pronouncements have asserted the importance of FLID for financial information users. For instance, the Canadian Institute of Chartered Accountants (CICA) in 2002, and the Institute of Chartered Accountants of England and Wales (ICAEW) in 2003 recommended that firms' annual financial reports should provide more FLID in order to meet users' needs, which leads to creating long-term value. However, mere disclosure (low quality information) may have a negative impact on the market decisions (Botosan, 2004). If low quality information is reported by the manager, it will not enhance the judgments of financial decision makers and other stakeholders (Dhaliwal, Radhakrishnan, Tsang, & Yang, 2012). Thus, managers should provide high quality FLID to help users make their investment decisions.

Prior studies have suggested several determinants of disclosure in general. It is also argued that CG is a key determinant of FLID (Alkhatib, 2014; Hassanein & Hussainey, 2015; Kuzey, 2018; Mousa & Elamir, 2018; Wang & Hussainey, 2013). Although no empirical study has examined

the impact of CG on QFLID, Aksu & Kosedag (2006) suggest that companies with high CG standards may have a better chance of providing high quality informative disclosure. CG assists in reducing information asymmetry by using adequate monitoring measures, such as adding more independent directors (Ebrahim & Fattah, 2015; El-Masry, Elbahar, & AbdelFattah, 2016). In India, the Mandatory Corporate Governance Code was put in place in the year 2000 by the Security Exchange Board of India (SEBI) and obliged all companies listed on the Bombay Stock Exchange (BSE) and other stock exchanges to disclose certain levels of information in their financial reports (Sharma & Singh, 2009).

Earlier studies, which examined the association between CG mechanisms and FLID, provide mixed results. For instance, Navarro & Urquiza (2015) found a positive impact of independent directors on FLID, although other researchers found no association between the two variables (Aljifri, Alzarouni, Ng, & Tahir, 2014; Ebrahim & Fattah, 2015; Kuzey, 2018; O'Sullivan, Percy, & Stewart, 2008; Uyar & Kilic, 2012). Wang & Hussainey (2013) found a negative association between CEO duality and FLID, while Navarro & Urquiza (2015) showed that CEO duality has no association with FLID. Wang & Hussainey (2013) and Navarro & Urquiza (2015) reveal that board size is positively related to FLID, whereas Kuzey (2018) and Liu (2015) reported no association between BSIZE and FLID. Al-Najjar & Abed (2014) found block holder ownership is negatively linked with FLID, while Alqatamin et al. (2017) found no significant association between block holder ownership and FLID.

These contradictory results might be because of measurement of FLID. The majority of earlier studies which examined the relationship between CG and FLID used quantity as a proxy to measure the quality of disclosure (Al-Najjar & Abed, 2014; Alsaeed, 2006; Cooke, 1989; Haniffa & Cooke, 2002; Hossain, Ahmed, & Godfrey, 2005; Hossain & Reaz, 2007; Inchausti,

1997; Singhvi & Desai, 1971; Wallace, Naser, & Mora, 1994). Botosan (2004) and Urquiza et al. (2009) argued that the quantity of information disclosed does not necessary imply its quality.

A closer look at the inconsistent results reveals that they can be reconciled if one can evaluate the quality of FLID. Therefore, the current study has a strong incentive to examine the relationship between CG and QFLID. Given the contradiction of prior studies' findings, and the importance of the association between CG and FLID for market participants and academics, more research is needed. To the best of the researcher's knowledge, no previous research examined the impact of CG on the QFLID in developing countries, particularly in India. Consequently, this study adopted a multidimensional framework to measure the QFLID for examining the impact of CG on QFLID among Indian listed companies.

It is also interesting to note that the main aim of FLID is to provide users and stakeholders with beneficial information about a company's future performance, and also to improve a firm's decision making capability regarding its investments (Healy & Palepu, 2001; Kieso et al., 2010; Menicucci, 2013c; Singhvi & Desai, 1971). Aljifri & Hussainey (2007) indicate that FLID is usful in different contexts, such as the firm value (FV) and the accuracy of analyst forecasts (ACUAF). **Firstly,** few studies have examined the association between the FLID and FV and they reported mixed results (Bravo, 2015; Hassanein & Hussainey, 2015; Wang & Hussainey, 2013). However, no study has examined the quality of FLID in relation to FV. Thus, this study's purpose is to bridge this potential knowledge gap and examine the link between QFLID and FV among Indian companies. **Secondly,** Lang & Lundholm (1996) highlight that financial analysts are an essential part of the capital market. They mentioned that analyst forecast contains information on earnings forecast, buying and selling guidance and other useful information for managers, brokers and investors. A limited number of studies have examined the link between FLID and ACUAF (Bozzolan, Trombetta, & Beretta, 2009). However, no

study considered the quality of FLID in relation to ACUAF. Therefore, in order to fill this gap, the present research examined the impact of QFLID on ACUAF among Indian listed companies.

1.2 Research Motivations

This research is motivated by several considerations. **Firstly,** FLID is beneficial for companies as it helps them to reduce information asymmetry (Alkhatib, 2014). When there is less information asymmetry between the company and its stakeholders, it enables the company to become more transparent and improve its decision making process. Beretta & Bozzolan (2004) highlight that the presence of FLID in annual reports of companies improves their overall credibility. On the other hand, a few studies suggest that FLID is not beneficial for companies due to various reasons (Aljifri & Hussainey, 2007). For instance, the downside of FLID mentioned is that it provides competitors of a company with useful information related to the future that can affect the position of the company. Moreover, some of the information related to the future is not easy to predict and it can lead companies to lawsuits. By looking at the pros and cons of FLID, it creates a motivation to research further in this area.

Secondly, some prior studies adopted quantity as a proxy to measure the quality of FLID (Al-Najjar & Abed, 2014; Bozzolan et al., 2009; Hassanein & Hussainey, 2015; Hussainey, Schleicher, & Walker, 2003; Mathuva, 2012b; Qu et al., 2015; Wang & Hussainey, 2013). Botosan (2004) argued that although quantity and quality are inseparable and difficult to measure, information quantity disclosed does not necessarily imply quality. Additionally, since it is difficult to measure disclosure quality due to issues of objectivity, the measurement of FLID quantity needs to be paralleled by quality measurement in order to clearly understand the QFLID. Beretta & Bozzolan (2008) supported this view and highlighted that it is not adequate to use the extent of disclosure (i.e. quantity of disclosure) to represent its quality. Therefore,

this study uses a multidimensional approach to measure the quality, as it covers both dimensions, quantity and richness, to provide a better understanding.

Thirdly, although prior studies have attempted to examine the effect of FLID on its consequences (FV and ACUAF), they have not taken the quality of FLID into consideration (Bozzolan et al., 2009; Bravo, 2015; Hassanein & Hussainey, 2015; Kent & Ung, 2003; Wang & Hussainey, 2013). Thus, this study considers the quality of FLID and investigates its impact on both FV and ACUAF. In order to fill the potential gap in this area, it is interesting to investigate the association between QFLID and both FV and ACUAF.

Finally, most of the previous studies, whether related to CG and FLID or to FLID and both FV and ACUAF, are conducted in developed countries (Agyei-Mensah, 2017; Al-Najjar & Abed, 2014; Bozzolan et al., 2009; Hassanein & Hussainey, 2015; Mathuva, 2012b; O'Sullivan et al., 2008; Wang & Hussainey, 2013). Thus, not much is known about these relationships in developing countries. Furthermore, evidences found by previous literature in the developed nations may not be helpful in understanding the association in developing nations, due to differences in environment and standards between these nations (Anglin, Edelstein, Gao, & Tsang, 2013). Siddiqui (2010) points out that most of the developing countries have poor infrastructure and enforcement is not up to standard. Based on this, the present research is motivated to investigate determinants and consequences of QFLID in India.

This study focuses on India context for following reasons. Firstly, India is a rapidly growing economy and attracted many foreign investments to increase its growth rate substantially (Arora & Athreye, 2002; Prasad, Rogoff, Wei, & Kose, 2005). As India is a developing country, CG has been a central issue as, earlier, the enforcement of corporate laws in India remained under scrutiny. The World Bank (2004) report, which is based on codes and standards observance, reported that India observes the majority of the principles and can perform better

in areas such as enforcement of laws, insider trading and dealing with certain violations of the Companies Act.

Secondly, India has a different ownership structure, which entails promoters and non-promoters ownership. According to the Securities and Exchange Board of India (SEBI), a promoter is defined as an individual or group of individuals who control the firm or act as an instrument in the formulation of a plan or programme pursuant to which the securities are offered to the public and those named in the prospectus as promoters (Ganguli & Agrawal, 2009; Kumar & Singh, 2013). Promoter ownership is considered to be several types of investors, including individuals, family members and corporate bodies (Selarka, 2005). To protect the interest of the investing community, laws and regulations in India require that promoters should have more than 20% of the post issue share capital (Ganguli & Agrawal, 2009). Kumar & Singh (2013) highlight that promoters in Indian firms raised the problem of owner-manager control. Charumathi & Ramesh (2015a) argue that companies with a higher promoters' holding have less incentive for higher disclosure. Thirdly, previous studies have also argued that several factors, for instance culture, religion and other societal norms, may affect corporate disclosure (Gautam & Singh, 2010; Hastings, 2000). As India has different religions and cultures, QFLID might influenced by these characteristics.

Fourthly, due to globalisation, CG is becoming an important area of consideration in India as their interaction with investors from developed countries is increasing rapidly. The Companies Act 1956 is an important legislation put in place for Indian companies, which enforces them to operate accordingly. The mandatory CG code was put in place by the Securities and Exchange Board of India (SEBI) in 2000 through Clause 49, followed by all the stock exchanges listed companies. The SEBI uses Clause 49 to monitor CG activities of listed companies. The listing agreement of the stock exchange in India is integrated with this clause. According to this clause, all the companies should disclose CG information as a separate section in their annual reports.

There is another requirement that companies should have a brief compliance report on CG. The report consists of nine sections, based upon the board of directors, risk management, compensation of directors, the audit committee, board meetings, shareholders' information, communication means, management analysis and their discussion. The clause also requires companies to obtain certification from the audit committee regarding meeting CG conditions, as stated therein. The companies must attach this certificate to their annual report before sending it to the stock exchange.

Finally, the stock market of India is comprised of 23 stock exchanges. However, there are two main stock exchanges, which govern the market, namely the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). The BSE was established in 1878 and it is the oldest stock exchange in Asia. The BSE represents about 90% of over-all Indian market capitalisation. All the listed companies in India are required to comply with the regulations of the SEBI.

For reporting purposes, there are two professional bodies in India, namely the Institute of Chartered Accountants of India (ICAI) and Institute of Cost and Work Accountants of India (ICWAI). As per the ICAI, Indian companies' reporting standards are in line with International Financial Reporting Standards (IFRS) and International Standards on Auditing (ISA).

Based on the above evidence, as India is a developing nation, which is growing rapidly, it is interesting to investigate the determinants and consequences of QFLID of Indian companies.

1.3 Research Aim and Objectives

This research aims to examine the determinants and consequences of QFLID in non-financial Indian listed firms. This study seeks to achieve the following objectives:

- To examine the association between CG mechanisms and QFLID among non-financial Indian listed firms.

- To examine the relationship between QFLID and FV among non-financial Indian listed firms.
- To investigate the association between QFLID and ACUAF among non-financial Indian listed firms.

1.4 Research Methodology

This section discusses the research methodology used in the present study. The details and justifications of the methodology are discussed in Chapter Four of the study. The association between CG mechanisms and QFLID is examined in Chapter Five. To measure the QFLID, this study adopted a multidimensional framework designed by Beattie et al (2004), which is further developed by Beretta & Bozzolan (2008). Both the quantity dimension and the richness dimension are considered in this framework. The second objective is to examine the relationship between QFLID and FV in Indian listed firms. Tobin's Q ratio (TQ ratio) is used as the main proxy to measure FV, while market capitalisation (MC) is used as an alternative measurement of FV to check the robustness of the main analysis. The third objective is to examine the association between QFLID and ACUAF in Indian listed firms. In this study, ACUAF is used as the main analysis, whereas dispersion of analysts' earnings forecast (DISAF) is employed as the robustness check. This study uses annual reports for CG and QFLID data (Salama, Dixon, & Habbash, 2012), while the data regarding FV and ACUAF are collected through the OSIRIS database which contains reliable information on listed firms.

In general, this research uses preliminary analysis, multivariate analysis and additional analysis in data analyses. In the preliminary analysis, this research discusses the descriptive statistics and checks for a multicollinearity problem through a correlation matrix and Variance Inflation Factor (VIF). The study uses descriptive statistics to summarise and describe the basic features of the data in regards to the tests of central tendency. Both a correlation matrix and the VIF

methods are employed to test the correlation among sample explanatory variables, as well as to clarify the extent of linear association among two explanatory variables (Gujarati & Porter, 2011). In addition to the preliminary analysis, this research uses multivariate methods to test the research hypotheses. The Chow test and Breusch-Pagan Lagrange multiplier (LM) are conducted for regression models in order to decide whether the panel or pooled model is more appropriate. Moreover, the Hausman test is conducted in order to decide between the random and fixed effects models (Greene, 2008).

This research performed additional (alternative) analyses to check the sensitivity and the robustness of the primary outcomes. Firstly, to confirm whether the main analysis differs or not, the sample is split into two sub-samples (high and low QFLID). Secondly, alternative measurements of dependent variables are used in order to examine the robustness of preliminary outcomes. The study conducts two-stage least square regression (2SLS) and instrumental variables (IV) to address the issue of endogeneity and to confirm whether this issue affects the primary results or not.

1.5 Research Contributions

This study contributes to the body of knowledge in several ways. **Firstly,** the present study adds a contribution to the literature in terms of determinants of FLID. It is noted that previous researchers have addressed the relationship between CG and the level of FLID. Most of them used the level or quantity of FLID as a proxy for its quality (Aljifri & Hussainey, 2007; Al-Najjar & Abed, 2014; Hassanein & Hussainey, 2015; Mathuva, 2012b; Qu et al., 2015; Wang & Hussainey, 2013). It is noted that there is no previous study, which focuses on the association between CG and quality of FLID in developing countries, specifically in India. Thus, this study attempts to investigate the impact of CG on QFLID in Indian non-financial listed companies.

Secondly, limited research has attempted to examine the association between FLID and FV (Bravo, 2015; Hassanein & Hussainey, 2015; Kent & Ung, 2003; Wang & Hussainey, 2013). However, these studies focused mainly on the quantity or the level of FLID. As per the researcher's knowledge, this is the only study, which examines the impact of the QFLID on FV in developing countries, particularly in India. This study attempts to bridge this gap by examining the impact of the QFLID on FV in Indian non-financial listed companies.

Thirdly, a few studies have investigated the relationship between FLID and ACUAF (Bozzolan et al., 2009). However, no study has taken QFLID into consideration in relation to ACUAF. Therefore, this is the first study to examine the impact of QFLID on ACUAF in a developing country (India).

Finally, the majority of prior studies which have examined the above relationships (the relationship between CG and FLID; the relationship between FLID and FV; and the relationship between FLID and ACUAF) are conducted in developed countries. However, not much is known about these relationships in developing countries. Thus, this study has bridged this gap by examining the determinants and consequences of QFLID among Indian listed companies.

1.6 Structure of the Study

This section explains the structure of the present research, which is comprised of seven chapters. The study consists of the following chapters: Chapter One covers the overview and background of the research, study motivations, study aim and objectives, methodology, research contribution and ends with the structure of the study.

Chapter Two sheds light on the literature of FLID. It covers working definitions of FLID, its motivations and the quality of FLID. It also reviews the empirical studies conducted to examine FLID. The first section discusses prior studies, which examined CG with FLID. The second

section discusses the existing literature regarding the consequences of FLID in relation to FV and ACUAF.

Chapter Three reviews the theoretical framework and hypotheses development. The first section discusses various theories to explain the link between CG and voluntary disclosure and an understanding of how voluntary disclosure links with both FV and ACUAF.

Chapter Four discusses the research methodology adopted for this study. It starts with the research methodology, the sample of the study and data collection. It provides the explanation and justification of methods used for measuring QFLID as a dependent variable in the first model, as an independent variable in both the second and third models, and FV and ACUAF as dependent variables in the second and third models respectively. Moreover, this chapter provides three models used in the present research, together with the analysis processes.

Chapter Five discusses the results regarding the association between CG and QFLID. Several analyses, including descriptive statistics, multicollinearity problems (using pairwise correlation and VIF) and the multivariate analysis are used to present the results. Furthermore, this chapter explains additional analyses to check the sensitivity and robustness of the outcomes. In addition, the robustness or sensitivity of the outcomes was confirmed by analysing the presence of the endogeneity problem.

Chapter Six covers the results of the association between QFLID and both FV and ACUAF. This chapter reports the findings using descriptive statistics, followed by the multicollinearity analysis (pairwise correlation and VIF) and multivariate analysis. Further analyses and sensitivity analyses are also presented in this chapter to confirm the robustness of the main results. The present study investigates whether high and low quality FLID have different impacts on dependent variables (TQ ratio and ACUAF). Moreover, alternative measurements of dependent variables (MC and DISAF) are used to examine the robustness of the preliminary

outcomes. In addition, the sensitivity of the outcomes was checked against the presence of the issue of endogeneity.

Chapter Seven provides the conclusion of the present research. This includes the summary of the key findings, discusses the implications of the findings, the limitations of this research and provides recommendations for future research.

Chapter Two: Literature Review (FLID)

2.1. Introduction

This chapter focus on overview and the previous studies related to FLID. It is organize as follows: Section 2.2 covers the concept and definition of FLID. Section 2.3 nature of FLID. Section 2.4 provides motivations of FLID. Section 2.5 explains the usefulness of FLID. Section 2.6 clarifies the quality of FLID. Section 2.7 covers the determinants of FLID. Section 2.8 review the empirical literature of FLID that consists of three parts as: section 2.8.1 discusses the empirical studies regarding CG and FLID, while section 2.8.2 discusses empirical studies regarding FLID and FV and section 2.8.3 discusses empirical studies regarding FLID and ACUAF. Section 2.9 research gap and finally section 2.10 presents the summary of current chapter.

2.2. Concept and Definition of FLID

Company's annual reports are comprised of two types of disclosure: Mandatory and Voluntary. Mandatory disclosure is compulsory for companies as multiple regulations and laws force companies to disclose a minimum amount of information that has to be revealed to users. Voluntary disclosure is further information that is reported by the company in their annual report, which exceeds the compulsory information. Additionally, voluntary disclosure is classifiable into two categories: 'backward-looking information' and FLID (Hussainey, 2004). While the past financial performance of a firm is reported using backward-looking information whereas in FLID the information is related to the current company's plans and their forecasts for the future (e.g., their earnings, anticipated revenues and expected cash flow). Information related to the future helps investors and other stakeholders to make an assessment regarding the future financial performance of the company. FLID also deals with non-financial

information (e.g. uncertainties and risks that can have an impact on the projected outcomes). As FLID is subjective so preparation of such information need professional judgement. Previous studies identified FLID in the annual report narratives by using certain keywords like "estimate," "outlook," "next," "likely," "anticipate," "expect," "believes", "intends", "plans" "forecast" or other similar vocabulary (Hussainey et al., 2003; Muslu, Radhakrishnan, Subramanyam, & Lim, 2011).

FLID has been defined in the literature by a number of authors. For instance, Hussainey (2004, p. 38) defines FLID as "information on predictions related to current and future plans to assist users of financial statement and other shareholders about firm's future performance". In the same vein, FLID is defined as "information or any forecast that assists to make assessments about the future; it comprises estimates of opportunities, management's strategy and risks and predictions data" (Celik et al., 2006, p. 200). Similarly, FLID is defined as "information on future estimates that help users to evaluate company's future performance" (Menicucci, 2013c, p. 1668). Likewise, FLID is defined as "corporate forecasts based on the future of the firm and provide valuable financial information to its owners who are concerned about its future performance " (Alkhatib, 2014, p. 858).

Based on the discussion above, this study defines FLID as information on future estimates that provide users and stakeholders with beneficial information about a company's future performance and also improves a firm's decision making capability regarding its investments. Therefore, this research considers FLID to be a key tool that assists stakeholders and users of a company's financial reports to evaluate FV and ACUAF.

2.3. Nature of FLID

Previous research look at the presentation of FLID in the corporate annual report. According to Aljifri & Hussainey (2007) and Bujaki & Zéghal (1999), FLID can be classified into various types of inforamtion like financial and non-financial, qualitative and quantitative, good and bad news, one year and multiple years' forecasts information.

A number of research described the nuture of FLID in the annual report. For instant, Bujaki & Zéghal (1999) studied the nature of FLID published in Management Discussion and Analysis (MD&A) and analyed chairmen's statements for fourty six Canadian firms. Their results indicate that 19.2% of the information in MD&A and in chairmen's statement is related to FLID. Furthermore, the findings reveal that most of the FLID is qualitative and firm-specific. In addition, the results indicate that good news is of higher porportion that is 97.5% of the information as compare to bad news that represent only 2.5%. Moreover, Clarkson et al. (1994) aruge that managers are highly likely to disclose favourable FLID mostly in annual reports. In addition, Clatworthy & Jones (2003) found that firms tend to disclose mostly good news regarding its performance and take credit for it whereas bad news related to its preformance is attributed to external sources. Furthermore, Wang & Hussainey (2013) reveal that FLID in UK firms reporting is neither verifiable or auditable as it is most comprised of good news.

2.4. Motivations of FLID

Several studies attempted to explain the motivation of companies regarding FLID. For instance, a number of studies have asserted that FLID is use to reduce information asymmetry between managers and investors , and to increase financial analysts' confidence (Bujaki & Zéghal, 1999; Lundholm & Van Winkle, 2006; Morton & Neill, 2001). Therefore, managers disclose more FLID to increase stakeholders confidence about the firms future performance (Healy & Palepu,

2001). Likewise, Lundholm & Winkle (2006) argue that firms tend to disclose a greater extent of FLID to make it more valuable and to reduce the degree of information asymmetry between insider (managers) and outsiders (shareholders). It also help firms to 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). 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, 2013c). For example, the study by Menicucci (2013c) 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.

In addition, Verrecchia (1983) and Verrecchia & Weber (2006) 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). Healy & Palepu (2001) and Walker & Tsalta (2001) concluded that companies disclose more information because they suppose expected benefits

will exceed costs. Furthermore, Kieso et al. (2010) mention that FLID contain both financial and non-financial information and it is useful for investors in their decision making process as they pay greater attention to information related to firms future forecasts. Schleicher & 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.

2.5. Usefulness of FLID

Prior studies investigated the benefits of FLID in different context. It covers issues like corporate future performance forecast, characteristics of analyst forecast and behaviour of stock price (Aljifri & Hussainey, 2007).

A number of research investigated the role of FLID in forecasting corporate future performance. Clarkson et al. (1994; 1999) indicate that the inclusion of FLID in the annual reports is much informative regarding firms future performance. Moreover, they found that change in the extent of FLID in MD&A is positively related to the firms future performance. That means the inclusion of FLID in MD&A provide value relevant information. Li (2010) investigated that whether the inclusion of FLIDs in MD&A is informative about future performance or not. The result reveal that FLID in MD&A is very informative with regards to firms future performance. Menicucci (2013c) highlight that FLID improves shareholders ability to assess future cash flows more efficiently, to make better future earnings estimates and make effective investment decisions.

Prior studies also focused on examining the impact of FLID on financial analyst forecast. Barron et al. (1999) found that a higher level of FLID regarding operations and capital expenditure is related to analysts' forecasts accuracy. Likewise, Walker & Tsalta (2001) reported positive relationship between FLID and analyst forecast published in narrative

reporting. Furthermore, Vanstraelen et al. (2003) indicate that FLID increases accuracy of analyst forecasts but back-ward information disclosure has no impact on it. Moreover, Bozzolan et al. (2009) mention that FLID shed light on the anticipated influence on company performance and it improves accuracy of analyst forecast.

Other studies investigated the association between FLID and stock market in annual reports. For instance, Muslu et al. (2011) tested whether FLID in MD&A aid investors to predict future earnings. Their results indicate that the greater extent of FLID in MD&A assist investors to predict future earnings more efficiently. Furthermore, Schleicher & Walker (1999) and Hussainey et al. (2003) found that a huge amount of FLID in narrative reporting improve capability of stock market to predict future earnings variations. Additionally, Wang and Hussainey (2013) provide evidence that FLID of companies who are well-governed improve the stock market ability to predict its future earnings. Moreover, Athanasakou & Hussainey (2014) examined the role of FLID in annual reports of companies. Their findings highlight that investors are dependant on future oriented information to predict company's future earnings.

2.6. The quality of FLID

The main purpose of disclosure is to provide high quality information concerning economic entities and useful for economic decision making (Van Beest, Braam, & Boelens, 2009). Providing high quality information is important because it will positively influence capital providers and other stakeholders in making investment, credit, and similar resource allocation decisions enhancing overall market efficiency (Van Beest et al., 2009).

Disclosure is a key tool of corporate accountability for investors that useful to consider when making decisions. In releasing information, a company has to consider the quality of disclosure. The quality is a complex and context-specific concept in nature. There are variety of ways to define quality of voluntary accounting disclosures. King (1996) defined quality as a degree of

self-interested bias in disclosure. Whereas, Hopkins (1996) termed quality as the ease that enables investors to read and evaluate the disclosed information. Wallace & Naser (1995) stated that disclosure should first align and be suitable for purpose. Second, information must be informative for users. Third, the firm should convey not only good news but also bad conditions. Fourth, the financial reports should have timelines or periodic reports. Fifth, the information is able to be read easily and understandably by users. Sixth, the information should be related to company risks, and analysis of performance. Finally, the company should release the information completely and comprehensively.

Furthermore, Bagnoli & Watts (2005) argued that the quality of disclosure is affected by the managers' intentions, which affects whether they will expose performance transparently or not. Before presenting with the firm's information transparently, the managers might consider what the contents of the information that was reported will be: these contents may depend on the quality of the information they choose to reveal, whether they are presenting bad or good news, and whether it will trigger a firm's value to decrease or increase.

Botosan (2004) debates that high quality disclosure is useful to the information's users in making financial decisions. It is argued that the quality of information disclosed is high if it is positively associated with analysts' earnings forecast accuracy (Beretta & Bozzolan, 2008), which suggest that disclosure quality is value relevant information to market participants (Baek, Kang, & Park, 2004; Healy, Hutton, & Palepu, 1999). Empirical previous studies have examined impact of FLID on FV, ACUAF, asymmetric information and firm's reputation (Bozzolan et al., 2009; Hassanein & Hussainey, 2015; Wang & Hussainey, 2013). Since agency and singling theories suggest that the QFLID could be used to reduce information asymmetries (Miller & Bahnson, 2002; Watts & Zimmerman, 1986), it can be expected that the QFLID is useful for various stakeholders and hence include a positive phenomenon for stock markets (Garrido-Miralles & Sanabria-García, 2014).

Based on above discussion, the QFLID, which is the focus of this study, can be define as value relevant information to market participants, and it helps users for economic decision making through reduce information asymmetries. Hence, improving both FV and ACUAF.

2.7. Determinants of FLID

Previous studies have used firms' characteristics and CG mechanisms as determinants of FLID (Agyei-Mensah, 2017; Agyei-Mensah & Agyei-Mensah, 2017; Aljifri & Hussainey, 2007; Al-Najjar & Abed, 2014; Kuzey, 2018; Wang & Hussainey, 2013).

Several studies have used firms' characteristics as determinants of FLID (Aljifri & Hussainey, 2007; Alkhatib, 2014; Beretta & Bozzolan, 2008; Celik et al., 2006; Kuzey, 2018; Mousa & Elamir, 2018). Firm size has been used in literature as an important determinant of FLID. Since firm size is used a proxy for political visibility, prior studies found evidence that size to have a strong impact on disclosure (Beattie et al., 2004; Beretta & Bozzolan, 2008; Kuzey, 2018). Kuzey (2018) and Wang & Hussainey (2013) suggest that FLID proposed to reduce information asymmetry and mitigate agency costs. Company profitability is another variable represented as determinants of FLID. Past research suggested that company profitability controls the potential effects on the FLID (Alkhatib, 2014; Kuzey, 2018; Uyar & Kilic, 2012). Signalling theory assumes that, if companies are performing well, they are liable to signal their activities to investors (Watson, 2002). Another determinant of FLID is leverage, previous research indicated leverage as an essential factor that may have an impact on disclosure practices (Abraham & Cox, 2007; Ho & Wong, 2001a; Hussainey & Al-Najjar, 2011; Oyelere, Laswad, & Fisher, 2003). Agency theory assumes that firms who have higher leverage tend to incur higher monitoring costs (Huafang & Jianguo, 2007; Jensen & Meckling, 1976; Watson, Shrives, & Marston, 2002). Liquidity is an indicator of the company's ability to cover its current obligations. Signalling theory assumes that managers of high liquidity companies tend

to disclose more information, as it signals their ability in managing liquidity as compared to managers who are managing lower liquidity (Elzahar & Hussainey, 2012). Firms with a higher growth rate may have higher information asymmetry between managers and shareholders, so they would have more incentives to disclose voluntary information in order to reduce this information gap (Gul & Leung, 2004). Industry type is also indicated by previous studies as a determinant variable of FLID (Aljifri & Hussainey, 2007; Alkhatib & Marji, 2012; Beretta & Bozzolan, 2008; Celik et al., 2006; Kuzey, 2018).

Furthermore, CG is one of the key determinants of corporate disclosure. It is also a crucial issue that is being addressed extensively by regulators and capital market participants around the world (El-Masry, Elbahar, & AbdelFattah, 2016). European Central Bank (ECB) (2004) defined CG as a set of processes and procedures to which a company is managed and directed. Gillian (2006) explained that the need of CG mechanisms is due to the separation between capital managers and capital providers. According to Fama & Jensen (1983), CG play a key role in monitoring and curbing managerial opportunism to make sure that shareholder's right are not being violated. Moreover, CG assists in reducing asymmetric information by using adequate monitoring measures such as adding more independent directors. According to Aksu & Kosedag (2006), companies that use high CG standards have a better chance of providing more informative disclosure.

Most definitions of CG provided by prior literature are concerned with shareholder protection through improving disclosure quality. According to Gillan & Starks (1998, p.4), CG is "the system of laws, regulations and factors that controls operations at a company". On the other side, Donelly & Mulcahly (2008) explained CG as a set of corporate mechanism designed to monitor managerial decisions and to make sure that corporation is operating according to the interests of its stakeholders. El-Masry et al. (2016) argue that a more appropriate definition of CG comprises additional components such as disclosure of board composition, including the

number of independent directors on the board; composition of various committees of the board; and separation of chair of the board and CEO. The main benefit of having an effective CG system is that it helps to build a strong financial system whether it's company-based or market-based, that have a huge impact on economic growth. According to Solomon (2007), CG enable companies to control external and internal environments to ensure that all its operations are executions according to stakeholder's interests. By the same token, John & Senbet (1998) highlight that CG enable stakeholders to exert control over a company by exercising their rights as established by regulators. Due to the effective of CG lead to more transparency, all the stakeholders like managers, creditors, suppliers, shareholders will be able to protect their interests in the company.

The role of company disclosure quality is really important as it enable companies to reduce information asymmetry between internal and external stakeholders. Ho et al. (2008) highlight that if the disclosure information is accurate and reliable, then it enable investors to make effective investments decisions. If CG companies are applied in companies then managers have less chance to manage their interest by holding information as the quality of monitoring will be improved. CG and voluntary disclosure are studied as accountability mechanisms (Hidalgo, García-Meca, & Martínez, 2011). It is highlighted by Karamanou & Vafaes (2005) that effective CG reduces the problem of information asymmetry and improve the transparency of the firm's operations. It is one of the most discussed and an important area of interest for both academics and businesses. Following Cerbioni & Parbonetti (2007) and Brown et al. (2011), due to a monitoring role of CG, it is expected that CG mechanisms and quality of firm's disclosure is positively associated. Based on above discussion, this study expects a positive association between CG and quality of FLID.

2.8. Empirical Literature of FLID

This part review various aspects of the literature related to this study's hypotheses. Firstly, the association between CG mechansimes and FLID. Secondly, the relationship between FLID and FV. Thirdly, the association between FLID and ACUAF.

2.8.1. Empirical Studies of CG and FLID

Corporate disclosure is a significant research area that has attracted many researchers in accounting since the beginning of 1960s (Hussainey & Al-Najjar, 2012). Extensive studies based on developed and developing countries of corporate disclosure has been examined in the literature. Most of them investigated the determinants of the level of disclosure and impact of firm characteristics on observed disclosure practices, which may explain the variations in disclosure level (e.g. Ahmed & Courtis, 1999; Aljifri et al., 2014; Chow & Wong-Boren, 1987; Cooke, 1989; Dyduch & Krasodomska, 2017; Elzahar & Hussainey, 2012; Kolsi & Kolsi, 2017; Wang & Claiborne, 2008). Recently, number of empirical studies has investigated the relationship between voluntary corporate disclosure and CG (Alnabsha et al., 2017; Eng & Mak, 2003; Madhani, 2014; Madhani, 2016; Maskati & Hamdan, 2017; Samaha, Khlif, & Hussainey, 2015; Yilmaz, Kurt-Gumus, & Aslanertik, 2017). It also there are a number of studies investigated the relationship between CG and FLID (Agyei-Mensah, 2017; Agyei-Mensah & Agyei-Mensah, 2017; Al-Najjar & Abed, 2014; Kuzey, 2018; Wang & Hussainey, 2013). However, no study has examined the link between CG and QFLID. Thus, in order to develop study hypotheses this section will discuss both voluntary disclosure in general and FLID in particular.

Firstly, previous studies used number of variables like the board of directors, audit committees, ownership structure and firm characteristics to study the impact of CG on corporate disclosure. Numerous studies display examples of the board of directors characteristics (Alnabsha et al.,

2017; Alotaibi & Hussainey, 2016a; Chen & Jaggi, 2001; Eng & Mak, 2003; Haniffa & Cooke, 2002), Audit committee (Aljifri et al., 2014; e.g. Barako, Hancock, & Izan, 2006; S. S. Ho & Shun Wong, 2001; Samaha et al., 2015) to study the mechanism of CG. Ownership structure have been examined as an explanatory variable in the literature of disclosure (e.g. Alhazaimeh, Palaniappan, & Almsafir, 2014; Alnabsha et al., 2017; Ghazali & Weetman, 2006; Huafang & Jianguo, 2007).

Several studies attempted to investigate the relationship between CG and voluntary disclosure. For instance, Chen & Jaggi (2001) examined the association between the independence of board directors (proxy of CG) and comprehensiveness of financial disclosure by using a sample size of 87 companies operating in Hong Kong. The study found a positive relationship between the ratio of independence of board directors and the extent of financial disclosure. Moreover, it is indicated that this relationship is stronger in non-family controlled companies as compare to family controlled companies. Similarly, Ho & Wong (2001a) studied the association between CG and level of voluntary disclosure among listed Hong Kong firms. Their study include CG variables like the ratio of independence of board directors, audit committee existence, CEO duality, and the proportion of family members on the board. Their results found a significant positive relationship between the existence of an audit committee and the level of voluntary disclosure. They reported a negative relation between ratio of family members' on board and the level of voluntary disclosure. The outcome of a positive relationship between the existence of an audit committee and level of voluntary disclosure is in line with the study conducted by Barako et al. (2006) who study the factors that may affect voluntary disclosure in Kenyan listed companies.

Haniffa & Cooke (2002) investigated the association between CG that's include factors like (board composition, cross-directorships, role duality, and the inclusion of family members,

financial director and non-executive chairperson on the board) and the level of voluntary disclosure. They used a sample of 87 non-financial companies listed on the Kuala Lampur Stock Exchange for the period 1995. The study reported a significant positive association between two variables of CG (non-executive chairman and family members sitting on the board) and voluntary disclosure level. Using similar sample for the year 2000, Ghazali & Weetman (2006) attempted to examine the impact of board characteristics and ownership structure on the level of voluntary disclosure. They found that the percentage of family members on the board has a negative impact on the extent of voluntary disclosure and found insignificant association between board composition and the level of voluntary disclosure. Moreover, Gul & Leung (2004) used a sample of 385 non-financial listed companies based in Hong Kong for the year 1996 to examine the relationship between board leadership structure represented by CEO role duality, the ratio of independent directors on the board and the level of voluntary disclosure. Their outcomes show a negative association of voluntary disclosure with CEO duality and the ratio of independent directors on the board.

Chau & Gray (2002) attempted to investigate the impact of ownership structure on corporate voluntary disclosure among 60 Hong Kong and 62 Singapore companies for the year 1997. They found that the extent of voluntary disclosure is positively and significantly associated with a wider ownership structure. In the same vein, using a sample of 158 listed companies in Singapore, Eng & Mak (2003) investigated empirically the impact of CG on the extent of voluntary disclosure. The ownership structure divided into government ownership, block holder ownership and managerial ownership. Their outcomes indicate that the government ownership and lower managerial ownership have a positive relationship with voluntary disclosure, whereas there is no relationship between block holder and the extent of disclosure.

Ghazali & Weetman (2006) studied the impact of ownership concentration, number of shareholders, director and government ownership on the level of voluntary disclosure. Their outcomes show that there is significant relationship between director ownership and the level of voluntary disclosure, while government ownership have no significant impact on voluntary disclosure. Barako et al. (2006) investigate the effect of the level of ownership structure on voluntary disclosure among Kenyan listed companies from 1992 to 2001. They found that the level of institutional and foreign ownership have a positive influence on the level of voluntary disclosure. Furthermore, Tsamenyi et al. (2007) attempted to investigate the influence of the CG on the level of voluntary disclosure in Ghanaian companies. They found that firm size, ownership structure and dispersion of shareholding have a significant positive relationship with voluntary disclosure, while leverage has insignificant association.

In the same vein, Huafang & Jianguo (2007) investigated the influence of ownership structure on the level of voluntary disclosure by using a sample size of 559 listed firms in China for the year 2002. They found that block holder ownership and foreign listing/shares ownership is related significantly to the level of voluntary disclosure. Whereas, state ownership, managerial ownership and legal-person ownership have insignificant association with voluntary disclosure. Likewise, in Taiwan, Guan et al. (2007) studied the relationship between ownership structure and the level of disclosure. Their outcomes indicate that institutional ownership and director ownership have a positive association with the extent of voluntary disclosure.

Cheng & Courtenay (2006) examined the association between the role of the board of directors, board size and CEO duality on the level of voluntary disclosure using 104 firms for the year 2009. Their findings show a significant positive association between the level of voluntary disclosure and ratio of independent non-executive directors. Similarly, Patelli & Prencipe (2007) used a sample of 175 non-financial companies listed on the Milan Stock Exchange for

the year 2002 to examine the relationship between independent directors and level of voluntary disclosure. Their outcomes revealed a positive and significant association between independent directors and the level of voluntary disclosure. Moreover, Lim et al. (2007) used 181 companies sample and attempted to investigate the association between board composition and the level of voluntary disclosure. The study found a positive relationship between board composition and the level of voluntary disclosure.

Akhtaruddin et al. (2009) studied association between CG and voluntary disclosure by using a sample of 94 Malaysian listed companies. Several board characteristics were tested in this study that includes board size, ratio of independence board of directors and the ratio of audit committee members to total members on the board. The study concluded that board size and ratio of independence board of directors have a positive and significant association with the level of voluntary disclosure, whereas there is insignificant relationship between the proportion of audit committee members to total members on the board and the level of voluntary disclosure. Garcia-Meca & Sanchez-Ballesta (2010) conducted a meta-analysis by using review of 27 empirical studies from around the world to examine the impact of the ratio of independent directors and ownership concentration on voluntary disclosure. They found that board independence has a positive influence on the level of voluntary disclosure, while there is negative association between ownership concentration and corporate voluntary disclosure.

Ho & Taylor (2013) examine the relationship between CG and voluntary disclosure by utilizing a sample of 100 Malaysian firms over three socio-economic periods: 1996, 2001 and 2006. The result highlight a positive and significant relationship between firms' CG structure and voluntary disclosure. In the same vein, Allegrini & Greco (2013) studied the relationship between CG variables and voluntary disclosure, using 177 listed Italian firms for year 2007. Their outcomes show a positive association between board size, diligence (proxies by board

and audit committee total meetings) and the frequency of audit committee meetings in regards with voluntary disclosure. There is negative association between CEO duality and corporate voluntary disclosure. Similarly, Jouini (2013) using non-financial listed Tunisian companies from 2004 till 2009, showed empirically that level of disclosure is explained by various factors like CEO duality, ownership concentration and control quality proxies by the number of auditors and presence of the Big 4 audit firms.

Aljifri et al. (2014) investigate the relationship among CG and corporate financial disclosure among 153 listed and non-listed UAE companies. The result found that both board composition and audit committee have no impact on voluntary disclosure. Alhazaimeh et al. (2014) provide empirical evidence of CG influence on coporate voluntary disclosure in Jordanian companies. The study examined five board characteristics that include board size, board composition, board activity, non-executive directors and audit committee. The findings show there is significant relationship between voluntary disclosure and board compensation only. Similarly, Sartawi et al. (2014) investigated the association between board composition and voluntary disclosure by using annual reports of listed 103 Jordanian companies for year 2012. The study reveal that higher ownership concentration reduce voluntary disclosure but foreign and old directors enable to improve its level.

A recent meta-analysis provided by Samaha et al. (2015) to examine the possible relationship between characteristics of committee (board and audit) and voluntary disclosure. Using 64 empirical studies between 1997 and 2013, the study measured total disclosure score by using capital, social and environmental disclosure. The outcome reveal that there is positive association between board characteristics and voluntary disclosure however, CEO duality is negatively associated with voluntary disclosure. Beekes et al. (2016) employed a sample of more than 5,000 listed firms among 23 countries from 2003 to 2008, to examine the association between CG, companies' disclosure practices and equity market transparency. Their findings

indicate that companies who are governed efficiently are related to frequent stock market disclosure.

Recently, Alnabsha et al. (2017) attempt to examine the influence of CG (board attributes and ownership structure) and firm characteristics on both mandatory and voluntary disclosure by using Libyan companies over the period 2006-2010. The results reveal that the corporate disclosure is linked with board size, board meetings, frequency, board composition and audit committee presence. Furthermore, they found that the disclosure level is positively linked to firm age, auditor type, listing status, liquidity and industry type. In the same vein, Maskati & Hamdan (2017) used a sample of 41 listed Bahrain companies to study the association between CG and voluntary disclosure. The results highlight that voluntary disclosure is positively associated with shareholder large ownership, board size and independence of board directors. Similarly, Yilmaz et al. (2017) examined the possible effect of CG mechanisms on voluntary disclosure in Turkey. This study conducted content analysis on Borsa Istanbul hospitality firms. The results indicated that voluntary disclosure is not affected by CG mechanisms and the firms do not satisfy CG indicators (such as board of directors and CG rules compliance report) in their annual reports.

With a specific focus on India, using a sample of 30 technology firms listed on the BSE in India, Kamath (2008) empirically investigated the extent of voluntary intellectual capital disclosures in India's emerging information, communication and technology sector as well as the association between the extent of disclosures and firm size. The outcomes indicate a significantly small extent of intellectual capital disclosures in Indian firms. The disclosures of Information Technology sectors are more than any other sectors' disclosures, however, there is no relationship between firm size and the extent of disclosure. Nandi & Ghosh (2013) investigated the relationship between CG, firm-level characteristics and corporate disclosure level among Indian companies from 2000 to 2010. Their findings show a negative relationship

between corporate disclosure and board characteristics. Abraham et al. (2015) examined compliance of Indian firms with both mandatory and voluntary disclosure of CG requirements of Clause 49 of the Stock Exchange Board of India, using firms listed on the BSE-100 index over the period 2004 to 2006. Their results indicate that Indian firms are highly compliant with the CG disclosure requirements of Clause 49, and the disclosure increased after amendments to this clause. Furthermore, they found private firms disclose more than firms controlled by the government. Charumathi & Ramesh (2015b) employed the data from a 156 firm-year observation of Indian firms listed on the National Stock Exchange (NSE) during the period 2010 to 2013. The aim of the study was to find the impact of certain determinants on the level of voluntary disclosure. The study used the approach of disclosure index and content analysis to measure voluntary disclosure. Leverage, firm size and institutional ownership emerged as the main sources to determine voluntary disclosures. Similarly, Madhani (2016) used a sample of 54 Indian listed companies for the period 2011 to 2012. The study aims to identify whether CG and disclosure practices of private and public sector companies are significantly different. The results indicate that there was no evidence of any significant difference in the CGD scores of companies across various types of ownership.

Based on the above studies, it is noted that CG have an impact on corporate voluntary disclosure. Nevertheless, the findings are mixed and there is no agreement regarding the nature and significance of this influence for each CG mechanism. Although the outcomes of these studies do not necessarily extend FLID practices, they are still a useful guide for the hypotheses development, and also when considering the suitable research methods.

Secondly, prior study mainly took the determinants of FLID into consideration. For instance, Celik et al. (2006) investigate the factors that may influence the level of FLID in annual report and utilized a sample of 233 firms listed on Istanbul Stock Exchange (ISE) in 2004. They found that the extent of FLID is positively and significantly related with firm size. However, FLID

level is negatively associated with ownership structure, foreign investment, ratio of institutional investors and profitability. Furthermore, they found that financial performance and ownership structure are the determinant factors affecting the level of FLID. Similarly, Aljifri and Hussainey (2007) investigate various factors that may influence the level of FLID among 46 listed UAE companies. The outcome showed that the level of FLID is significantly and positively associated with the degree of financial leverage, whereas profitability is related negatively to the level of FLID.

Hussainey & Al-Najjar (2011) investigate the factors that may influence future-oriented information in the UK annual reports. Using a sample 8098 firm-years over the period 1996-2002, the results indicated that firm size is the key factor that affects the firms' future-oriented information. It also revealed that future-oriented information is affected by firm profitability and percentage of both directors (outsider and insider) ownership. Moreover, corporate dividend policy has a positive relationship with corporate narrative reporting. By the same token, Mathuva (2012a) attempted to investigate the determinants of the FLID by using 91 firm-year observations during the period 2009 and 2011 among non-financial listed companies in Nairobi. Their outcomes reveal that companies with high debt, better performance, greater capital investment and higher foreign investment concentration have more FLID as compare to cross-listed companies. Similarly, Uyar & Kilic (2012) studied the impact of CG attributes on the level of FLID among publicly traded 138 Turkish corporations listed on the Istanbul Stock Exchange (ISE) for 2010. Their findings show that firm size and auditor size are the significant variables in explaining the level of FLID. In addition, using a sample of the top 40 firms listed on Italian Stock Exchange, Menicucci (2013a) examined the determinants of the level of FLID in Management Commentaries in Italy. They found that profitability is significantly associated with FLID but firm size and leverage are not significantly associated with the extent of FLID.

Employing a sample of 125 firms listed on Jordanian stock exchange for 2011, Alkhatib (2014) attempted to investigate the factors that may affect the level of FLID. Disclosure index was adopted to measure the extent of FLID, where the value of one is given for a disclosed item and zero if undisclosed. The findings show that auditor type, firm size and profitability is significantly associated with FLID, but leverage has no association. Furthermore, Athanasakou and Hussainey (2014) examine FLID credibility in annual reports. Using 10,095 annual reports of UK non-financial listed firms over the period 1996 – 2007. The findings indicated that the FLID is negatively related with firm value. Whereas, it is positively linked to volatility of operations, issuance of debt, decline in performance, underperforming industry peers and miss analysts' earnings forecast.

Recently, Mousa & Elamir (2018) attempt to investigate the factors that may influence FLID and used a sample of Bahraini listed firms from 2010 to 2013. They employed a disclosure index of 56 items to measure the level of FLID. They found that firm size and leverage have significant association whereas profitability, liquidity and industry type have insignificant relationship with the level of FLID. In the same vein, Kuzey (2018) investigated the determinants of FLID in integrated reporting. Using a sample of 55 non-financial firms whose reports are available in the Integrated Reporting Examples Database in 2014. The study utilized content analysis and disclosure index to examine the quantitative and qualitative FLID in integrated reporting. An unweighted approach as a dichotomous variable used to measure the existence or absence of each item (the score is assign as 1 if the firm disclosed the item at least once, 0 otherwise). The results indicated that females on board and firm size have a positive association with FLID, while leverage has a negative association with FLID. On the other hand, the study failed to find any association between FLID and profitability, industry type, board size and composition.

Several previous studies examine the possible relationship between CG and FLID. O'Sullivan et al. (2008) investigate the link between CG attributes and FLID using a sample of largest 300 public listed companies in Australia for the year 2000 and 2002. Their results show that in 2000 the FLID is positively related to CG, audit quality, auditor's meeting frequency, use of a big 6 auditor and auditor's independence. However, in 2002 none of the CG factors are significantly related to FLID of company.

Wang & Hussainey (2013) investigated the relationship between CG and the level of FLID using sample of UK FTSE All-Share companies from 1996-2007. They found that CG affect firms' decisions regarding whether to disclose more information voluntarily or not. Additionally, the FLID of well-governed companies enhanced their capital market ability to expect future earnings. Their outcomes indicate that FLID has a positive relationship with firm and board size, dividends yield, leverage and composition of board. While, FLID has a negative correlation with profitability, managerial ownership and CEO duality. In the same vein, Al-Najjar & Abed (2014) investigated the relationship between CG and the level of FLID in the UK, by using the top 500 UK-listed companies. They found that firm size, independence of audit committee, operating cash flow and cross-listing status is positively and significantly associated with FLID. However, blockholder ownership, profitability and leverage are negatively linked with FLID. Likewise, Navarro & Urquiza (2015) investigated the association between board of directors' characteristics and FLID, using a sample of 40 companies for the year 2007. Their outcomes indicate that independent boards of directors and board size are positively related to FLID. Whereas, CEO duality has no association with FLID. It further highlight that independent directors are aware of the need to rise the FLID as it would help to improve analysts' forecasts and increase market transparency.

Liu (2015) conducted a study to investigate the possible link between mechanism of CG and FLID among listed Chinese firms for the period 2008 till 2012. The study found that the level

of FLID improve due to increase in the proportion of independent directors in board and the presence of financial expertise in audit committee. It further concluded that improvement in FLID is not related to managerial and state ownership. Similarly, Qu et al. (2015) examined the relationship between CG and quality of FLID among non-financial Chinese companies listed in Shanghai and Shenzhen for the year 2010. The study use precision and accuracy as a proxy to measure the quality of FLID, and sales forecasts as proxy for FLID. Their findings suggest that good CG have a positive impact on sales forecast disclosure. Moreover, effective CG tend to improve accuracy of non-financial information. Charumathi & Ramesh (2015a) examined the determinants of the level of FLID in India. Using a sample of the Bombay Stock Exchange (BSE) 100 companies for the years from 2010-2014, the study reveal that there was little progress being made to improve FLID for five years. Their results reveal that the high proportion of independent directors, firm size and profitability are positively associated with FLID level. However, promoters' ownership, institutional ownership and industry type have no relationship with the level of FLID.

Recently, Agyei-Mensah & Agyei-Mensah (2017) investigated the association between CG, corruption and FLID. Using 174 firm-year observations in listed companies among two African countries, Botswana and Ghana for the year 2011-2013. The researchers used FLID index to measure the level of FLID. The outcomes reveal that companies in Botswana, known as the least corrupt country have more FLID than companies in Ghana, which is the one of the most corrupt countries in sub-Saharan Africa. They found that FLID in Ghana is influenced by the ratio of independent board members. On the other hand, FLID in Botswana is associated with ownership concentration. Similarly, Agyei-Mensah (2017) attempted to examine the effect of CG on the FLID among listed companies in Ghana. The study found that there is significant relationship between board ownership concentration and the level of FLID.

Based on the above discussion, it is noted that many studies have measured level or quantity of voluntary disclosure (Agyei-Mensah, 2017; Aljifri & Hussainey, 2007; Al-Najjar & Abed, 2014; Charumathi & Ramesh, 2015a; Hassanein & Hussainey, 2015; Hussainey et al., 2003; Hussainey & Al-Najjar, 2011; Mathuva, 2012b; Menicucci, 2013c; Mousa & Elamir, 2018; Qu et al., 2015; Wang & Hussainey, 2013). The majority of them have avoided measuring the quality of disclosure and used quantity (Al-Najjar & Abed, 2014; Alsaeed, 2006; Cooke, 1989; Haniffa & Cooke, 2002; Hossain et al., 2005; Hossain & Reaz, 2007; Inchausti, 1997; Singhvi & Desai, 1971; Wallace et al., 1994), or precision and accuracy as a proxy for quality of disclosure (Hui & Matsunaga, 2014; Qu et al., 2015). The problem involved in such approaches is that the accuracy of financial disclosure may be undermined by these inappropriate measurements. Similarly, Botosan (2004) and Urquiza et al. (2009) argued that the quantity of information disclosed does not necessary imply its quality, also quantity and quality are inseparable and difficult to measure. Additionally, Beretta & Bozzolan (2008) suggest that it is not adequate to use the extent of disclosure (quantity of disclosure) to represent its quality and adopted a multidimensional framework to measure disclosure quality. Consequently, investigating the quality of FLID among listed non-financial companies in India is important as Indian companies are legally obliged to reveal certain minimum information.

In contrast to the prior empirical studies that employed disclosure quantity as a proxy for its quality, the present research challenges this proposition by measuring the quality of FLID by adopting a multidimensional framework designed by Beattie et al (2004), which is further developed by Beretta & Bozzolan (2008). Since both quantity and the richness dimensions are considered in this framework.

To the best of researcher's knowledge, no previous research examined the impact of CG on the quality of FLID in developing countries, particularly in India. Consequently, the current study

attempts to investigate the impact of CG on quality of FLID in Indian non-financial listed companies.

2.8.2. Empirical Studies of FLID and FV

Previous studies suggested that voluntary disclosure can improve FV by reducing agency problems associated with information asymmetry (e.g. Plumlee, Brown, Hayes, & Marshall, 2015; Shi, Kim, & Magnan, 2014; Welker, 1995). Other researchers argue that disclosure enables investors to reduce estimation risk, thereby reducing the cost of financing (Barry & Brown, 1985; Diamond & Verrecchia, 1991; O. Kim & Verrecchia, 1994).

The empirical evidence on the impact of voluntary disclosure on FV is still inclusive, and the results are mixed. Several studies examined the association between disclosure and FV through its influence on the cost of capital (Botosan & Plumlee, 2002; Elzahar, Hussainey, Mazzi, & Tsalavoutas, 2015; Kim & Shi, 2011; Plumlee, Brown, & Marshall, 2008; Plumlee et al., 2015). However, the empirical studies that examine the direct impact of corporate voluntary disclosure on FV are limited and have mixed results. For instance, Hassan et al. (2009) examine the relation between the level of voluntary and mandatory disclosure and FV in Egypt over the period 1995-2002. The study used market-to-book ratio as a measure of FV. They found no relationship between FV and voluntary disclosure whereas mandatory disclosure is negatively associated with FV. By contrast, Uyar & Kiliç (2012) used a sample of 129 manufacturing firms listed on Istanbul Stock Exchange (ISE) in 2010. The study aim was to investigate the association between voluntary disclosure and FV. The study used market-to-book ratio and market capitalisation as proxies to measure FV. Their findings show that voluntary disclosure is positively related to market-to-book value measure of FV, while there is no significant association found between voluntary disclosure and market capitalisation. Belgacem & Omri (2014) studied the impact of voluntary disclosure on FV in the Tunisian Stock Market for the

period 2000 till 2008. The study found insignificant relation between FV and voluntary disclosure.

Recently, Nekhili et al. (2016) used a sample of 98 French firms to examine the influence of Research & Development narrative disclosure on the firm's market value of equity. For the period 2000–2004. The association between R&D-related disclosure and market value influenced differently. A positive relationship is found when they control for R&D capitalization. While, a negative association found when controlling for R&D intensity. They also find that equity-based compensation and audit committee independence are the most important drivers for R&D narrative disclosure. By the same vein, Alotaibi & Hussainey (2016b) investigated the influence of quantity and quality corporate social responsibility disclosure (CSRD) on FV. Using a sample of 171 non-financial companies listed in the Saudi stock market over the period 2013-2014. The study measured CSRD quality by following Beest el al (2009) and capture all qualitative attributes of information quality as defined in the conceptual framework of the IASB (2010 a). While, they used disclosure index to measure the quantity of CSRD. Their outcomes indicate that a positive relationship between quality and quantity of CSRD and market capitalisation. Conversely, they did not find the same outcomes when they use either Tobin's Q or Return on Assets (ROA) as proxies for FV. This suggests that both quantity and quality of CSRD have the same impact on FV. Their results indicated that the association between voluntary disclosure and FV depends on the measure of FV (e.g., Tobin's Q, ROA and market capitalisation).

Few studies examined the association between the FLID and FV and the results found are either positive or negative, hence mixed. For instance, Kent & Ung (2003) investigated the FLID relating to earnings in Australia. The study used a sample of 100 firms listed on Australian Stock Exchange for the year 1991-1992. They found that firms with steady earnings tend to

provide more FLID. In the same vein, Wang & Hussainey (2013) investigated whether the level of FLID that are driven by governance are informative about future earnings by using a sample of UK FTSE All-Share firms for the year 1996-2007. The results show that FLID of firms that are governed efficiently contain value relevant information for investors. It also helps to improve stock market ability to predict future earnings. Similarly, Muslu et al. (2014) utilised computer-intensive techniques to investigate the properties of the quantity of FLID in the MD&A for a large sample of 10-K filings filed with the SEC for the period 1994 to 2007. Their results show that companies provide prospective information in the MD&A to reduce poor information environments in the stock market. Moreover, FLID provide useful information to the stock market as they increase the link of current stock returns with future earnings. Nevertheless, FLID are unable to completely reduce the poor information environments for companies with high FLID.

Furthermore, Bravo (2015) examined whether FLID and firm's reputation cause a reduction in stock returns by using a sample size of 73 US firms. The method of content analysis is being used to measure FLID. The result indicate that FLID has a huge impact on capital market and firms of sound reputation affect extensively on stock return volatility. However, Hassanein & Hussainey (2015) examined the impact of the change of forward-looking financial disclosure (FLFD) on FV, by using UK FTSE companies listed on the London Stock Exchange from 2005 to 2011. They found that the changes in FLFD has a negative effect on the value of poorly performing companies, while, it has no effect on the value of well-performing companies.

Based on the review of the literature, most studies did not focus on the potential influence of quality of disclosure on FV. Accounting research used disclosure quantity as a proxy for its quality (Baek et al., 2004; Healy & Wahlen, 1999; Hussainey & Mouselli, 2010; Mouselli, Jaafar, & Hussainey, 2012). Prior studies that examine the effect of the quality of corporate

disclosure has employed different proxies that might not directly measure disclosure quality. For example, Healy et al. (1999) found that higher disclosure quality measured by analysts disclosure ratings (AIMR) are related to higher stock returns. Their outcomes suggest that companies with high quality of disclosure attract the attention of investors and analysts and increase stock liquidity. In addition, in Korea, Baek et al. (2004) found that companies with higher disclosure quality measured by the existence of American Depositary Receipts (ADR) experience a smaller decrease in their value during the financial crises. In the same vein, Hussainey & Mouselli (2010) and Mouselli et al. (2012) investigated the association between disclosure quality and FV among UK firms. They measured disclosure quality by using the quantity of future oriented statements. Their findings indicate that future oriented earnings statements could explain differences in stock returns. Furthermore, a recent study by Elzahar et al. (2015) investigated the influence of disclosure quality of Key Performance Indicators (KPIs) on cost of capital. They measured the quality of the KPI disclosure by following ASB's guidelines. The study reported a negative and significant association between the KPIs disclosure and cost of capital. In addition, in the US, Plumlee et al. (2015) investigated the association between voluntary environmental disclosures (VED) quality and FV that is estimated by using future cash flows and cost of equity. They measured VED quality using a disclosure index consider the type of the disclosure (positive/neutral/negative). They found that VED quality is associated with FV through both the cash flow and the cost of equity components.

Based on the above discussion, it is pointed out that voluntary disclosure and FV is sensitive to the type of disclosure, and the proxy used for measuring FV. This suggests that the association between corporate voluntary disclosure and FV is still an open empirical question. In contrast to the prior empirical studies that employed disclosure quantity as a proxy for its quality, the present research challenges this proposition by measuring the quality of FLID by

adopting a multidimensional framework designed by Beattie et al (2004), which is further developed by Beretta & Bozzolan (2008). Both quantity and the richness dimension are considered in this framework.

To the best of researcher knowledge, no previous research investigate the impact of the quality of FLID on FV in developing countries, particularly in India. Consequently, the current study attempts to bridge this gap by examining the impact of FLID quality on FV among Indian non-financial listed companies.

2.8.3. Empirical Studies of FLID and ACUAF

Lang & Lundholm (1996) highlight that financial analysts are an essential part of capital market. They mentioned that analyst forecast information can be used for many purposes as it contains information on earnings forecast, buying and selling guidance and other useful information for managers, brokers and investors. The empirical studies that examine the relationship between voluntary disclosure and ACUAF are limited. Firstly, Lang & Lundholm (1996) investigated the association between information disclosure and ACUAF. The study used reports of the Financial Analyst Federation Corporate Information Committee (FAF) for the period 1985 till 1989. The study found that firms with greater disclosure policies tend to have larger analyst following. It also found that more informative disclosure policies lead to high ACUAF and more likely to reduce dispersion among individual analyst forecast.

Barron et al. (1999) examined the relation between Management Discussion and Analysis (MD&A) information quality and ACUAF. The study highlight that high quality of Management Discussion and Analysis lead to lower dispersion and error in ACUAF. Moreover, they found that high level of FLID regarding capital expenditure and operation is linked with more ACUAF. Whereas, Hope (2003) investigated the relation between ACUAF and extent of annual report disclosure by using firms from 22 countries. The study found that

disclosure level is positively associated with ACUAF means that analysts use disclosure as a useful source.

Vanstraelen et al. (2003) conducted a study across three European countries that are Belgium, German and Netherlands and examined the assoication between nonfinancial disclosure level and analyst forecast and dispersion. They found that bigger companies tend to provide great extent of both backward and forward looking information disclosure voluntarily. Moreover, the study reported that high level of FLID is linked with lower dispersion and higher ACUAF. By using data of companies from 31 countries, Dhaliwal et al. (2012) investigated the relationship between non-financial information and ACUAF. The study used presence of stand-alone report related to corporate social responsibility as a proxy for non-financial information disclosure. The study found that the relationship between the two variables is much stronger in companies and countries that are stakeholder oriented. However, the issuance of stand-alone report is negatively associated with ACUAF.

Recently, Saleh & Roberts (2017) investigated the association between online corporate reporting quality and analyst behaviour by using UK listed companies. The study found that the quality is an important element to increase analyst following. However, the study found no association between quality of online corporate reporting and analyst EPS forecast.

Regarding FLID, Bozzolan et al. (2009) used a sample of non-financial Italian, German, French and Switzerland companies listed on New York Stock Exchange (NYSE) for year 2002 till 2004. The study conducted content analysis to FLID and investigate its impact on accuracy and dispersion. The study presented that FLID are more efficient to improve ACUAF and reduce dispersion.

Based on the discssion above, it is noted that there is no single study that examined the association between QFLID and ACUAF, specifically in developing countries such as India.

This study objective to examine the possible relationship between these two variables among non-financial Indian companies to fulfil this gap of literature.

2.9. Research Gap

The review of extant empirical literature reveals that existing studies on the determinants and consequences of FLID suffer from several weaknesses. Firstly, and in terms of determinants of FLID (CG and FLID), limited empirical studies have examined the link between CG and FLID in different countries and provided mixed results (Aljifri & Hussainey, 2007; Al-Najjar & Abed, 2014; Kuzey, 2018; Liu, 2015; O'Sullivan, Percy, & Stewart, 2008; Qu et al., 2015; Uyar & Kilic, 2012); particular in India (Charumathi & Ramesh, 2015a). The majority of prior studies have avoided measuring the quality of disclosure and used quantity (Al-Najjar & Abed, 2014; Alsaeed, 2006; Cooke, 1989; Haniffa & Cooke, 2002; Hossain, Ahmed, & Godfrey, 2005; Hossain & Reaz, 2007; Inchausti, 1997; Singhvi & Desai, 1971; Wallace, Naser, & Mora, 1994), or precision and accuracy (Hui & Matsunaga, 2014; Qu et al., 2015) as a proxy for quality of disclosure. Most of these studies used quantity as a proxy to measure the quality of disclosure (Al-Najjar & Abed, 2014; Alsaeed, 2006; Cooke, 1989; Haniffa & Cooke, 2002; Hossain et al., 2005; Hossain & Reaz, 2007; Inchausti, 1997; Singhvi & Desai, 1971; Wallace et al., 1994). Botosan (2004) and Urquiza et al. (2009) argued that the quantity of information disclosed does not necessarily imply its quality. Additionally, Beretta & Bozzolan (2008) suggest that it is not adequate to use the extent of disclosure (quantity of disclosure) to represent its quality and adopted a multidimensional framework to measure disclosure quality. Accordingly, this study extends, as well as contributes to, the extant research by adopting a multidimensional framework to measure the quality of FLID among listed non-financial companies in India. Furthermore, studies examining the antecedents of CG and FLID have mainly focused on general features of the firms (in the study) (Cooke, 1992; Waweru, 2014).

Consequently, this study extends and contributes to CG research by examining the impact of thirteen CG mechanisms on the quality of FLID. In addition, in the Indian context, only Charumathi & Ramesh (2015a) examined the association between CG and FLID, and they focused on the quantity, rather than quality, of FLID. Thus, this study extends and contributes to the Indian context by examining the impact of thirteen CG mechanisms on the quality of FLID.

Secondly, few of the empirical studies examined the association between the FLID and FV; the results found are either positive or negative, hence mixed (Bravo, 2015; Hassanein & Hussainey, 2015; Kent & Ung, 2003; Wang & Hussainey, 2013). These mixed results might be because of the measuring of FLID, as they only focused on the quantity of FLID rather than the quality. For instance, Wang & Hussainey (2013) found a positive relationship between FLID and FV, whereas Hassanein & Hussainey (2015) reported a negative association between the change in FLIFD and FV. However, no single study has investigated the link between QFLID and FV in general, and particularly in India. Hence, the present research focuses on the quality of FLID by adopting a multidimensional framework, including both the quantity and richness dimension. Based on this, the current study extends and contributes to the extant literature by investigating the impact of QFLID on FV among listed non-financial companies in India.

Finally, only a limited number of studies have examined the relationship between voluntary disclosure and ACUAF in general (Barron, Kile, & O'KEEFE, 1999; Hsu & Chang, 2011; Lang & Lundholm, 1996; Li Eng & Kiat Teo, 1999; Maaloul, Ben Amar, & Zeghal, 2016; Vanstraelen, Zarzeski, & Robb, 2003). Only the study by Bozzolan et al. (2009), however, examined the impact of FLID on ACUAF. They have mainly focused on the quantity of FLID rather than its quality, and the study was conducted in four western countries (Italy, Germany, France and Switzerland). However, no single study has investigated the link between QFLID

and ACUAF in general, and in India in particular. Hence, the present research focuses on the quality of FLID by adopting a multidimensional framework, which includes both the quantity and the richness dimension. Therefore, the present research extends as well as contributes to the literature by examining the impact of the quality of FLID on ACUAF among non-financial Indian listed firms.

2.10. Summary

The main objective of this research is to examine the determinants and consequences of QFLID among non-financial Indian companies listed on BSE. This chapter provide a review of the previous literature regarding FLID. Firstly, it review FLID through: its definitions, nature, motivations, uesfuless, the quality of FLID and determinants of FLID. Secondly, it covers the empirical studies regarding the impact of CG on FLID. The literature highlight that previous studies examined the relation between CG and voluntary disclosure in general (Alhazaimeh et al., 2014; Aljifri et al., 2014; Beekes et al., 2016; Maskati & Hamdan, 2017; Samaha et al., 2015; Yilmaz et al., 2017). On the other hand, some studies examined the direct impact of CG on FLID (Agyei-Mensah, 2017; Al-Najjar & Abed, 2014; Charumathi & Ramesh, 2015a; Liu, 2015; O'Sullivan et al., 2008; M. Wang & Hussainey, 2013) and found mixed results, but in general CG influence FLID.

Finally, it reviewed the empirical studies regarding the impact of QFLID on both FV and ACUAF. The association between corporate disclosure and FV can be indirect due to its impact on cost of capital (Botosan & Plumlee, 2002; Elzahar et al., 2015; J. W. Kim & Shi, 2011; Plumlee et al., 2008; Plumlee et al., 2015), or direct (Alotaibi & Hussainey, 2016b; Hassan et al., 2009; Hassanein & Hussainey, 2015; Mendes-Da-Silva & de Lira Alves, Luiz Alberto, 2004; Patel, Balic, & Bwakira, 2002; Plumlee et al., 2008; Plumlee et al., 2015). However, limited studies have investigated the impact of FLID on FV (Bravo, 2015; Hassanein &

Hussainey, 2015; Kent & Ung, 2003; Wang & Hussainey, 2013), and they found maxed findings. Furthermore, few studies have examined the impact of voluntary disclosure on ACUAF (Barron et al., 1999; Hope, 2003; Lang & Lundholm, 1996; Saleh & Roberts, 2017; Vanstraelen et al., 2003). While, Bozzolan et al. (2009) investigated the association between FLID and ACUAF.

As the initial aim of current research is to examine the determinants and consequences of QFLID, this study measures the quality of FLID by adopting a multidimensional framework designed by Beattie et al (2004), which is further developed by Beretta & Bozzolan (2008). Based on the previous literature, this research expects there is impact of CG on the quality of FLID. Furthermore, it is also expected there is impact of quality of FLID on FV and ACUAF.

Chapter Three: Theoretical Framework and Hypotheses Development

3.1. Introduction

This chapter review the theories and covers the study's hypotheses development. In previous research CG and the firm characteristics have determined FLID. On the other hand, FLID has an impact on both FV and ACUAF. This chapter attempts to test the association between CG and QFLID in order to identify the variables that are linked with QFLID. Furthermore, it investigates the impact of QFLID on both FV and ACUAF.

This chapter consists of the following sections: section 3.2 covers the dominant theories related to CG, QFLID, FV and ACUAF. Section 3.3 presents the research hypotheses development. Section 3.4 is a summary of the present chapter.

3.2. Theories

Previous studies have used various theories to explain disclosure practices such as agency, signalling, stakeholder, resource dependence, capital need, legitimacy and political cost theories (Alhazaimeh et al., 2014; Alnabsha et al., 2017; Barako et al., 2006; M. Elmagrhi et al., 2017; Elzahar & Hussainey, 2012; Ntim, Opong, & Danbolt, 2012; Ntim & Soobaroyen, 2013; Samaha, Dahawy, Hussainey, & Stapleton, 2012; Samaha et al., 2015; Wang & Hussainey, 2013). These theories are used to inform and interpret different motivations according to the nature of the study.

3.2.1. Agency Theory

Jensen & Meckling (1976) explain that, in the agency relationship, the principal engages with an agent to act on its behalf. The agency relationship often leads to conflicts of interest and information asymmetry. Conflict of interest starts when an agent acts to achieve their own

personal interests while making decisions and neglecting the consequences for shareholders. Information asymmetry reflects the gap between the amount of information in the hands of the management and that held by market participants (Fields, Lys, & Vincent, 2001). As managers work in the firm daily, they are knowledgeable and aware of all business transactions whereas stakeholders depend on periodic information from the company such as annual and interim reports.

Agency theory offers an explanation on why managers disclose information voluntarily (Chow & Wong-Boren, 1987; Cooke, 1991; Firth, 1980). Since shareholders monitor the activities of the managers, so managers use voluntary disclosure to satisfy their shareholders and to convey a message to them that they are acting according to their best interest (Chow & Wong-Boren, 1987; Cooke, 1991; Firth, 1980; Hossain, Perera, & Rahman, 1995). By disclosing greater and high quality information, the uncertainties of their investors are minimised, leading to a significant decrease in the cost of external financing (Watson et al., 2002). Quality of disclosure is considered as one of the monitoring mechanisms used by investors. It can reduce information asymmetry between an agent and principal, so it can lower agency costs (Huang & Zhang, 2008; Jensen & Meckling, 1976; Junker, 2005).

With regard to CG, agency theory suggests that the introduction of CG mechanisms reduces agency costs by monitoring managerial opportunism (Haniffa & Hudaib, 2006; Lubatkin, Lane, Collin, & Very, 2005; Solomon, 2007). Barako (2004) argues that sometimes managers do not consider shareholders' interests and this necessitates a CG mechanism, which ensures that various interests are protected for the good of the firm. In accordance with agency theory assumptions, several empirical studies use CG and firm characteristics as determinants of corporate voluntary disclosure (Agyei-Mensah, 2017; Agyei-Mensah & Agyei-Mensah, 2017; Ajinkya, Bhojraj, & Sengupta, 2005; Al-Najjar & Abed, 2014; Charumathi & Ramesh, 2015a;

Ho & Shun Wong, 2001; Hussainey & Al-Najjar, 2011; Kuzey, 2018; Lang & Lundholm, 1993; Mousa & Elamir, 2018; Wang & Hussainey, 2013). Agency theory suggest that building an institution based on CG mechanisms helps to protect both stakeholders' and management interests. For example, reducing executive board members can lead to more independence of the board (Adolf & Gardiner, 1932; Al-Janadi, Rahman, & Omar, 2013; Chen & Jaggi, 2001; Solomon, 2007). This may enable the board members to show a greater sense of accountability (Bebchuk & Weisbach, 2010; Conyon & He, 2011; Fama, 1980). Furthermore, board diversity reduces information asymmetry due to increased supervision of management operation (Walt & Ingley, 2003). Moreover, separating CEO and chairperson positions decreases agency problems as it enforces managers to operate according to shareholders' interests (Haniffa & Cooke, 2002; Jensen, 1993). In addition, audit committees are considered to be a crucial instrument to oversee managerial activities (Allegrini & Greco, 2013; Klein, 1998).

According to agency theory, managers use voluntary disclosure as a source to reduce information asymmetry. Sheu et al., (2010) highlight that as disclosure decreases information asymmetry among managers and stakeholders so it increases FV. Healy & Palepu (1993) point out that managers' better disclosure behaviour enables investors to understand their business activities effectively and decrease uncertainty related to the company's future performance which may influence its share price and FV (Hassan et al., 2009). The information regarding FLID reduces both issues of information asymmetry and agency costs (Hassanein & Hussainey, 2015). It also decreases the uncertainty surrounding a firm's future performance and minimises managers' ability to gain private benefits that increase the anticipated cash flow to shareholders (Hassanein & Hussainey, 2015). FV tends to increase due to high quality of disclosure as it either decreases capital costs or maximises cash flows or both (Alotaibi & Hussainey, 2016b; Elzahar et al., 2015).

To conclude, agency theory recommends that CG mechanisms improve overall governance and help companies to minimise agency cost and improve both QFLID and FV (Fama & Jensen, 1983; Jensen & Meckling, 1976; Siddiqui, Razzaq, Malik, & Gul, 2013). Thus, this study seeks to investigate the impact of CG on the QFLID and how QFLID impacts FV among non-financial Indian listed companies. Agency theory suggests that disclosure quality improves overall FV (Huang & Zhang, 2008; Jensen & Meckling, 1976; Junker, 2005).

3.2.2. Signalling Theory

Akerlof (1970) developed signalling theory that highlights the information asymmetry problem and how it could be reduced by signalling more information to others (Morris, 1987). In addition, the theory posits that investors rely on information provided by the firm (Abhayawansa & Abeysekera, 2009). In this regard, Watts & Zimmerman (1986) mention that managers adopt voluntary disclosure to signal information to their investors about their operations. This theory suggests credible information should be disclosed via voluntary disclosure. Additionally, signalling theory suggests that companies disclose more information to decrease information asymmetry problem and signal high quality of disclosure to investors (Alotaibi & Hussainey, 2016a; Oyelere et al., 2003). However, company managers usually decide to disclose information only when the marginal benefits from disclosure exceed the associated cost (Hughes, 1986).

Jensen & Meckling (1976) point out that good CG enables companies to reduce the issue of information asymmetry. Lundholm & Myers (2002) expected that FLID of companies with effective CG tends to have value-relevant information for investors. Prior studies predicted negative association between voluntary disclosure and the issue of information asymmetry (Brown, Hillegeist, & Lo, 2004; Coller & Yohn, 1997; Welker, 1995). Gordon et al., (2010)

argue that voluntary disclosure sends signals to the marketplace as it anticipates an increase in a company's net present value (NPV) which increases the value of stock.

Verrecchia (1983) reported that managers with better information signal high quality information to the capital market and to competitors. In addition, managers in need of finance convey positive signals to both investors and debt holders (Alotaibi & Hussainey, 2016b). More specifically, Hussainey & Aal-Eisa (2009) show that FLID is superior to dividend information as it reduces investor uncertainty regarding future earnings. In the same context, managers provide more FLID to interested parties as it reduces information asymmetry, improves owners' confidence regarding the company's future performance (Hassanein & Hussainey, 2015; Hossain & Hammami, 2009; Singhvi & Desai, 1971; Uyar, Kilic, & Bayyurt, 2013) and fulfils the investors' requirement of providing information (Wang & Hussainey, 2013). Companies may use FLID to signal to investors that they are generating positive results related to their profitability, which improves companies' FV (Sun, Salama, Hussainey, & Habbash, 2010). Another advantage of using FLID by managers is that it improves ACUAF due to a reduction in information asymmetry (Bozzolan et al., 2009; Lang & Lundholm, 1996; Lundholm & Myers, 2002). This study expects to find positive impact of QFLID on both FV and ACUAF.

Based on the above, it is noticed that signalling and agency theories share similar attributes as both are associated with rational behaviour and information asymmetry issues among firms and investors. Both theories consider disclosure as a key tool to decrease information asymmetry (Morris, 1987). Furthermore, these theories suggest that disclosure quality mitigates information asymmetry issues between managers and stakeholders and improves FV and ACUAF.

3.2.3. Resource Dependence Theory

Resource dependence theory explains that the role of internal CG structure, that includes directors and committees, is not just to ensure effective monitoring of managers. However, they also connect company to critical resources that can be utilised to maximise firms' financial performance (Alnabsha et al., 2017; Hillman & Dalziel, 2003; Pfeffer, 1972; Pfeffer, 1973). It suggests that companies can use CG to use such resources to improve their performance (Chen & Roberts, 2010). Moreover, Pfeffer & Salancik (2003) mention that this theory considers the board as a source to reduce outside uncertainty instead of just dichotomising directors as executives and non-executives of the board. This theory highlights that CG is an important resource for the company as it improves voluntary disclosure (Alnabsha et al., 2017).

In line with resource dependence theory, prior studies suggest that CG decreases environmental uncertainty as directors bring different resources that are used to improve company legitimacy which improves the firms' performance (Hillman et al., 2000; Nicholson & Kiel, 2007). Both board and outside directors provide necessary resources, such as their knowledge, to the firms and represent the interest of all stakeholders. It can help the company to gain a competitive advantage due to having a direct relationship with the environment (An, Davey, & Eggleton, 2011; Chen & Roberts, 2010; Hillman et al., 2000; Kiel & Nicholson, 2003; Nicholson & Kiel, 2007). This theory also suggests that non-executive directors procure external resources by their proficiency, prestige and networking (Haniffa & Cooke, 2002). Spencer (1983) stated that the role of a non-executive director should be advisory not decision-making, in that their experience and expertise are fully acknowledged, their advices are influential but they should not intervene the establishment of corporate policies. In short, non-executive directors enrich the board's expertise primarily through advice regarding strategic decision-making.

Resource dependence theory suggests that firms tend to disclose more voluntary information to gain access to crucial resources (Amran, Lee, & Devi, 2014; Branco & Rodrigues, 2008). Furthermore, this theory suggests that better voluntary disclosure gives companies more chance to obtain crucial resources with better costs, which helps to build a solid reputation (Branco & Rodrigues, 2008; Elzahar & Hussainey, 2012; Oliveira, Lima Rodrigues, & Craig, 2011; Pfeffer & Salancik, 1978; Pirson & Turnbull, 2011). In this regard, it is argued that voluntary disclosure reduces information asymmetry which leads to better financing, investment and liquidity effects (Beretta & Bozzolan, 2004; Botosan, 1997; I. Brown, Steen, & Foreman, 2009). By the same token, Castanias & Helfat (2001) and Haniffa & Cooke (2002) argue that increased disclosure reduces the concerns of stakeholders regarding managers' strategies. This, in turn, may lead to reduced capital restrictions, improved finance access, and to gaining financial benefits in the future (Alnabsha et al., 2017; Cheng, Ioannou, & Serafeim, 2014; Hoang, Abeysekera, & Ma, 2016).

To conclude, resource dependence theory suggests that the CG is a company resource, comprised of expertise, image, and information links (Alnabsha et al., 2017; Hoang et al., 2016). The board of directors performs a monitoring role and provides necessary resources, for instance business contracts, experience and knowledge that improves financial performance (Chen, 2011; Nicholson & Kiel, 2007). Furthermore, a larger board with the presence of more independent directors could improve the company with critical competitive resources, give constructive advices to the management, and contribute to a better monitoring system. This, in turn can lead to improvement in QFLID.

3.2.4. Stakeholder Theory

Stakeholders are defined as "any individual or group who can influence or is influenced by the achievement of a corporate's aim" Freeman (1983; 2010, p. 54). According to Clarkson (1994)

and Rizk et al. (2008), a firm's stakeholders can be divided into two groups: (1) primary or powerful group comprised of all individuals who contribute to the business such as shareholders, investors, suppliers, employees, providers and government. (2) a secondary group, which does not essentially contribute to the survival of the business, but can affect or be affected by a firm's operations, for instance, society and media. Stakeholder theory is established on the assumption that a company's continued survival needs the support of stakeholders. This theory assumes that the behaviour of different stakeholder groups (primary groups) enhance management's ability to relate corporate needs with their environments. The more influential the stakeholder is, the more the company must adopt stakeholder management.

According to Freeman et al. (2010), it is necessary to take into consideration the interests of all stakeholders rather than only the shareholders. Donaldson & Preston (1995) indicate that stakeholder theory has three viewpoints, namely descriptive accuracy, instrumental power, and managerial perspective or normative validity. The first two perspectives assume that a company should strategically manage primary stakeholders by classifying them with the self-interest of the organisation, whereas the normative view suggests that managers should pay attention to all stakeholder groups.

Based on the descriptive and instrumental perspectives of stakeholder theory, corporate disclosure is considered as a tool to manage the perception of only the primary stakeholder group (Ullmann, 1985). Consequently, it is employed for the strategic purpose of gaining agreement and support for the company's continuing operation, rather than for responsibility purposes (Deegan & Samkin, 2008). In line with this concept is the perception of the important stakeholder group concerning the firms managed through corporate disclosure. However, the managerial or normative stakeholder point of view demonstrates that companies have specific duties and obligations to different stakeholders and that corporate disclosure is necessary for

the firm to ensure greater accountability by disclosing information to relevant stakeholders (Guay, Kothari, & Watts, 1996).

Although this theory widely adopted in the literature, it has been criticised for several reasons. It is not adequate to explain the dynamics, which link the company to the stakeholders (Key, 1999). It is also not justifiable and practicable to determine all stakeholders, as that may negatively affect the welfare of the company (Etzioni, 1998; Sternberg, 1997). In addition, it is reliant on the particular power of stakeholders and, thus, may ignore the other stakeholders who are likely to be regarded as less important (Deegan, 2002). Therefore, the stakehoher theory is excluded in the present research.

Since this study aims to examine the determinants and consequences of QFLID, this research relied on agency, signalling, and resource dependence theories. These theories are more appropriate to explain the main relationships used by this study, and more adequate for developing the hypotheses of this study.

3.3. Research Hypotheses Development

3.3.1. Hypotheses Related to CG and QFLID

This section explains the development of the research hypotheses related to the first objective, examining the association between CG mechanisms and QFLID in Indian listed companies based on relevant theoretical and empirical evidence.

To examine this relationship, a total of thirteen CG related variables are taken into consideration. The development of the hypotheses for board of directors, audit committee, and ownership structure are as follows:

3.3.1.1. Board of Directors' Characteristics

An essential element in determining voluntary disclosure is the characteristic of the board of directors (Allegrini & Greco, 2013; Beasley, 1996; Davidson, Nemec, & Worrell, 1996; Madhani, 2015; Maskati & Hamdan, 2017; Samaha et al., 2015). It is a key tool for shareholders to exercise control on top management (John & Senbet, 1998). Accordingly, board effectiveness mitigates agency costs, and enhances the firm's transparency. Consequently, board characteristics could influence the QFLID. The current study examines five board characteristics, namely board size, CEO duality, board independence, frequency of board meetings and the presence of females on the board.

3.3.1.1.1. Board Size

According to agency theory, board size is a potential variable of CG used to monitor management performance (Allegrini & Greco, 2013; Alotaibi & Hussainey, 2016a; Fama & Jensen, 1983). Earlier studies show that board size makes the decision-making more effective. For instance, Laksmana (2008) highlights that a large board increases the chance of having a diverse board that can lead to better expertise . Similarly, Samaha et al. (2012) mention that senior executives cannot dominate prominently if the size of the board is large. Moreover, Ntim et al. (2012) reported that companies with a large board size show high disclosure compared to those with a small board size. On the contrary, Herman (1981) and Jensen (1993) indicate that large board size creates issues, for example less communication and monitoring, which have a negative impact on disclosure behaviour. According to the Resource-dependence theory perspective, larger boards improve corporate reputation due to having a greater diversity of experience (Alnabsha et al., 2017; Lajili & Zéghal, 2005; Linsley & Shrives, 2006).

Prior studies to examine the association between board size and voluntary disclosure provided mixed results. Few studies found a positive association between board size and corporate

disclosure in general (Barako et al., 2006; Laksmana, 2008; Samaha et al., 2015), whereas others found no association between board size and the level of disclosure (Cheng & Courtenay, 2006; Ebrahim & Fattah, 2015; Kuzey, 2018; Lakhal, 2005; Othman, Ishak, Arif, & Aris, 2014). On the other hand, some researchers argue that board size reduces board effectiveness so board members feel less motivated, which can cause low levels of disclosure (Byard, Li, & Weintrop, 2006; Cerbioni & Parbonetti, 2007; Yermack, 1996). In the Indian context, the Indian Corporate Governance Code (ICGC) number (49) recommends that a board of directors should comprise of at-least four members. The total number of directors (executive and non-executive) on the board is used as a proxy to measure board size. Based on the above discussion, the following hypothesis is formulated:

H1.1: There is a significant positive association between board size and QFLID among Indian listed companies.

3.3.1.1.2. CEO Duality

CEO duality occurs when the Chief Executive Officer (CEO) and the Chairman of the board of directors is the same person. According to agency and resource-dependence perspective, CEO duality has a negative impact on disclosure and firms' performance (Reverte, 2009). From the agency theory perspective, separation of chairman and CEO positions reduces agency problems as it motivates managers to work according to the interests of their shareholders (Fama & Jensen, 1983; Haniffa & Cooke, 2002; Jensen, 1993). Similarly, the resource-dependence theory suggests that separating CEO and board chairman positions improves a firm's legitimacy and stakeholders' participation by promoting equality and fairness in the decision making process (Alnabsha et al., 2017; Elzahar & Hussainey, 2012). It is argued that separation between the role of chairman and CEO increases board independence and leads to efficient monitoring and management performance (Conheady, McIlkenny, Opong, &

Pignatel, 2015; Donnelly & Mulcahy, 2008; Haniffa & Cooke, 2002; Jensen, 1993). Likewise, CEO duality gives the CEO power to make decisions according to his best interests with less interference (Haniffa & Cooke, 2002). Similarly, CEO duality creates a strong individual power base, which might affect the efficient control exercised by the board (Donaldson & Davis, 1991; Fama & Jensen, 1983; Jensen & Meckling, 1976).

Previous empirical studies give mixed results on CEO duality. A number of studies found that CEO duality and voluntary disclosure is negatively associated (Allegrini & Greco, 2013; Gul & Leung, 2004; Haniffa & Cooke, 2002; Li, Pike, & Haniffa, 2008). However, some studies found no association between CEO duality and the level of voluntary disclosure (Aljifri et al., 2014; Alnabsha et al., 2017; Alotaibi & Hussainey, 2016a; Babío Arcay & Muiño Vázquez, 2005; Barako et al., 2006; Cheng & Courtenay, 2006; Ghazali & Weetman, 2006; Liu, 2015).

In the Indian context, ICGC (49) recommend that if the CEO is also the chairman then half of the board of directors should be independent. From the above, this study expects to find a negative association between CEO duality and QFLID. The hypothesis is stated as follows:

H1.2: CEO duality and the QFLID are negatively and significantly associated among Indian listed companies.

3.3.1.1.3. Board Independence

Independence of boards received huge interest from academic research and CG regulations (Chen, 2011; Johanson & Østergren, 2010). Independent directors monitor management's performance and decrease information asymmetry between managers and stakeholders (Allegrini & Greco, 2013; Lim et al., 2007), and thereby increase the level of voluntary disclosure (Lang & Lundholm, 1993). In addition, board independence protects shareholders interests and reduces agency costs (Lipton & Lorsch, 1992). Furthermore, resource-dependence theory assumes that independent directors procure external resources by their

proficiency, prestige and networking (Chen, 2011; R. M. Haniffa & Cooke, 2002; Nicholson & Kiel, 2007; Tricker, 1984). In this regard, increased board independence enhances corporate response to stakeholders' informational needs (Lopes & Rodrigues, 2007).

Empirically, it is shown that independent directors support the board and committees by using their experience and knowledge (Barako et al., 2006; Haniffa & Cooke, 2002). Bozec (2005) reports that a large number of independent directors improve managerial monitoring, which creates the possibility to hinder managerial initiatives. Accordingly, prior research on the association between board independence and voluntary disclosure provided mixed results. Many empirical studies found board independence and voluntary disclosure is positively associated (Adams & Hossain, 1998; Chen & Jaggi, 2001; Cheng & Courtenay, 2006; Huafang & Jianguo, 2007; Lim et al., 2007; Liu, 2015; Patelli & Prencipe, 2007; Samaha et al., 2015; Wang & Hussainey, 2013), whereas, other studies found either no association (Aljifri et al., 2014; Ebrahim & Fattah, 2015; Kuzey, 2018; O'Sullivan et al., 2008; Uyar & Kilic, 2012) or a negative association (Barako et al., 2006; Chapple & Truong, 2015; Eng & Mak, 2003; Ghazali & Weetman, 2006; Gul & Leung, 2004; Madhani, 2015) between two variables.

In the Indian context, ICGC (49) recommends that half of the board directors should be independent. From the above discussion, this study expects that there is a positive association between board independence and QFLID. Therefore, this study proposes the following hypothesis:

H1.3: There is a significant positive association between the percentage of board independence and the QFLID among Indian listed companies.

3.3.1.1.4. The Frequency of board meetings

The frequency of board meetings is considered to be an essential tool of CG as it enables board directors to effectively control a company's operations and monitor its financial reporting

activities (Alotaibi & Hussainey, 2016a). According to agency theory, the board of directors has the power to monitor the decisions made by top level management, which is one of the main bases of the decision control system (Fama & Jensen, 1983). In addition, the frequency of board meetings highlights the commitment of the board in terms of sharing information with management (Brick & Chidambaran, 2010). It helps to enhance managerial monitoring, which has a positive impact on corporate disclosure (Ntim & Oseit, 2011). Whereas Carcello (2002) mentions that board meetings' frequency might not be beneficial in terms of shareholders' interests, others such as Vafeas (1999) warned that the time directors spend on meetings might be used for routine tasks like presenting management reports instead of monitoring management performance.

Prior empirical studies found a positive association between the frequency of board meetings and voluntary disclosure (Alnabsha et al., 2017; Barros, Boubaker, & Hamrouni, 2013; Brick & Chidambaran, 2010; Kent & Stewart, 2008; Laksmana, 2008). Nevertheless, Alhazaimeh et al. (2014) found no association between frequency of board meetings and voluntary disclosure. In the Indian context, ICGC (49) recommends that a board should hold at least four meetings a year. Following previous studies, this study expects to find a positive relationship between QFLID and the frequency of board meetings. It examines the following hypothesis:

H1.4: There is a significant positive association between the number of meetings and the QFLID among Indian listed companies.

3.3.1.1.5. Females' Presence on the Board

The presence of female members on the board acts as a key tool that consolidates board effectiveness and efficiency (Carter, Simkins, & Simpson, 2003a; Carter, D'Souza, Simkins, & Simpson, 2010; Walt & Ingley, 2003). Gender diversity (number of female directors) is a challenging research issue (Singh, Vinnicombe, & Johnson, 2001) and it is an important dimension of CG (Liao, Luo, & Tang, 2015). Board gender diversity could bring several

benefits, such as effective decision making and exchanging and presenting new ideas (Alvarez & McCaffery, 2000; Barako & Brown, 2008; Carter, Simkins, & Simpson, 2003b; Dowling & Aribi, 2013). It can also give the company a competitive edge as it improves the creativity and knowledge of the board (Watson, Kumar, & Michaelsen, 1993). According to agency theory, board gender diversity enhances board efficiency as it prevents managers exploiting shareholders' wealth and improves board independence (Barako & Brown, 2008; Carter et al., 2003b; Elzahar & Hussainey, 2012). According to the resource-dependence theory perspective, board diversity improves the relationship between firms and the external environment by quality disclosure that helps them to gain critical resources (Hillman et al., 2000; Pfeffer, 1972).

Empirical research examining the association between female board directors and corporate disclosure practices showed mixed results. For instance, Barako & Brown (2008); Chapple & Truong (2015); Kuzey (2018) and Liao et al. (2015) reported a positive association between gender diversity and voluntary disclosure. Sartawi et al. (2014), however, found no relationship between the two variables. In the Indian context, ICGC (49) recommends that boards should have at least one woman director. Based on the above discussion, this study expects that the presence of females on the board would increase QFLID. Therefore, the hypothesis is set as follows:

H1.5: There is a significant positive association between the percentage of the presence of females on the board and the QFLID among Indian listed companies.

3.3.1.2. Ownership Structure

Ownership structure has been also considered as a key determinant to improving CG practices (Ebrahim & Fattah, 2015; Konijn, Kräussl, & Lucas, 2011; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1999). Nevertheless, empirical research on ownership structure and voluntary corporate disclosure gives contradictory results (Bebchuk & Weisbach, 2010;

Ebrahim & Fattah, 2015). The following subsections cover three ownership structures within Indian listed companies, known as block holder, institutional and promoter ownership.

3.3.1.2.1. Block holder Ownership

Block holder ownership is defined as the ratio of ordinary shares held by substantial shareholders (that is 5% or more) (Eng & Mak, 2003; Huafang & Jianguo, 2007). As block holders act as owner managers because they have unlimited access to information (Samaha et al., 2012), therefore companies with concentrated ownership tend to involve less voluntarily in compliance with CG rules (Ismail & Sinnadurai, 2012; Ntim & Soobaroyen, 2013) and reduce information asymmetry, which decreases agency conflicts (Jensen & Meckling, 1976; Reverte, 2009). Habbash (2010) highlights that block holder ownership includes various investors, such as individuals, private companies, trusts, banks and more. According to agency theory, block holder ownership reduces agency costs, therefore companies with high block holder have less incentive to provide extra information (Al-Najjar & Abed, 2014; Eng & Mak, 2003).

Empirically, the association between block holder ownership and voluntary disclosure reported mixed results. For instance, numerous studies found a negative association between block holder ownership and voluntary disclosure (Al-Najjar & Abed, 2014; Garcia-Meca & Sanchez-Ballesta, 2010; McKinnon & Dalimunthe, 1993; Mitchell, Chia, & Loh, 1995; Schadewitz & Blevins, 1998), whereas Huafang & Jianguo (2007) and O'Sullivan et al. (2008) found a positive relationship between these two variables. On the other hand, other authors do not report any significant association between disclosure and ownership concentration (Abdelbadie & Elshandidy, 2013; Alqatamin et al., 2017; Eng & Mak, 2003; Hidalgo et al., 2011; Nekhili, Boubaker, & Lakhal, 2012; Nekhili et al., 2016).

Based on the above discussion, this research expects a negative relationship between block holder ownership and QFLID. This study proposes the following hypothesis:

H1.6: There is a negative association between the level of block holder ownership and the QFLID among Indian listed companies.

3.3.1.2.2. Institutional Ownership

It has been argued that institutional ownership plays a key role in CG structure. It oversees managers' discretion and improves information effectiveness presented in the capital market (Balsam, Krishnan, & Yang, 2003; Ferreira, 2010; Koh, 2003). Agency theory highlights that institutional ownership helps to gain effective control over the company, as managers disclose more information to satisfy institutional shareholders thus gaining their backing to gain access to important resources (Alnabsha et al., 2017; Al-Najjar & Abed, 2014; Charumathi & Ramesh, 2015a; Yoshikawa & Rasheed, 2009). El-Gazzar (1998) points out that higher institutional ownership increases the motivation of managers to publish more voluntary information to increase shareholders' confidence. By the same token, Qu et al. (2015) reported that CG and institutional ownership encourages managers to disclose more QFLID.

Empirically, prior studies investigated the association between institutional ownership and voluntary disclosure. For example, Barako et al. (2006); Bushee & Noe (2000); Carson & Simnett (1997); Guan et al. (2007); Mathuva (2012b) and Al-Bassam et al. (2015) found a positive relationship between institutional ownership and voluntary disclosure, whereas Alqatamin et al. (2017) found that institutional ownership and the level of disclosure are negatively and significantly associated with each other. On the other hand, Charumathi & Ramesh (2015a); Jouini (2013) and Wang & Hussainey (2013) reported no association between the two variables. This study expects to find a positive association between institutional investors and QFLID. The hypothesis is set as follows:

H1.7: There is a positive association between institutional ownership and the QFLID among Indian listed companies.

3.3.1.2.3. Promoters' Ownership

According to the Securities and Exchange Board of India (SEBI), a promoter is defined as an individual or group of individuals who control the firm or act as an instrument in the formulation of a plan or programme pursuant to which the securities are offered to the public and those named in the prospectus as promoters (Ganguli & Agrawal, 2009; Kumar & Singh, 2013). Promoter ownership is considered as several types of investors, including individuals, family members and corporate bodies (Selarka, 2005).

To protect the interest of the investing community, laws and regulations in India require that promoters should have at least 20% of the post issue share capital. They should either contribution at least 20% of the proposed issue or ensure shareholding of at least 20% of the post issue capital, the participant has to be locked for at least three years. This requirement should not be applicable if a firm remains listed for three years or more in a stock exchange and has a track record of payment of dividend for at least three immediately preceding years (Ganguli & Agrawal, 2009). Kumar & Singh (2013) highlight that promoters in Indian firms raised the problem of owner-manager control. Charumathi & Ramesh (2015a) argue that companies with a higher promoters' holding have less incentive for higher disclosure. Empirically, Charumathi & Ramesh (2015a) found no significant association between promoter ownership and FLID in Indian companies. This study considers the following hypothesis:

H1.8: There is a negative association between promoter ownership and the QFLID among Indian listed companies.

3.3.1.3. Audit Committee

The audit committee is one of the important subcommittees of board of directors which monitors the financial reporting processes; thereby it affects corporate disclosure by reducing information asymmetry (Mangena, & Pike, 2012). Appuhami & Tashakor (2017) indicated that the role of audit committee is to improve the picture of disclosure and prevent mangers benefitting personally. From an agency theory perspective, an audit committee can be considered as an instrument to reduce agency costs (Ho & Wong, 2001b; Klein, 1998), therefore, it increases the quality of reporting (Bradbury, Mak, & Tan, 2006; Collier, 1993; Cotter & Silvester, 2003; Nelson, Gallery, & Percy, 2010). In line with Zaman et al. (2011), this study uses five dimensions to assess the audit committee effectiveness, namely audit committee size, audit committee independence, frequency of audit committee meetings, audit committee financial expertise, and number of female members on the audit committee.

3.3.1.3.1. Audit Committee Size

The audit committee improves the extent of disclosure of financial reports (Al-Janadi et al., 2013). Agency theory highlights that companies with a good audit committee disclose more information and reduce agency costs (Alotaibi & Hussainey, 2016a; Barako et al., 2006). Bedard et al., (2004) indicate that committee size should be large enough to achieve effective monitoring, although not so large as to adversely affect the decision making process. Furthermore, research on organisational behaviour indicates that larger-sized audit committees tend to be less productive (Alotaibi & Hussainey, 2016a; Jensen, 1993; Karamanou & Vafeas, 2005). Consequently, firms need to maintain a balance between the size of the audit committee and its responsibilities, as a large audit committee has an ambiguous effect on the process of monitoring (Karamanou & Vafeas, 2005).

With regard to empirical results, earlier studies documented a positive association between audit committee size and voluntary disclosure (Abeysekera, 2010; Al-Bassam et al., 2015; Albitar, 2015; Allegrini & Greco, 2013; Beasley, 1996; Hidalgo et al., 2011; Laksmana, 2008; Li et al., 2008; Ntim, Lindop, & Thomas, 2013; O'Sullivan et al., 2008; Samaha et al., 2015). On the other hand, Aljifri & Hussainey (2007) and Magena & Pike (2005) reported no association between audit committee size and FLID. In the Indian context, ICGC (49) recommends that an audit committee should have least three members. From the discussion, it could be argued that there is a positive relationship between audit committee size and QFLID, so the following hypothesis is formulated:

H1.9: There is a significant positive association between the audit committee size and the QFLID among Indian listed companies.

3.3.1.3.2. Audit Committee Independence

Bedard et al. (2004) highlight that independence of the audit committee is important for a company to operate effectively. Agency theory assumes that audit committee independence reduces agency costs. The independence of audit committee members can significantly contribute to the effectiveness of the committee (Xie, Davidson, & DaDalt, 2003), as it enables the committee to achieve their objectives with greater responsibility (Abbott, Parker, & Peters, 2004). Previous studies found that independence of the audit committee improves the quality of financial disclosure and also evaluates management performance accurately (Cerbioni & Parbonetti, 2007; Forker, 1992; Ho & Shun Wong, 2001). Furthermore, Song & Windram (2004) and Uzun et al. (2004) highlight that greater board independence lowers issues of financial reporting and corporate fraud. With regard to empirical results, Aljifri et al. (2014) and Ho & Wong (2001) found positive and significant association between audit committee independence and FLID. In the Indian context, ICGC (49) recommends that at least two-thirds

of the members must be independent in the audit committee. Consequently, the above discussion results in the following hypothesis:

H1.10: There is a positive association between audit committee independence and the QFLID among Indian listed companies.

3.3.1.3.3. Frequency of Audit Committee Meetings

Frequent audit committee meetings enhance the effectiveness of the audit committee, and improve the accuracy of financial statements, which leads to better audit quality (Beasley, Carcello, Hermanson, & Neal, 2009). The frequency of audit committee meetings is considered as the only publicly available quantitative indicator about the diligence of audit committees (Raghunandan & Rama, 2007). Based on the agency theory, as frequent audit committee meetings increase audit activities, hence they enable the audit committee to monitor management activities effectively and reduce agency conflicts (Xie et al., 2003). Due to increase in monitoring, it reduces information asymmetry and improves the extent of disclosure activities (Nelson et al., 2010).

Earlier studies, such as Barros et al. (2013); Beasley et al. (2009); Bronson et al. (2006); Karamanou & Vafeas (2005) and Kelton & Yang (2008) provide empirical evidence of a positive association between the frequency of audit committee meetings and voluntary disclosure . On the other hand, other studies found no relationship between the two variables (Alhazaimeh et al., 2014; Matoussi, Karaa, & Maghraoui, 2004; Othman et al., 2014). In the Indian context, ICGC (49) recommends that audit committees should organise at least four meetings a year. Based on the above discussion, this study expects to find a positive relationship between the frequencies of audit committee meetings with the QFLID. Accordingly, the hypothesis below is set as follows:

H1.11: There is a positive association between the frequency of audit committee meetings and the QFLID among Indian listed companies.

3.3.1.3.4. Audit Committee Financial Expertise

Audit committee expertise is an important element in decreasing financial misstatements (Abbott et al., 2004; Beasley et al., 2009; Cohen, Krishnamoorthy, & Wright, 2004) and it improves financial reporting quality (Chen, Firth, Gao, & Rui, 2006). An audit committee with good expertise provides credible and high-quality information to the market (Smith, 2003). In the same vein, an audit committee with financial expertise effectively monitors the financial reporting process and improves disclosure activities (Liu, 2015; Mangena & Pike, 2005; McDaniel, Martin, & Maines, 2002). Agency theory suggests that an experienced audit committee leads to enhanced auditing activities (Fama, 1980; Fama & Jensen, 1983). Moreover, it assumes that the audit committee is viewed as one of the monitoring agents within a company which is instrumental in improving the quality of financial reporting (Cheng & Courtenay, 2006; Vafeas, 2000) and useful in reducing agency costs. Zahra & Pearce (1989) highlight that an audit committee formed of diverse skills and experience resists managerial domination and works according to the stakeholders' interests.

Empirical results of earlier studies reported a positive association between financial expertise and disclosure (Abbott et al., 2004; Felo, Krishnamurthy, & Solieri, 2003; Felo & Solieri, 2009; Kelton & Yang, 2008; Krishnan & Visvanathan, 2006; Liu, 2015; Mangena & Pike, 2005). Therefore, this study expects to find a positive relationship between audit committee financial expertise and QFLID, hence it proposes the following hypothesis:

H1.12: There is a positive association between audit committee financial expertise and the QFLID among Indian listed companies.

3.3.1.3.5. Females' Presence on the Audit Committee

Singh et al. (2001) point out that gender diversity (presence of women in top management) is becoming a challenging research issue nowadays, and Liao et al. (2015) consider gender diversity to be an important CG dimension. Recent studies highlight that the presence of females on boards and audit committees improves corporate monitoring and enhances reporting processes that lead to better disclosure quality (Ittonen, Miettinen, & Vähämaa, 2010; Stewart & Munro, 2007; Thiruvadi & Huang, 2011). Based on an agency theory perspective, gender diversity reduces the issue of information asymmetry and improves monitoring of management activities (Carter et al., 2003a; Walt & Ingley, 2003). It also helps them to moderate the possible conflicting anticipations of stakeholders who have different interests, hence it improves CG (Liao et al., 2015). Empirically, Liao et al. (2015) reported a positive and significant association between company disclosure and gender diversity. Consequently, this study expects that the presence of women in audit committees improves QFLID. Hence, the hypothesis is as follows: *H1.13: There is a significant positive association between the percentage of females' presence on the audit committee and the QFLID among Indian listed companies.*

3.3.2. Hypothesis Related to QFLID and FV

Previous studies examined the impact of disclosure on FV (Alotaibi & Hussainey, 2016b; Mendes-Da-Silva & de Lira Alves, Luiz Alberto, 2004; Plumlee et al., 2015; Shi et al., 2014; Uyar & Kiliç, 2012). However, limited studies examined the association between FLID and FV. Nevertheless, the results of prior studies are contradictory. Wang & Hussainey (2013) showed that FLID of well-governed companies increase the stock market's ability to predict future earnings, and contain value relevant information for investors. Bravo (2015) examined whether FLID and the firm's reputation causes a reduction in stock returns. The result indicated that FLID has a huge impact on the capital market, and firms of sound reputation are affected extensively by stock return volatility. However, Hassanein & Hussainey (2015) examined the

impact of the change of forward-looking financial disclosure (FLFD) on FV, by using UK FTSE companies. They found that the changes in FLFD has a negative effect on the value of poorly performing companies, while, it has no effect on the value of well-performing companies.

According to agency and signalling theories, a high quality of disclosure enables firms to enhance their valuation process and reduce information asymmetry among managers and investors. Therefore, high quality disclosure increases FV, as it either reduces the cost of capital, or maximises cash flows, or sometimes both (Alotaibi & Hussainey, 2016b; Elzahar et al., 2015). Drawing on agency theory, FLID decreases information asymmetry and agency costs (Hassanein & Hussainey, 2015). This, in turn, decreases the uncertainty surrounding the firm's future performance and, thereby, could increase the anticipated cash flow to shareholders (Hassanein & Hussainey, 2015).

The empirical evidence about the impact of voluntary disclosure on FV is still inclusive and gives mixed results. Some studies found that voluntary disclosure is positively related to FV (Alotaibi & Hussainey, 2016b; Cheung, Jiang, & Tan, 2010; Elzahar et al., 2015; Mendes-Da-Silva & de Lira Alves, Luiz Alberto, 2004; Nekhili et al., 2016; Plumlee et al., 2015; Uyar & Kiliç, 2012; Wang & Hussainey, 2013), whereas Hassanein & Hussainey (2015) reported a negative association between the change in FLIFD and FV. Hassan et al. (2009) found no association between voluntary disclosure and FV.

Most of the studies examine disclosure in general and FV, and do not consider QFLID. Moreover, no study has considered developing countries, particularly India. Based on the above discussion, this study expects that the QFLID positively affects the FV. Consequently, the hypothesis of this study is set as follows:

H2: There is a positive association between the QFLID and FV among Indian listed companies.

3.3.3. Hypothesis Related to QFLID and ACUAF

Jennings (1987) showed that management forecasts and financial analysts' revisions have significant associations with stock return, which confirms the management forecasts' credibility; once this is discovered, subsequent information disclosed by the company will be seen as credible. Lang & Lundholm (1996) highlight that financial analysts are an essential part of capital market. They mentioned that analyst forecast information can be used for many purposes as it contains information on earnings forecast, buying and selling guidance and other useful information for managers, brokers and investors.

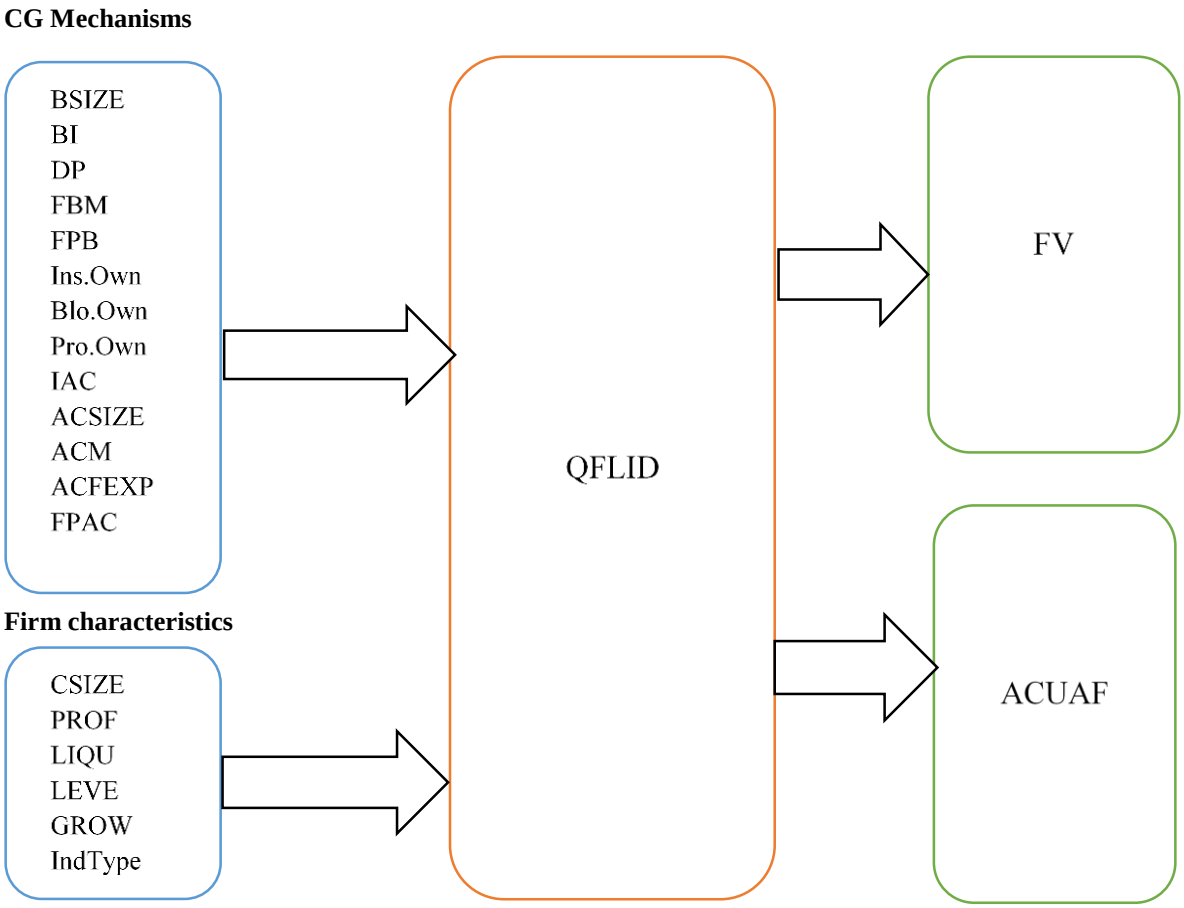
Limited studies examined the relationship between voluntary disclosure and ACUAF. Lang & Lundholm (1996) investigated the association between information disclosure and ACUAF and found that firms with greater disclosure policies tend to have a larger analyst following. Similarly, Barron et al. (1999) examined the relationship between Management Discussion and Analysis (MD&A) information quality and ACUAF and reported that a high level of FLID regarding capital expenditure and operation is linked with more ACUAF. Vanstraelen et al. (2003) conducted a study across three European countries and examined the assoication between nonfinancial disclosure level and analyst forecast and dispersion. They found that the greater extent of disclosure is associated with lower dispersion and high ACUAF.

With regard to FLID, Bozzolan et al. (2009) used a sample of non-financial Italian, German, French and Swiss companies and discovered that FLID is more efficient to improve ACUAF and reduce dispersion. According to the signalling theory perspective, managers signal more information to the market to reduce information assymetry. Thus, if the managers provide more disclosure information, it will increase analyst following and improve accuracy. Hence, it is expected that the QFLID enhances ACUAF.

Overall, both theoretical and empirical literature reveals that analysts can obtain useful information from voluntary disclosures to anticipate a firm's future earnings. FLID, as a key

example of corporate voluntary narratives, comprises earnings-sensitive financial information that has the potential to impact on ACUAF. Based on the above discussion of empirical studies, it is noted that there is no single study that examined the association between QFLID and ACUAF in developing countries such as India. This study examines the relationship between these two variables and expects the following hypothesis:

H3: There is a positive association between the QFLID and ACUAF among Indian listed companies.



QFLID *denotes the quality of forward-looking disclosure* ***FV*** *denotes frim value.* ***ACUAF*** *denotes accuracy of analysts forecast.* ***BSIZE*** *denotes board size.* ***DP*** *denotes the CEO duality.* ***FBM*** *denotes the frequency of board meetings during the year.* ***BI*** *denotes the independence of board.* ***FPB*** *denotes the ratio of female presence on the board of directors.* ***BloOwn*** *denotes blockholder ownership.* ***InsOwn*** *denotes institutional ownership.* ***ProOwn*** *denotes promoter ownership.* ***ACSIZE*** *denotes audit committee size.* ***ACM*** *denotes the frequency of audit committee meetings during the year.* ***IAC*** *denotes the independence of the audit committee.* ***ACFEXP*** *denotes audit committee financial experts.* ***FPAC*** *is the ratio of female presence on the audit committee.* ***LEVE*** *denotes the leverage ratio.* ***PROF*** *denotes profitability.* ***LIQU*** *denotes liquidity.* ***GROW*** *is firm growth.* ***CSIZE*** *denotes Firm size.* ***IndType*** *denotes industry type.*

Figure 3. 1 Theoretical Framework of Determinants and Consequences of QFLID

3.4. Conclusion

The present chapter tries to give a review of the relevant theories adopted in the disclosure literature to explain the possible association between CG and QFLID, as well as the impact of QFLID on both FV and ACUAF. However, it is noted that no single theory is capable of giving an explanation of corporate disclosure inclusively. The review of the relevant theoretical framework clarifies that each theory has its own assumptions and unique perspectives to explain the phenomenon of disclosure.

Given that the current research is concerned with the relationship between CG and QFLID, it applies agency, signalling and resource dependence theories to inform and interpret previous findings. Moreover, this research is concerned with the impact of QFLID on FV and ACUAF; the agency and signalling theories are applied to explain and interpret the study results.

The research hypotheses are formed based on the integrated theoretical framework and the empirical literature review. This chapter covers the hypotheses to examine the association between CG and QFLID. Based on theories and the literature on CG and corporate disclosure, the present study expects an association between CG and QFLID among non-financial Indian companies. In addition, the current chapter illustrates the relevant hypotheses to examine the association between QFLID and FV. Based on literature of corporate disclosure and FV, this research expects to find a significant and positive association between QFLID and FV. Lastly, the current study proposes a positive and significant impact of QFLID on ACUAF.

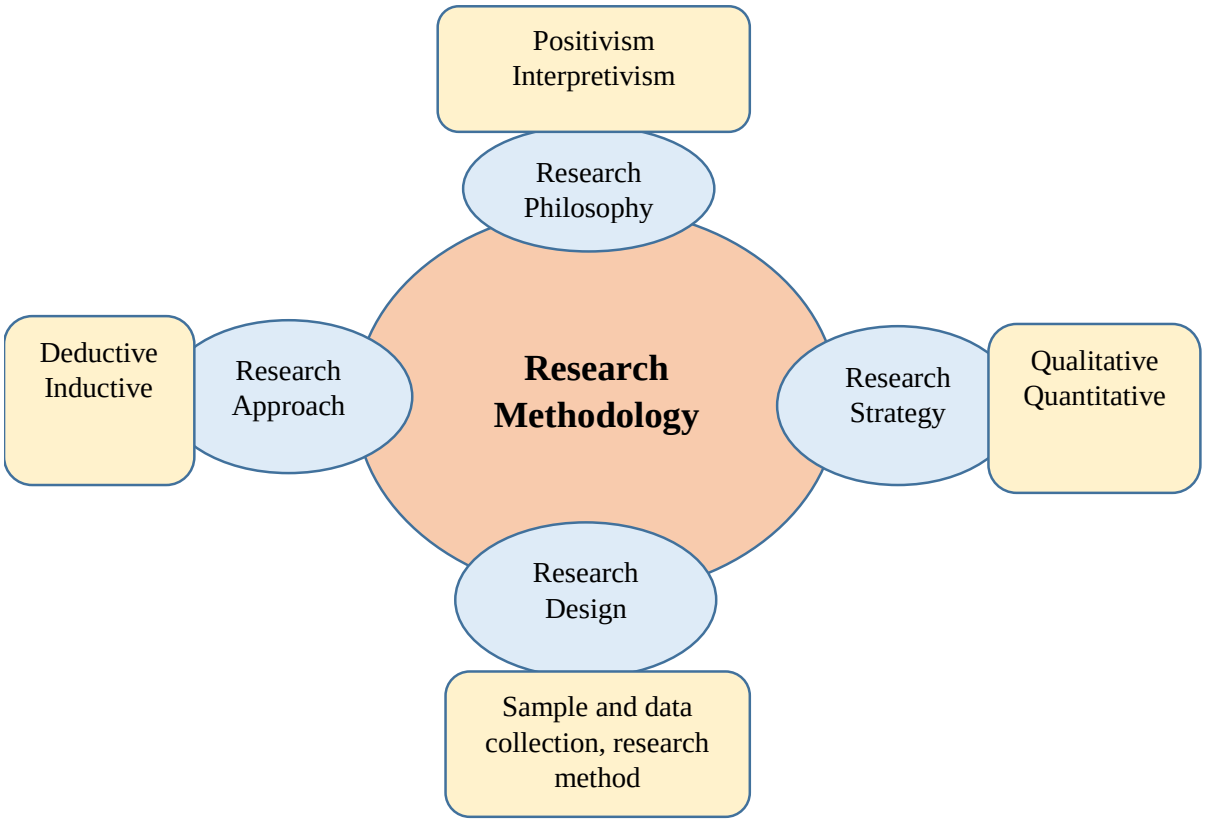
Chapter Four: Methodology

4.1. Introduction

The present chapter explains the research methods used in the current study. It contains the following sections: Section 4.2 explains the research methodology. Section 4.3 focuses on the sample selection procedures. Section 4.4 discusses the process of measuring the study's variables. Section 4.5 presents the empirical models of the study. Section 4.6 focuses on the empirical procedures of data analysis. The final section, 4.7, summarises the present chapter.

4.2. Research Methodology

Howell (2012, p. 82) explained that methodology has an impact on the methods and it also influences what knowledge needs to be considered and the consequent results of the examination. To achieve the study objectives, this section discusses the research philosophy, strategy, approach and the design adopted. The figure below presents the research methodology.



Source: (Saunders et al. 2009).

Figure 4. 1 The research methodology

4.2.1. Research Philosophy

The most important step in organising any social science research is that the rationale for the selection of research philosophy should be determined and explained (Saunders, 2011). Collis & Hussey (2003) point out that research philosophy explains the approach used to collect, analyse and utilise the data. The research philosophy refers to the assumptions of the research, including what data need to be collected, how research is carried out, and how results can be analysed. Positivism and interpretivism are the two key research paradigms (Bernard & Bernard, 2012; Bryman, 2015). According to Annells (1996) the positivism approach observes and describes a steady reality as per the objective perspective, while the interpretivism

philosophy targets the differences between organising a research and the reality that must be comprehended. The positivism approach considers that reality is objective and independent from researchers, and observers are not part of research. The positivism philosophy involves studying literature to determine a relevant theory (theories), and using the selected theory (theories) to develop hypotheses. Once developed these hypotheses are tested to be either confirmed or rejected in order to select a theory (theories) (Bryman, 2015; Saunders, 2011). On the contrary, the interpretivism philosophy assumes that observers should not be independent from what is being observed. This philosophy suggests that researchers need to interact with what is being researched in order to gain a better understanding of a social situation (Bryman, 2015; Saunders, 2011).

Research philosophies and methods are the two main concepts that are consistent in a research paradigm. In this study, the positivism paradigm is adopted, and this approach is convenient because this research relies mainly on companies' annual reports to examine FLID in non-financial Indian listed companies. According to Saunders (2011), the positivism philosophy is more beneficial if the nature of the problem requires identifying, and factors which influence a result need understanding. Therefore, this research adopts the positivism paradigm as it aims to examine: (i) the impact of CG mechanisms on QFLID; (ii) the impact of QFLID on FV; and (iii) the impact of QFLID on ACUAF, among non-financial Indian listed companies.

4.2.2. Research strategies

With regard to the methodology adopted in this study, Punch (1998) points out that it is essential to utilise a suitable research approach to address the research issues. In social sciences, two methods have been used, namely quantitative and qualitative. The researcher used a quantitative approach to relate causes and to influence references to theory in order to test the study's hypothesis. A quantitative approach suggests a mathematical approach in which

collected data need to be quantified. According to Bryman (2015) and Berg (2004), the quantitative method utilises various statistical analyses and provides solid measurement approaches that make the findings more reliable and easier to generalise. Furthermore, this method improves the generalisation ability as it deals with a larger sample size and is able to be managed over a longer time period (Berg, 2004).

On the other hand, a qualitative approach takes a non-numerical, descriptive approach into consideration to collect information to present understanding of the phenomenon (Berg, 2004). Moreover, it considers interpretations of observations and words as it articulates reality and makes an attempt to explain the nature of people in natural circumstances (Amaratunga, Baldry, Sarshar, & Newton, 2002). This method utilises analysis to explore knowledge, as it is not just limited to quantification of data (Hassanein & Hussainey, 2015). However, the qualitative method suffers from some drawbacks. This approach uses a small sample for the analysis, which is not sufficient to represent the whole population (Hakim, 1987). Another drawback is that the level of reliability and transparency is comparatively lower in this method (Berg, 2004) and this approach is time-consuming, therefore it may lead to inefficient tools being used to provide sufficient explanations (Berg, 2004). The most convenient research approach for positivist researchers to adopt is data-based surveys (Collis & Hussey, 2013; Saunders, 2011). Following the positivism philosophy, this study mainly utilises quantitative data (Crotty, 1998). To achieve the study objectives this strategy uses theories which assist the researcher to discuss the results based on association among different variables.

4.2.3. Research approach

Concerning the research approach, research paradigms are divided into two principal research approaches, namely deductive and inductive (Saunders & Lewis, 2009; Saunders, 2011). According to Sekaran (2003: 37), deductive research is defined as “the process by which we

arrive at provide reasoned conclusion by logical generalisation of a known fact" whereas inductive research is "a process where we observe certain phenomena and provide conclusions".

Robson (2002) explained that the deductive approach begins by establishing a testable hypothesis and finishes by investigating the results of the inquiry, leading to either confirming or adjusting the theory according to the findings. This approach enforces the need to gather quantitative data to examine the established hypothesis, and use a well-structured methodology to facilitate the replication of the outcome (Gill & Johnson, 2010). In other words, this approach moves from general to specific aspects (Collis & Hussey, 2013).

On the other hand, the inductive approach begins with data collection and then moves to data analysis, leading to formulation of the theory (Babbie, 2010). In this approach, the theory follows the data rather than vice versa in the deductive approach (Saunders, Lewis, & Thornhill, 2007). Collis & Hussey (2013) suggest that the inductive approach is considered as a study that develops theory from the observations and inferences of empirical reality. Consequently, the aim of the inductive approach is to develop a theory and underpin the phenomena being investigated; hence it moves from specific to general.

Bryman & Bell (2007) suggest that the deductive approach, which focuses on testing a theory, is linked with quantitative research, whereas the inductive approach (building a theory) is associated with qualitative research. In addition, Saunders et al. (2007) state that the deductive approach is highly associated with the positivist paradigm, while the inductive approach is aligned with the interpretivist paradigm.

The aim of this study is to investigate the nature of corporate disclosure activities and to examine the impact of CG mechanisms on the QFLID and both FV and ACUAF among Indian non-financial companies. However, this study does not consider the development of a particular theory. Therefore, the appropriate approach is deductive, because positivist research

often adopts a deductive approach (Collis & Hussey, 2013; Saunders, 2011). Furthermore, previous disclosure literature provides strong evidence that deductive research is the appropriate research approach (Barako et al., 2006; Ghazali & Weetman, 2006; Haniffa & Cooke, 2002).

Based on the above discussion of research paradigm, the current research has adopted the positivism paradigm. This approach is convenient because this research relies mainly on companies' annual reports to examine FLID in non-financial Indian listed companies since it is investigating the actuality of a phenomenon that already exists between CG and QFLID and between QFLID and both FV and ACUAF in Indian listed companies. Furthermore, this research also requires the use of existing theories in developing hypotheses, which can be rejected or confirmed according to the study results (Saunders et al., 2009). The research method used in the present study is consistent with the quantitative strategy, based on the positivism philosophy. This strategy uses theories that help the researcher to find a link between study variables and achieve the research aims (Crotty, 1998). Therefore, the research strategy is planned to examine the hypothesis through the collected data. To achieve study objectives this strategy uses theories (agency, signalling and resource dependence theories) which assist the researcher to discuss the results based on association among different variables. However, as this study does not consider the development of a particular theory, the appropriate approach is deductive, because positivist research often adopts a deductive approach (Collis & Hussey, 2013; Saunders, 2011). This research applied the deductive approach, since the study's hypotheses were built according to the existing literature and theories. Furthermore, consistent with the positivists' approach, statistical analysis techniques were used to examine these hypotheses. This method is consistent with the main aim of this research, which is to investigate the determinants and consequences of QFLID among Indian non-financial companies.

4.3. Sample Selection Procedure and Data Collection

4.3.1. Sample Selection Procedure

The initial sample is made up of the top 500 companies listed on the BSE from 2006 to 2015. The reason for choosing this sample size is that the BSE-500 index represents approximately 93% of the total market capitalisation of the BSE, as BSE represents about 90% of over-all Indian market capitalisation. The reason for considering a 10-year period (from 2006-2015) is to ensure an adequate and consistent observation which strengthens the results of this study.

Following prior researchers (Al-Najjar & Abed, 2014; Alqatamin et al., 2017; Athanasakou & Hussainey, 2014; Hui & Matsunaga, 2014; Sun et al., 2010), financial firms were excluded from the initial sample because of their unique reporting requirements and differing disclosure regulations. In addition, companies with missing data were excluded (Habbash, Xiao, Salama, & Dixon, 2014). The study also excludes any companies established after 2006. In addition, companies controlled by government and foreign companies were not considered as they influenced by different regulations and social obligations, which may be difficult to account for (Haldar & Rao, 2011). Thus, the final sample of this study is 212 companies. Table 4.3 and Table 4.4 below present the final sample for the current study sorted by industry type.

Table 4. 1 Sample selection

BSE-500 index	Number of Companies	Number of Observations
Initial sample	500	5000
Excluded:		
Financial and insurance companies	(94)	(940)
Foreign Companies	(65)	(650)
Government Controlled Companies	(43)	(430)
Companies established after 2006	(25)	(250)
Missing data	(61)	(610)
Final sample	212	2120

Table 4. 2 Final sample sorted by industry

Sector	**Number of companies**	**Sector Ratio**
Oil & Gas	21	9.91%
Services	42	19.81%
Construction	22	10.37%
Trading companies	15	7.07%
Pharmaceuticals and health care	31	14.62%
Clothes	14	6.60%
Food and Drinks	14	6.60%
Automobile & Motorcycle manufacturers	12	5.66%
Equipment	18	8.49%
Agriculture & Fishing	14	6.60%
Metals & Mining	9	4.25%
Total	212	100%

4.3.2. Data Collection

This study uses secondary data, i.e. annual reports, because they provide the most comprehensive and pertinent data on an annual basis. Moreover, it is considered as a key resource for users to evaluate voluntary disclosure information (Botosan, 1997; Lang & Lundholm, 1993; Neu, Warsame, & Pedwell, 1998). In addition, these reports are easier to compare across firms than other informal channels, such as direct contact with analysts or press releases (Chang & Most, 1985; Jizi, Salama, Dixon, & Stratling, 2014). A total of 2120 annual reports of non-financial Indian listed firms from 2006 till 2015 were collected from the BSE and companies' websites. In addition, the majority of companies' annual reports are available within the first quarter of the following fiscal year.

Data regarding QFLID and CG were manually gathered from companies' annual reports. Furthermore, the OSIRIS database was used as an additional source for collection of financial data. In the case of unavailability of such information, Bloomberg was used to get the required data.

4.4. Measurement of the Research Variables

This part focuses on the variables employed in this research and clarifies the measurement of each variable. It begins by determining both dependent and independent variables, followed by control variables, and then discusses how these variables are measured.

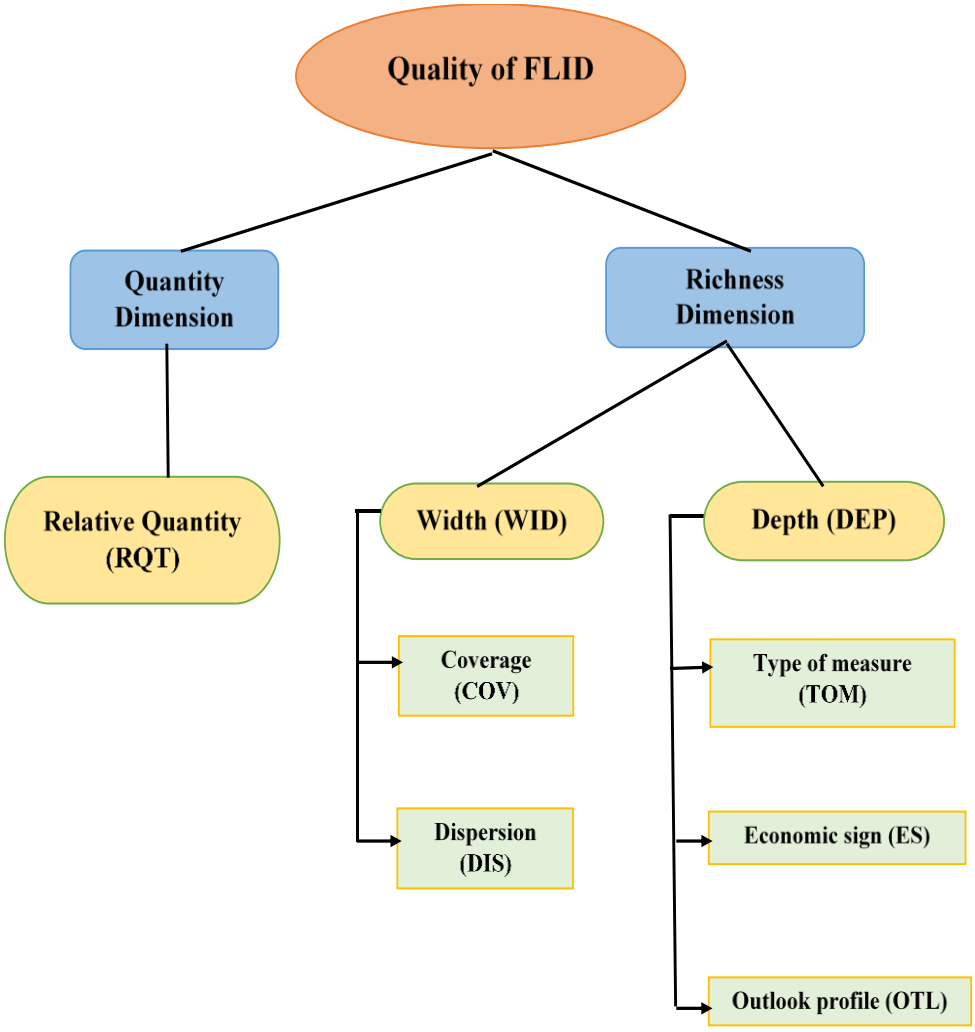
4.4.1. Measuring the QFLID

The concept of quality is quite complex, and it has a multifaceted and subjective nature (Beattie et al., 2004). Therefore, no method or theory has enabled the researcher to develop certain proxies to measure this concept. Beattie et al. (2004) mentioned two categories to measure disclosure: subjective ratings and semi-objective studies. Few studies used the qualitative

approach also used the method of readability and linguistic analysis to measure quality of disclosure, whereas other studies adopted quantity or level as a proxy to measure disclosure quality (Al-Najjar & Abed, 2014; Bozzolan et al., 2009; Hassanein & Hussainey, 2015; Hussainey et al., 2003; Mathuva, 2012b; Qu et al., 2015; Wang & Hussainey, 2013). However, the notion of using information quantity to obtain a certain proxy for quality measurement is unclear to evaluate whether it is suitable or not. Urquiza et al. (2009) argued that using a high number of sentences to measure disclosure may not implicate high transparency and might not be suitable to present higher disclosure quality.

Beattie et al. (2004) developed a valuation framework to measure voluntary disclosure that enables researchers to measure the extent of disclosure spread across various topics. Following Beattie's framework (2004), Beretta & Bozzolan (2008) considered both the qualitative and quantitative perspectives of FLID and developed a new framework. They highlighted that disclosure quality is not limited to its magnitude, so it also consider what information is disclosed and the topics covered in disclosure.

To measure the QFLID, this study adopted a multidimensional framework designed by Beattie et al (2004), which is further developed by Beretta & Bozzolan (2008). Since both the quantity dimension and the richness dimension are considered in this framework.



Source: (Beretta & Bozzolan, 2008)

Figure 4. 2 The Multidimensional Framework of QFLID

The following sections address these two dimensions: quantity and richness, as these dimensions measure the QFLID.

4.4.1.1. Quantity Dimension (QD)

To measure the QFLID in annual reports, this study uses manual content analysis as the essential measurement, quantity dimension is measured by the relative number of items disclosed by the firm in its annual reports, which is adjusted for size and industry. Beattie et al (2004) suggested that the standardised residuals of an ordinary least squares (OLS) regression

could be used as a good proxy for disclosure quantity, using industry and size as independent variables. In this context, earlier studies supported the impact of industry and size on disclosure quantity (Ahmed & Courtis, 1999; Beretta & Bozzolan, 2008; Urquiza et al., 2009).

The content analysis approach has been extensively utilised and is considered to be a key tool for measuring FLID (Aljifri & Hussainey, 2007; Al-Najjar & Abed, 2014; Alqatamin et al., 2017; Aribi & Gao, 2010; Athanasakou & Hussainey, 2014; Beattie et al., 2004; Hassanein & Hussainey, 2015; Hussainey et al., 2003; Kuzey, 2018; Wang & Hussainey, 2013). It is defined as "a technique used for the research of manifest content of communication and take objective, systematic and quantitative description into consideration" (Bernard, 1952, p. 18).

Beattie et al (2004) highlighted that content analysis classifies text units into categories to draw valid inferences, and to maintain reliability in the classification procedures. In thematic analysis, which is also known as textual content analysis, scholars conclude inferences from themes intrinsic to the message by systematically classifying data into categories using manual or computerised content analysis (Jones & Shoemaker, 1994). Regarding the current study, the content analysis method is adopted to obtain data about the QFLID, which is collected from annual reports of non-financial Indian listed companies.

Bryman & Bell (2003) explain that content analysis is a suitable choice for quantifying data through analysis of texts and documents, which can be easily replicated in pre-determined categories. Furthermore, it is useful in exploratory research in cases where there is no need of generalisations to be made and no specific theory required to be employed (Kolbe & Burnett, 1991). The rationale behind utilising content analysis is that it has many benefits, for instance it is easy to apply, it is used for both quantitative and qualitative analysis, it deals with a textual content and it describes the trends in communication content. To collect data from annual reports, researchers prefer the method of content analysis due to its advantages. Various earlier studies regarding different types of voluntary disclosure used content analysis to examine the

extent of the disclosure (Aribi, 2009; Chakroun & Hussainey, 2014; Habbash & Ibrahim, 2015; Salama, Dixon, & Habbash, 2012).

Several steps are required when content analysis is used to measure FLID (Krippendorff, 1980; Wolfe, 1991). These steps are: determining the document required for measuring disclosure; determining the recoding unit; determining the coding mode and testing the viability of reliability.

1. Determining the document

The crucial stage to conduct content analysis in disclosure studies is to determine the document that will be used for the analysis. However, most of the earlier studies do not cover the information regarding what sections of annual reports should be utilised for analysis. The focus of this study is to measure FLID by using the annual reports of non-financial Indian listed companies. The reason behind this is that FLID is more likely to be included in annual reports rather than financial statements. Deciding which sections should be analysed in an annual report is an essential stage in any content analysis study (Krippendorff, 1980). According to Beattie et al. (2004), annual reports contain the following sections which can be utilised for content analysis: Financial Highlights, Summary Results, Chairman's Statement, CEO's Review, Financial Director's Report and the review of the company's finance, business and operations. In the current study, FLID data is derived from narrative sections in firms' annual reports, such as Chairman's Statement, Outlook section, Director's Report, and Management Discussion and Analysis (MD&A). The reason for using these sections is that they are available in the annual reports of non-financial Indian listed companies.

2. Determining the recording units

The next step after determining the document is the selection of recording units. Previous literature discussed various units such as pages, sentences, paragraphs, group of words or a whole document can be used as a recording unit for content analysis.

Beattie et al (2004) highlighted that sentences are a large recording unit, so it is important to divide them into text units as each group of words is a specific single piece of information and they are meaningful according to the context. 'Text unit' captures a piece of information and it is a part of the sentence (Beattie & Thomson, 2007). Previous studies criticised coding by paragraphs, sentences and words, since different information related to the future may be contained within the same sentence or paragraph and coding by words is considered to be meaningless without the sentence. Based on this discussion, this study used text units as a recording unit.

3. Determining the Coding Mode

Content analysis has been utilised in prior studies as a research method to capture different types of information in annual reports. Previous studies used two methods to conduct content analysis, the manual method (coded by hand) which is used in many studies (Adjaoud, Zeghal, & Andaleeb, 2007; Alnabsha et al., 2017; Alqatamin et al., 2017; Eng & Mak, 2003; Kuzey, 2018; La Rosa & Liberatore, 2014), and the computerised method (computer-aided) which is employed by other researchers (Elshandidy, Fraser, & Hussainey, 2013; Hussainey et al., 2003; Merkley, 2014).

Manual content analysis is more beneficial compared to computerised content analysis as it uses both quantitative and qualitative analyses, and it permits researchers to explain words and phrases much better within the context (Beattie et al., 2004; Deumes, 2008). Although the computerised content analysis saves time, effort, and allows examination of a large sample, there are some concerns about the robustness of computer-aided content analysis. The

computer-aided content analysis is not an adequate method in examining the intellectual capital disclosure in annual reports (Beattie & Thomson, 2007). Hussainey (2004:53) reported that *"Manual content analysis is more effective than computerised analysis to identify themes in the texts."* Furthermore, computerised content analysis deals with explicit data but it is unable to detect implicit, or tacit, meanings or items (Carney, 1972). According to Beretta & Bozzolan (2008), manual content analysis classifies text units into categories to draw valid inferences with the aim of quantifying the items of disclosure, or reading a narrative section to identify and determine the information that is linked with FLID (Celik et al., 2006).

4. Determining the Categories and Selection of Keywords

To identify FLID disclosure, this study follows Barako et al. (2006) and Maali et al. (2006) and determines four categories. Wallace and Naser (1996) and Francis et al. (2008b) argued that no theory or consensus has been made so far regarding determining the criteria for categories that can be used to measure the extent of the disclosure. The selection of categories can be done either by evaluating previous literature or by investigating FLID content (Marston and Shrives 1991; Clarkson et al. 1994; Bryan 1997; Barako et al. 2006).

This study included both financial and non-financial information to determine the categories and to generate the list of FLID items. This study follows a list of 35 forward-keywords, which was developed by Hussainey et al. (2003). This includes words such as *forecast, forthcoming, outlook, will, and likely* to create a checklist of items that can be used in this study (see Appendix 4.1). Following earlier studies (Aljifri & Hussainey, 2007; Al-Najjar & Abed, 2014; Alqatamin et al., 2017; Athanasakou & Hussainey, 2014; Celik et al., 2006; Charumathi & Ramesh, 2015a; Hassanein & Hussainey, 2015; Hussainey et al., 2003; Mathuva, 2012b; Wang & Hussainey, 2013), a list consisting of 50 FLID items, split across four categories, has been created. The list of items and categories has been sent to certain individuals who were selected on the basis of their knowledge and experience regarding accounting practices. The individuals

are in the field of either academics or accounting. The feedback confirmed the four categories but the list of FLID items has been reduced to 34 items. This method of determining categories and key words is in line with earlier studies (e.g. Kent and Ung 2003; Barako et al. 2006; O'Sullivan et al. 2008; Menicucci 2013).

The results in the modified checklist are classified into four main categories, which are consistent with prior studies of FLID (Al-Najjar & Abed, 2014; Alqatamin et al., 2017; Bozzolan & Ipino, 2007; Hutton, Miller, & Skinner, 2003; Vanstraelen et al., 2003). The four categories are: (1) financial information (15 items), (2) strategic information (5 items), (3) company trend (5 items) and (4) environment information (9 items). This method is consistent with earlier research (Al-Najjar & Abed, 2014; Alqatamin et al., 2017; Kent & Ung, 2003; Menicucci, 2013a; O'Sullivan et al., 2008) (See Appendix 4.2).

5. Testing Reliability and Validity

To ensure credibility of content analysis, reliability and validity are the key tools. Reliability explains "the extent to which any measuring procedure yields similar results on repeated trials" (Carmines & Zeller, 1979, p. 11). This means that the method of content analysis is reliable to produce similar results while different researchers measure disclosure (Marston & Shrives, 1991). On the other hand, validity points out "the extent to which any measuring instrument measures what it is intended to measure" (Carmines & Zeller, 1979, P. 17). Neuendorf (2004) defined reliability and validity of content analysis as the extent to which a measuring process produces similar results in repeated trials. In the same vein, Aribi & Gao (2011) state that the reliability and validity of content analysis are determined to ensure that different researchers code the unit in same way which decreases the chances of inaccuracy and biases. This study took several steps to ensure reliability and validity of content analysis: Firstly, a set of specified and explicit coding instruments has been introduced to reduce conflicts and achieve objectivity (Aribi & Gao, 2010). Secondly, different coders examined five annual reports to ensure that all

coders use the same coding procedures (Aribi & Gao, 2010; Hussainey, 2004). Finally, the results of coding the five annual reports have been compared and reviewed by three academic experts in the area of accounting to identify possible disagreements, to assess reliability and to secure consistency. In this regard, clear definitions of categories and subcategories and explicitly formulated decision rules and procedures of FLID were established and developed, as mentioned earlier.

Internal consistency reliability is a situation where the same results of a study can be produced by another researcher (Beattie, McInnes, & Fearnley, 2004; Beattie & Thomson, 2007). The Cronbach's alpha is the common measure used for internal consistency of disclosure indices. It explains how well the data items in a variable are positively associated, and it presents the average of associations among the items utilised to measure the variable. Consequently, consistent with previous researchers (Allegrini & Greco, 2013; Botosan, 1997; Elshandidy, Fraser, & Hussainey, 2013; Hassan, Romilly, Giorgioni, & Power, 2009; Jouini, 2013), this study adopted Cronbach's alpha to measure reliability of the FLID checklist. It has been suggested by prior that the level of reliability of the disclosure index is reliable when the value of coefficient of Cronbach's alpha is 0.80 or more (Allegrini & Greco, 2013; Botosan, 1997; Carmines & Zeller, 1979; Hassan et al., 2009; Jones & Shoemaker, 1994). Table 4-3 shows the reliability of the sub-groups and as a whole.

As indicated in Table 4-3 the coefficient value of Cronbach's alpha for the FLID index is approximately 83.9%, indicating a high degree of reliability for FLID index.

Table 4. 3 Summary of Cronbach's Alpha test for FLID index

Group	No of items	Group test correlation	Cronbach's alpha	Alpha if group deleted
Financial information	15	.879	.839	.853
Strategic information	5	.807		.802
Company trend	5	.829		.793
Environment information	9	.842		.845
Overall	34		.839	

Following Beattie et al. (2004) the dimension of disclosure quantity is measured by using the relative number of text units, which is adjusted by two factors, size and industry type, that have been consistently found to influence the level of disclosure. The standardised residuals from an Ordinary Least Squares (OLS) regression of the number of text units on industry and size are used as proxy of the quantity dimension.

$$\mathrm{RQD_i} = \mathrm{OD_i} - \mathrm{ED_i}$$

Where; $\mathrm{RQD_i}$ is relative quantity disclosure index for firmi; $\mathrm{OD_i}$ is observed disclosure for firmi; $\mathrm{ED_i}$ is estimated disclosure for firmi.

Next, the RQD index is standardised (STRQD) by using the maximum and the minimum of the relative quantity of disclosure of the firms analysed.

$$\mathrm{STRQD_i} = \frac{\max_j \mathrm{RQD_j} - \mathrm{RQD_i}}{\max_j \mathrm{RQD_j} - \min_j \mathrm{RQD_j}}$$

4.4.1.2. Richness Dimension (RCN)

The richness is measured by considering both the width (WID) and the depth (DEP) of disclosure.

(1). Width (WID) relies on both coverage (COV) and dispersion (DIS) of disclosure across subtopics.

i) Coverage (COV) is measured by the ratio of items (sub items) disclosed at least once, divided by total number of items (sub items) that are taken into consideration.

$$\mathrm{COV_i} = \frac{1}{\mathrm{st}} \sum_{\mathrm{j=1}}^{\mathrm{st}} \mathrm{INF_{ij}}$$

Where; $\mathrm{INF_{ij}}$ Value (1) if firm i discloses information about the item j in the annual report, (0) otherwise; st = the number of items (sub items).

ii) Dispersion of disclosure (DIS) indicates how concentrated disclosed items are among the checklist items. DIS is measured by the concentration of the items disclosed

$$\mathrm{DIS_i} = -\sum_{\mathrm{i=1}}^{\mathrm{n}} \mathrm{P_i^2}$$

Where; $\mathrm{P_i}$ is the ratio of disclosure of item i measured by the number of items disclosed in category i; $\mathrm{DIS_i}$ statistic will have a value between 1 and 1/n: a minimum value of 1/n when all text units fall into one category, and a maximum value of 1 when text units are spread equally among categories.

The arithmetic mean of both coverage (COV) and dispersion (DIS) is used to obtain the value of width (WID):

COV and DIS indices help in estimating how information in annual reports is distributed across themes in the disclosure checklist. Larger DIS and COV indices reveal the higher spread of information (SPR). Thus, the current study calculates the spread as the average of COV and DIS as follows:

$$\mathrm{WID_i} = \frac{1}{2}(\mathrm{COV_i} + \mathrm{DIS_i})$$

(2). Depth (DEP) depends on type of measure (TOM), economic sign (ES), and outlook profile (OTL).

i) Type of measure (TOM) indicates that the text unit disclosed in a firm's annual report is either quantitative (e.g. earnings are likely to be about USD 84-87 billion next year) or qualitative (e.g. profits next year expected to increase 20%). TOM is measured as the ratio of the number of text units containing a measure of the total number of text units disclosed in the annual report.

$$\mathrm{TOM_i} = \frac{1}{\mathrm{id_i}} \sum_{\mathrm{j=1}}^{\mathrm{id_i}} \mathrm{TOM_{ij}}$$

Where; $\mathrm{id_i}$ stands for the number of text units disclosed in the annual report of firmi; $\mathrm{TOM_{ij}}$ has been given a value of (1) if the text units are disclosed (qualitative or quantitative) in the annual report of firm i, (0) otherwise. The examples of text units collected from annual reports are as follows: profits next year expected to increase by 20%, earnings are likely to be about USD 84-87 billion next year.

ii) Economic sign (ES) is measured by counting the number of text units disclosed which include an indication of the anticipated effect on future performance, ES is measured as a proportion of the total number of text units disclosed in the annual report of the firm.

$$\mathrm{ES_i} = \frac{1}{\mathrm{id_i}} \sum_{\mathrm{j=1}}^{\mathrm{idi}} \mathrm{ES_{ij}}$$

Where; $\mathrm{id_i}$ stands for number of text units disclosed in the annual report of firmi.; $\mathrm{ES_{ij}}$ has a value of (1) if the text units disclosed have an expected impact on the future performance of the firm i (share price, ROA, ROE, … etc.). An example of this is that if the company adds a new segment, thereby increasing their profitability, or if there is an increase in the income of homebuyers that leads to counter the impact of higher interest rates. Otherwise, it has a value of (0).

The outlook profile (OTL) considers the disclosures (on decisions, actions or programs) that the management has taken and the extent of forward looking information disclosed representing the company's internal environment.

$$OTL_i = \frac{1}{2}\frac{1}{id_i}\sum_{j=1}^{id_i} OTL_{ij}$$

Where; OTL_i is the outlook profile index for firmi.; id_i represents the number of text units disclosed by firm i.

OTL_{ij} has been allocated a value of (2) if the information disclosed in text units of the annual report of firm i refers to decisions, actions or programs, and is forward-looking oriented which is beneficial for investors' forecasts (sales, earnings, revenue, income, and other financial data) (e. g. the company will add a new segment, thereby increasing their sales).

The value is (1) if the information disclosed in text units of the annual report of firm i refers to decisions/actions taken, actions/planned actions, or programs/actual state of business, or is forward-looking information, and is considered as beneficial for investors' forecasts (sales, earnings, and other financial data). For example, inflation puts pressure on input costs which affects earnings, or the company introduces a new segment which can boost sales. Otherwise, it has a value of (0).

The value of Depth (DEP) is the average of three dimensions (TOM, ES and OTL).

$$DEP_i = \frac{1}{3}(TOM_i + ES_i + OTL_i)$$

The richness (RCN) dimension is the average of both Width (WID) and Depth (DEP) dimensions:

$$RCN_i = \frac{1}{2}(WID_i + DEP_i)$$

The QFLID is obtained by averaging the Richness (RCN) dimension and the Standardised Relative Quantity (STRQT) dimension:

$$\mathrm{QUALITY_i} = \frac{1}{2}\,(\mathrm{STRQD_i} + \mathrm{RCN_i})$$

4.4.2. Measuring the FV

To investigate the impact of the QFLID on FV, this study uses Tobin's Q (TQ ratio) as a proxy to measure FV in the main analysis. Additionally, MC is utilised as an additional proxy for FV to check the robustness of results. The reasons for using two measures of FV are as follows: Firstly, there is no agreement in earlier literature that confirms the best measure of FV (Haniffa & Hudaib, 2006; Mangena, Tauringana, & Chamisa, 2012; Ntim, Opong, & Danbolt, 2015; Plumlee et al., 2015). Secondly, using two different proxies to measure FV provides a robustness check for the results (Christensen, Kent, Routledge, & Stewart, 2015; Mangena et al., 2012; Ntim & Soobaroyen, 2013; Ntim, 2015; Terjesen, Couto, & Francisco, 2016). Thirdly, this research focuses on TQ ratio and MC because these measures are extensively utilised in the literature (Alotaibi & Hussainey, 2016b; Hassanein & Hussainey, 2015; Kumar & Singh, 2013; Tan, Xu, Liu, & Zeng, 2015; Uyar & Kilic, 2012), which may improve comparability with previous studies.

Yermack (1996) defined TQ ratio (market-based measures) as the market value of equity divided by the replacement cost. Likewise, TQ ratio is termed as the proportion of market value to the replacement value of company's assets (Gaio & Raposo, 2011). Haniffa & Hudaib, (2006) mentioned that TQ ratio is used to investigate whether corporate management is using its assets effectively in order to maximise shareholders' wealth. TQ ratio interprets the market expectation of economic return generated by the company's assets (Bitner & Dolan, 1996). TQ ratio reflects the current market value of the firm's stock as it is a market-based measure

(Thomsen, Pedersen, & Kvist, 2006). It measures the extent to which a firm expects to earn a higher than average return on invested capital (Abdullah et al., 2009).

Different authors measured TQ ratio in various ways. For instance, Yermack (1996) divided market value by replacement cost to calculate TQ ratio, while Booth & Deli (1996) calculated TQ ratio by dividing the market value by the total assets. Consequently, this study used TQ ratio as a proxy to measure FV by following previous researches (Alotaibi & Hussainey, 2016b; Hassanein & Hussainey, 2015; Kumar & Singh, 2013; Tan et al., 2015), and computes it as:

$$\text{TQ ratio} = \frac{(\text{Total debt} + \text{Market value of equity})}{\text{Book value of total assets}}$$

MC is used as a second measure as it can determine FV, which is an important indicator in the financial sector and assists to evaluate the development of a country (Alotaibi & Hussainey, 2016b; Uyar & Kilic, 2012). Following earlier studies, MC is measured as the market value of common equity at the end of a company's financial year. Accordingly, MC is crucial from the viewpoint of shareholders to measure FV. In the current study, MC is an additional proxy for measuring FV. It is vital to note that TQ ratio and MC, which are measures of FV, are considered as the dependent variables in this research.

4.4.3. Measuring the Accuracy of Analysts' forecast (ACUAF)

This section discusses the method used to measure ACUAF in order to examine its relation with QFLID. Botosan (2004) indicated that if the disclosed information is of higher quality, it assists the users of information to make financial decisions more effectively. Earlier studies found a significant association between ACUAF and disclosure (Beretta & Bozzolan, 2008; Bozzolan et al., 2009; Lang & Lundholm, 1996; Lee, 2017; Vanstraelen et al., 2003). The studies highlighted that high quality disclosure assists analysts to effectively evaluate cash flow in the future by considering better earnings forecasts.

From the above discussion, this study suggests that the QFLID will be high if it is positively linked with ACUAF. Following earlier studies (Beretta & Bozzolan, 2008; Bozzolan et al., 2009; Hope, 2003; Lang & Lundholm, 1996; Vanstraelen et al., 2003), this study measures the ACUAF as follows:

ACUAF = - |AEPSt – MAFt| / PSt

Where,

AEPS = actual earnings per share in period t,

MAF = the median analysts' forecast of earnings per share in period t,

SP = beginning of share price in period t

This study used Bloomberg to collect both forecasted and actual earnings per share. The forecast accuracy is defined as the negative of the absolute value of the analyst forecast error, deflated by stock price.

In addition, the current study used dispersion (DISAF) as an alternative measurement of dependent variable (ACUAF) to test whether the main results are robust by applying different measurement or not. Beretta & Bozzolan (2008) argue that the quality of disclosed information will be high if it is negatively and significantly related to DISAF. A number of prior researchers (Beretta & Bozzolan, 2008; Bozzolan et al., 2009; Lang & Lundholm, 1996; Lee, 2017; Vanstraelen et al., 2003) indicated that DISAF is more likely to be low when firms publish a high quality of information disclosure. Following Beretta & Bozzolan (2008) and Lang & Lundholm (1996), DISAF measures as follows:

$$\text{DISAF} = \frac{\frac{1}{j}\sqrt{\sum_j (EPStj - E\hat{P}St)^2}}{\text{PP}t}$$

EPSt represents analyst earnings per share, $E\hat{P}St$ is mean of earning per share, PPt is price per share and J represents the number of analysts that are following the company.

4.4.2. Measuring the Independent Variable (CG variables)

This study examines several CG characteristics to determine their impact on the QFLID among non-financial Indian listed companies. The study considers three CG mechanisms, namely: board of directors' characteristics, ownership structure, and audit committees as an independent variable. These variables contribute to understanding how these mechanisms affect disclosure practices of Indian listed non-financial companies. Each of these mechanisms is further divided into various variables to enable a more detailed and appropriate measurement, as seen in Table 4.5.

Consistent with previous research, the explanatory variables involved in this research are measured as follows: with regard to the board of director's characteristics, board size (BSIZE) is measured as the total number of board members (Al-Najjar & Abed, 2014; Elshandidy et al., 2013; Liu, 2015; Qu et al., 2015; Wang & Hussainey, 2013). Board independence (BI) is calculated as the proportion of the number of independent (non-executive) directors to the total number of board members (Al-Najjar & Abed, 2014; Charumathi & Ramesh, 2015a; Elshandidy & Neri, 2015; Liu, 2015; Qu et al., 2015). The study used a dummy variable to measure CEO duality: (1) if the CEO of the company serves as a board chairman, (0) otherwise (Al-Najjar & Abed, 2014; Liu, 2015; Qu et al., 2015; Wang & Hussainey, 2013). Frequency of board meetings (FBM) is measured as the number of meetings during the year (Al-Najjar & Abed, 2014; Liu, 2015; Qu et al., 2015; Wang & Hussainey, 2013). Female presence on the board of directors (FPB) is measured as the number of females serving as board directors divided by the total number of board members (Ntim & Soobaroyen, 2013; Ntim, 2015; Sartawi et al., 2014; Ujunwa, 2012).

Concerning ownership structure, institutional ownership (Ins.Own) is computed as institutional ownership to total owners' ratio (Al-Najjar & Abed, 2014; Charumathi & Ramesh, 2015a; Liu,

2015; Qu et al., 2015; Wang & Hussainey, 2013). The proportion of block holder ownership (at least owning 5% of total company ordinary shareholdings) is used to measure block holder ownership (Blo.Own) (Abdelsalam & Street, 2007; Al-Najjar & Abed, 2014). Promoters' holding (Pro.Own) was measured as the ratio of shares held by promoters (Charumathi & Ramesh, 2015a).

Regarding audit committee characteristics, independence of audit committee (IAC) is measured as the ratio of independent directors on the audit committee (Al-Najjar & Abed, 2014; Liu, 2015; Qu et al., 2015; Wang & Hussainey, 2013). Audit committee size (ACSIZE) is measured as the total number of audit committee members (Al-Najjar & Abed, 2014; Liu, 2015; Qu et al., 2015; Wang & Hussainey, 2013). Audit committee meetings (ACM) is measured as the number of meetings held during the year (Al-Najjar & Abed, 2014; Liu, 2015; Qu et al., 2015; Wang & Hussainey, 2013). The ratio of the members with accounting experience and financial qualifications to audit committee size is used to measure audit committee financial expertise (ACEXP) (Al-Najjar & Abed, 2014; Liu, 2015; Qu et al., 2015; Wang & Hussainey, 2013). Finally, the study used the number of females in the audit committee divided by the total number of audit committee members to measure females' presence on the audit committee (FPAC) (Sartawi et al., 2014; Thiruvadi & Huang, 2011).

4.4.3. Measuring the Control Variables (firm characteristics)

This research employs three empirical models to test the research hypotheses. In the first model, QFLID is considered as a dependent variable, and CG as an independent variable. However, in the second and the third models the QFLID becomes the independent variable while the FV and ACUAF are considered dependent variables. Firm characteristics have been widely used in prior research as control variables of FLID, FV and ACUAF. In addition, in order to reduce potential issues related with omitted variables, including endogeneity issues,

this research controls for numerous variables (Ntim et al., 2013; Wooldridge, 2015). Following previous research (Albitar, 2015; Aljifri et al., 2014; Alkhatib, 2014; Al-Najjar & Abed, 2014; Barako, 2007; Celik et al., 2006; Hossain et al., 2005; Kent & Ung, 2003; Khlif & Hussainey, 2016; Kuzey, 2018; Liu, 2015; Uyar & Kilic, 2012; Wang & Hussainey, 2013), six control variables have considered in this study, namely firm size, leverage, profitability, liquidity, growth and industry type.

4.4.3.1. Firm Size

Signalling theory suggests that firms with a larger size are likely to catch the attention of financial analysts to gain the information needed in making rational advices (Hussainey & Al-Najjar, 2011; Wang & Hussainey, 2013). Furthermore, agency theory suggests that larger firms perform a greater number of complex business transactions as compared to smaller companies, and thereby are likely to incur high agency costs (Jensen & Meckling, 1976; Leftwich, Watts, & Zimmerman, 1981; Pérez, 2004). Therefore, larger companies publish more voluntary disclosures to decrease these costs. Empirically, several studies documented a positive association between corporate disclosure and firm size (Albitar, 2015; Aljifri et al., 2014; Alkhatib, 2014; Al-Najjar & Abed, 2014; Barako, 2007; Celik et al., 2006; Dembo & Rasaratnam, 2014; Eng & Mak, 2003; Ferguson, Lam, & Lee, 2002; Haniffa & Cooke, 2002; Hossain et al., 2005; Kent & Ung, 2003; Khlif & Hussainey, 2016; Liu, 2015; Soliman, 2013; Uyar & Kilic, 2012; Wang & Hussainey, 2013). On the other hand, other empirical studies reported that corporate voluntary disclosure is negatively associated with firm size (Aljifri & Hussainey, 2007; Mathuva, 2012b; Menicucci, 2013b; O'Sullivan et al., 2008). The current study assumes that large Indian listed companies disclose more QFLID.

Firm size is regarded as an important factor that influences FV and ACUAF (Bozzolan et al., 2009; Eisenberg, Sundgren, & Wells, 1998; Lang & Lundholm, 1996; Samaha et al., 2012). It

is argued that larger companies are more likely to employ more skilled managers and large assets base which enable them to enhance their values (Baek et al., 2004; Black, Love, & Rachinsky, 2006; Black, Jang, & Kim, 2006; Klapper & Love, 2004). Some previous empirical research reports a positive relationship between firm size and both FV and ACUAF (Baek et al., 2004; Belgacem & Omri, 2014; Bozzolan et al., 2009; Hassan et al., 2009; Hassanein & Hussainey, 2015; Lang & Lundholm, 1996; Sheu et al., 2010). Following previous studies, the natural logarithm of total assets at the end of the year is used to measure firm size (Elshandidy & Neri, 2015; Sartawi et al., 2014).

4.4.3.2. Profitability

In line with past research, it is suggested that company profitability controls the potential effects on the FLID (Alkhatib & Marji, 2012; Alkhatib, 2014; Urquiza et al., 2009; Uyar & Kilic, 2012). Signalling theory assumes that, if companies are performing well, they are liable to signal their activities to investors (Watson, 2002). Profitable firms tend to disclose additional information, because managers are motivated to increase disclosure to ensure their position and it will also assist them to legitimise their continued management (Haniffa & Cooke, 2002; Ntim & Soobaroyen, 2013). Accordingly, it is noted that high profit firms disclose more information than those with small profits (Alkhatib & Marji, 2012; Uyar & Kilic, 2012).

Empirically, numerous previous studies found that profitability impacts significantly and positively on voluntary disclosure (Albitar, 2015; Cerbioni & Parbonetti, 2007; Charumathi & Ramesh, 2015a; Elshandidy & Neri, 2015; Ghazali & Weetman, 2006; Haniffa & Cooke, 2002; Khlif & Hussainey, 2016; Mathuva, 2012b; Soliman, 2013; Wang & Hussainey, 2013), whereas other studies documented a negative association between profitability and corporate disclosure (Aljifri & Hussainey, 2007; Aljifri et al., 2014; Celik et al., 2006; Chen & Jaggi, 2001; Inchausti, 1997; Wallace et al., 1994). Furthermore, others reported that profitability has

no significant impact on disclosure practices (Ahmed & Courtis, 1999; Allegrini & Greco, 2013; Alqatamin et al., 2017; Barako et al., 2006; Elzahar & Hussainey, 2012; Uyar & Kilic, 2012). This study expects a positive and significant association between profitability and the QFLID. Following the previous study, return on assets (ROA) (net income before tax divided by total assets) is being used to measure profitability.

4.4.3.3. Leverage

Previous research indicated leverage as an essential factor that may have an impact on disclosure practices (Abraham & Cox, 2007; Ho & Wong, 2001a; Hussainey & Al-Najjar, 2011; Oyelere et al., 2003). Agency theory assumes that firms who have higher leverage tend to incur higher monitoring costs (Huafang & Jianguo, 2007; Jensen & Meckling, 1976; A. Watson et al., 2002). To decrease these costs, companies disclose more information to show their capability of meeting any obligations set by the creditors (Jensen & Meckling, 1976; A. Watson et al., 2002). In addition, providing more FLID is one way of reducing the adverse effects of the high levels of debt (Mathuva, 2012b). In the same vein, from a signalling theory view, managers disclose more information voluntarily when the firm has a high leverage ratio as it will attract investors and it will also signal to creditors that the company is capable of meeting both short- and long-term requirements (Elzahar & Hussainey, 2012). Therefore, it is expected that leverage is positively associated with the level of corporate disclosures (Wang & Hussainey, 2013).

Several studies have indicated that leverage ratio has an impact on voluntary disclosure (Ahmed & Courtis, 1999; Aljifri & Hussainey, 2007; Elshandidy et al., 2013; Hassan et al., 2009; Hossain et al., 1995; Mathuva, 2012b; Merkley, 2014; O'Sullivan et al., 2008; Wang & Hussainey, 2013), whereas others do not find any relationship between the two variables (Abraham & Cox, 2007; Al-Najjar & Abed, 2014; Celik et al., 2006; Chow & Wong-Boren,

1987; Ho & Wong, 2001a; Huafang & Jianguo, 2007; Menicucci, 2013a; Nekhili et al., 2012; Nekhili et al., 2016; Nor, Saleh, Jaffar, & Shukor, 2010; Uyar & Kilic, 2012; Wallace et al., 1994). The link between leverage and both FV and ACUAF has mixed results. Empirically, some past research found a negative association between leverage and both FV and ACUAF (Banerjee, Gokarn, Pattanayak, & Sinha, 2009; Bozzolan et al., 2009; Jackling & Johl, 2009; Kumar & Singh, 2013; Mangena et al., 2012; Uyar & Kiliç, 2012). On the other hand, appositive relationship provided by McConnell & Servaes (1995). Following previous studies (Al-Najjar & Abed, 2014; O'Sullivan et al., 2008), the ratio of a firm's total long-term debt at the end of the year to total assets at the end of year is used to measure leverage.

4.4.3.4. Liquidity

The current study utilises the company's liquidity to control the potential effects on the QFLID. Liquidity is an indicator of the company's ability to cover its current obligations. Signalling theory assumes that managers of high liquidity companies tend to disclose more information, as it signals their ability in managing liquidity as compared to managers who are managing lower liquidity (Elzahar & Hussainey, 2012). Wallace & Naser (1995) indicate that it is expected that companies with a high liquidity ratio disclose more to demonstrate their ability to meet their short-term liabilities. Furthermore, Abd-Elsalam & Weetman (2003) indicate that high liquidity proportions lead to an increase in disclosed information, whereas agency theory suggests that firms with a lower liquidity ratio might disclose more information to reduce agency costs and to reassure shareholders and creditors (Wallace et al., 1994).

Empirically, several previous studies document that liquidity impacts significantly and positively on voluntary disclosure (Camfferman & Cooke, 2002; Elshandidy et al., 2013; Ezat & El-Masry, 2008; Samaha & Dahawy, 2010). On the other hand, other studies reported that corporate voluntary disclosure is negatively influenced by firm liquidity (Aly, Simon, &

Hussainey, 2010; Menicucci, 2013c; Naser, Al-Khatib, & Karbhari, 2002; Wallace et al., 1994), while other researchers document that liquidity has no significant impact on disclosure practices (Agyei-Mensah, 2012; Aljifri et al., 2014; Alsaeed, 2006; Barako et al., 2006; Elzahar & Hussainey, 2012; Mangena & Pike, 2005; Mathuva, 2012a).

Liquidity might play an important role in improving FV and ACUAF. Previous research found significant positive association between liquidity and FV (Alotaibi & Hussainey, 2016b; Hassanein & Hussainey, 2015). Bozzolan et al. (2009) found that liquidity has positive impact on ACUAF, whereas Beretta & Bozzolan (2008) found no relationship between two variables. In the current study, the ratio of the company's current assets to current liabilities is used to measure liquidity.

4.4.3.5. Firm growth

The survival of the firm is dependent on its growth. If the growth of the firm is higher, then the probability of its survival will be much higher (Henry, 2008). If the opportunity regarding growth is high for a company then it becomes more attractive and they will receive a better valuation (Beiner, Drobetz, Schmid, & Zimmermann, 2006). The high growth rate may raise the issue of higher information asymmetry between management and shareholders (Smith Jr & Watts, 1992). Therefore, voluntary disclosure can be used as an incentive to reduce such issues (Gul & Leung, 2004). It is suggested that companies with high growth tend to increase their FLID activities which indicates both are positively associated.

According to the signalling theory, growth tends to be positively associated with disclosure (Lev & Penman, 1990). Moreover, Frankel et al. (1995) pointed out that companies that have high growth prospects suffer from frequent agency problems because of a higher level of information asymmetry as compared to other companies. It is argued that firms with better growth opportunities are more attractive and, thus, are more likely to receive better valuation

(Henry, 2008). Previous studies support the above argument and found that firm growth has a positive association with FV (Haniffa & Hudaib, 2006; Henry, 2008).This study used firm growth as a control variable and examined its association with QFLID. It is also used a control variable for both FV and ACUAF. Hence, following prior studies firm growth is measured by the ratio change of sales.

4.4.3.6. Industry Type

Another determinant of firm information disclosure is the type of industry (Alkhatib & Marji, 2012; Celik et al., 2006). Omar & Simon (2011) indicate that firms which are operating in various sectors are bound to additional disclosure requirements. For example, manufacturing firms are enforced to disclose additional information as compared to firms operating in the service industry, because the operations of manufacturing firms are highly likely to harm the environment. According to signalling theory, if an industry is more homogeneous, then the companies adopt similar reporting practices (Aly et al., 2010; Malone, Fries, & Jones, 1993; Wallace et al., 1994). In this regard, if a firm within an industry fails to follow the same disclosure practices as compared to other firms in the same industry, this gives a signal that it is hiding bad news (Craven & Marston, 1999; Oyelere et al., 2003).

Empirically, mixed statistically significant results are found. Previous studies found a significant association between sector type and the extent of corporate disclosure (Ahmed & Courtis, 1999; Aljifri, 2008; Aljifri et al., 2014; Cooke, 1992; Haniffa & Cooke, 2005; Muttakin & Khan, 2014; Salama et al., 2012). On the other hand, others document that industry type has no significant impact on FLID (Aljifri & Hussainey, 2007; Alqatamin et al., 2017; Eng & Mak, 2003; Mathuva, 2012a; McNally, Eng, & Hasseldine, 1982; Raffournier, 1995; Wallace et al., 1994). Following earlier studies (Aljifri & Hussainey, 2007; Alkhatib, 2014; Allegrini & Greco, 2013; Elzahar & Hussainey, 2012; Mathuva, 2012a), the industrial factor

is predicted to influence the quality of FLID among the non-financial Indian listed companies. Furthermore, the relationship between industry type and both FV and ACUAF supported by past studies (Elsayed, 2007; Hope, 2003; Ntim, 2013; Wahba, 2015) which report that a firm's industry significantly effects its market valuation. To classify the industry type, the sample in this study is divided into eleven types of industries and is coded from 1 to 11 (Beretta & Bozzolan, 2008; Charumathi & Ramesh, 2015a).

Table 4. 4 Definition and measurement of variables

Abbreviated name	Full name	Description	Data source
Dependent variables			
QFLID	Quality of forward-looking information disclosure	Ratio of FLID quality (dependent variable in model one and independent variable in model two) measured by multidimensional apportion	Company annual report
TQ ratio	Tobin's Q ratio	(Total debt + Market value of equity) / Book value of total assets	Osiris database
MC	Market capitalization	Measured as the market value of common equity at the end of a company's financial year	Osiris database
ACUAF	Accuracy of analysts forecast	Accuracy is defined as the negative of the absolute value of the analyst forecast error, deflated by stock price	Bloomberg database
DISAF	Dispersion of analysts forecast	The standard deviation of the change over the fiscal year in the median forecast from the preceding month, deflated by the stock price as of the beginning of the fiscal year.	Bloomberg database
Independent variables			
BSIZE	Board size	Total number of board members	Company annual report
BI	Board independence	Ratio of the number of independent directors divided by the total number of board members.	Company annual report
DP	CEO duality	Dummy variable: (1) if the CEO of the company serves as a board chairman, (0) otherwise	Company annual report
FBM	Frequency of board meetings	The number of board meetings during the year	Company annual report
FPB	Female presence on the board of directors	The number of females serving as board directors divided by the total number of board members	Company annual report
Ins.Own	Institutional ownership	Institutional ownership to total owners' ratio	Company annual report
Blo.Own	Block holder ownership	Proportion of block holder ownership (those who own at least 5% of total company ordinary shareholdings)	Company annual report
Pro.Own	Promoters ownership	The ratio of shares held by promoters	Company annual report
IAC	Independence of the audit committee	The ratio of independent directors on the audit committee	Company annual report
ACSIZE	Audit committee size	The number of audit committee members	Company annual report
ACM	Audit committee meetings	Number of meetings during the year	Company annual report
ACFEXP	Audit committee financial Expertise	The ratio of the members with accounting experience and financial qualifications to audit committee size	Company annual report
FPAC	Female presence on the audit committee	The number of females in the audit committee divided by the total number of members of the audit committee	Company annual report
Control variable			
CSIZE	Company size	Measured by the natural logarithm of total assets	Osiris database
PROF	Profitability	Measured by net income to total assets	Osiris database
LIQU	Liquidity	Measured as the proportion of the company's current assets to its current liabilities	Osiris database
LEVE	Leverage	The ratio of a company's total debt at the end of the year to total assets at the end of year	Osiris database
GROW	Growth	Measured by the ratio change of sales	Osiris database
IndType	Type of industry	The sample in this study is divided into eleven types of industry and is coded from 1 to 11	Osiris database

4.5. Research Empirical Models

This study covers the following objectives:

1- To examine the impact of CG mechanisms on QFLID among non-financial Indian listed companies.

2- To examine the impact of the QFLID on FV among non-financial Indian listed companies.

3- To investigate the association between QFLID and ACUAF among non-financial Indian listed companies.

This study used three regression models to test the hypotheses and fulfil its objectives. The first model investigates the effect of CG mechanisms on the QFLID. The second model examines the impact of the QFLID on FV measured by TQ ratio. The third model investigates the impact of QFLID on ACUAF. The estimated regression models are presented as follows:

1. QFLID= β0 + β1BSIZE + β2DP + β3FM + β4BI + β5FPB + β6BloOwn + β7InsOwn + β8ProOwn + β9ACSIZE + β10ACM + β11IAC + β12ACFEXP + β13FPAC + β14FCSIZE + β15IndType + β16LEVE + β17PROF + β18LIQU + β19GROW + e.

2. TQ ratio = β0 + β1QFLID + β2CSIZE + β3LEVE + β4LIQU+ β5GROW + β6IndType + e.
3. ACUAF = β0 + β1QFLID + β2CSIZE + β3LEVE + β4PROF + β5LIQU+ β6GROW + β7IndType + e.

Where,

QFLID denotes the Quality of FLID; β0 denotes the constant term; TQ ratio denotes proxies to measure firm value (FV); ACUAF denotes accuracy of analysts' earnings forecast; BSIZE

denotes the board size; DP stands for CEO duality; FBM stands for the frequency of board meetings; BI denotes the board independence; FPB denotes the ratio of female presence on the board; BloOwn denotes block holder ownership; InsOwn denotes institutional ownership; ProOwn denotes promoters' ownership; ACSIZE denotes audit committee size; ACM denotes audit committee meetings; IAC denotes Independence of audit committee; ACFEXP denotes audit committee financial experts; FPAC denotes the ratio of female presence on the audit committee; CSIZE denotes company size; IndType denotes industry type; PROF is profitability; GROW stands for firm growth; LIQU denotes liquidity and e denotes the error term.

4.6. Empirical Procedures of Data Analysis:

This section discusses three statistical techniques used in this study. These are preliminary analysis, multivariate analysis and sensitivity analysis.

4.6.1. Preliminary Analysis

This study used three preliminary analyses termed as: descriptive statistics, univariate analysis, and correlation matrix. Descriptive statistics summarise and describe basic features of the data in regards to the tests of central tendency and shape of distribution on a single variable in a reasonable way. The first statistics used for the continuous variables in a data set is known as tests of central tendency. It is also called measures of location and includes mean, median, standard deviation, maximum and minimum values. Both the Variance Inflation Factor (VIF) and the correlation matrix methods test the correlation among sample explanatory variables and clarify the level of linear association among two explanatory variables (Gujarati & Porter, 2011). A higher degree of the correlation coefficient among the explanatory variables harms the results of the regression analysis, due to the multicollinearity issue (Grewal, Cote, &

Baumgartner, 2004; Gujarati, 2008; Harris & Raviv, 2006). They suggest that (at level of) ± 0.80 or higher would indicate the start of a serious multicollinearity issue that could influence the regression findings.

4.6.2. Multivariate Analysis

There are two methods that can be used to conduct multivariate analysis: parametric and non-parametric methods. These methods will be used by the researcher according to the nature and characteristics of the data. Gujarati (2003) highlights five necessary assumptions that need to be investigated before the selection of the two multivariate analysis methods. The assumptions are as follows: (1) Linearity suggests that there is linear association between both the explanatory and dependent variables, (2) normality assumes that the data is normally distributed, (3) the hypothesis of heteroscedasticity assumes that the dependent variables are constantly changed, (4) independence assumes that there should be no association among the error terms of two or more observations and (5) multicollinearity assumes that there is no collinearity between independent variables of the study.

In order to determine which method is appropriate for the present research (parametric or non-parametric), several tests are checked. To investigate the problem of normality, this study conducted a histogram test. Quantile-Quantile (Q-Q plot) test is being used to examine the issue of linearity. To test heteroscedasticity, the study utilised Breusch-Pagan/Cook-Weisberg and White's general tests. Lastly, the study used pairwise Pearson correlation matrix and VIF tests to examine the problem of independence and multicollinearity.

4.6.2.1. Panel Regression Analysis

There are three main types of data used by researchers to conduct empirical analysis. These are: cross-sectional, time series and panel data. The cross-sectional data is based on the value of one or more variables, collected for various entities/units used as a sample over the same

time period, whereas, the values of one or more variables are observed over a time period in the time series data. Lastly, panel data is similar to cross-sectional units (companies) and observed over time (years) (Gujarati, 2003).

The flaw of cross-sectional data analysis is that it suffers from the issue of heteroscedasticity and auto-correlation that can have an impact on the validity of the results. Panel data analysis overcome the issues related to cross-sectional data analysis (Petersen, 2009). It is very beneficial as it enables researcher to measure the individual effects that are non-observable and reduces the reliability issue of explanatory variables regarding the explanation of dependent variables (Serrasqueiro & Nunes, 2008). Moreover, when the panel data regression model is based on cross-sectional and time-series data, it increases the degree of freedom and data quantity (Gaud, Jani, Hoesli, & Bender, 2005; Pesaran, Shin, & Smith, 2000).

To examine the research hypotheses of the study, regression analysis is utilised as the main tool. There are two types of regression analysis: panel and pooled. The major difference between them is that panel regression can differentiate among the firms and over time, which helps the researcher to take any unobservable heterogeneity out of the sample, but pooled regression is unable to do this (Himmelberg, Hubbard, & Palia, 1999). This study organised various tests to make the choice between the panel and pooled regression models. Following (Twumasi-Ankrah, Ashaolu, & Ankrah, 2015), the Chow test and the Breusch-Pagan LaGrange Multiplier (LM) are used and, based on their results, this study chose the panel regression model to conduct the analysis.

There are many advantages of using panel data analysis. It takes both spatial (units) and worldly (time) scope into consideration, which is crucial to examine linear information. It is also a key source for longitudinal data analysis, specifically when there are various sources of information. When the perceptions for individual analysis are longer, panel data analysis has

various procedures that are useful to scrutinise variations in a specific type of cross-sectional unit over a time period (Gujarati 2003; Gujarati 2008).

Panel data analysis is useful because it reduces the level of co-linearity among the variables and also provides extra instructive information regarding the data. Due to its combination of the cross-sectional and time series dimension, panel data regression makes the analysis more effective and also offers flexibility. It considers certain variables that exclude heterogeneity in the estimation process. It is also helpful in analysing complicated behavioural models such as technological change that cannot be done by using either cross-sectional or time series analysis. From the above discussion, this study uses panel data regression. Many studies used panel data to study the relationship among different 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). Random effect and fixed effect models are the two main models of panel data regression. The random effect model assumes that individual effects are random disturbances drawn from the probability distribution, whereas the fixed effect model considers that the individual effect term is constant.

4.6.3. Additional Analyses and Robustness Test

This research used additional analyses to check the sensitivity of primary findings and to confirm whether they are robust to various measurements. Firstly, the current research used high QFLID and low QFLID firms to examine whether or not the main results differ due to this. Secondly, different alternative measurements are used for the explanatory variables. For instance, the study used MC (proxy to measure FV) as an alternative measurement to test whether the main findings are robust to various measures or not. Moreover, the study used DISAF (proxy for ACUAF) as an alternative measurement to confirm the robustness of the main results. Finally, the current research used two-stage least squares (2SLS) (the lagged

value of CG mechanisms and FLID utilised as instrumental variables) to control the endogeneity issue.

4.7. Chapter Summary

The current chapter discusses the methodology and identifies the research methods utilised to achieve the aim and objectives of this study. The methods covered in the chapter are to examine the relationship between CG mechanisms and the QFLID, and impact of the QFLID on both FV and ACUAF. It explains manual content analysis and a multidimensional approach that is used to measure the QFLID. In addition, TQ ratio and MC are used as proxies to measure FV. Furthermore, ACUAF and DISAF are used to measure analysts' earnings forecast. The data analysis is achieved by employing fixed effect models of panel regression. The present research used 212 non-financial Indian listed companies (2120 company's observations) from 2006 to 2015 to test the hypothesis. Chapter 5 will cover the methods discussed in this chapter, and present the summary of descriptive statistics for all variables employed, to examine the impact of CG on the QFLID among non-financial Indian listed companies and discuss the results obtained from the multivariate analysis.

Chapter Five: CG Mechanisms and QFLID

5.1. Introduction

The present chapter examines the impact of CG on the QFLID in non-financial Indian listed companies' annual reports. Furthermore, this chapter aims to examine the research hypotheses related to the relationship between the independent variables (CG) and the QFLID. This chapter consists of the following sections: section 5.2 covers descriptive statistics of regression variables. Section 5.3 presents the multicollinearity issue. Section 5.4 explains the results of the multivariate analysis. Section 5.6 describes additional and sensitivity analyses. Section 5.6 deals with the endogeneity problem and section 5.7 covers a summary of this chapter.

5.2. Descriptive Statistics of the Regression Variables

Table 5.1 presents descriptive statistics' results of QFLID (dependent variable), CG (independent variable) and control variables (company characteristics).

With regard to the dependent variable (QFLID), Table 5.1 below displays that the maximum of QFLID of the sample firms is 68% while the minimum score is 0%. This is similar to Aljifri and Hussainey (2007), as their study found that the maximum FLID score among UAE companies is 70% and the minimum FLID score is 0%. This range shows that a variation exists among Indian listed companies in their decision-making process regarding FLID. The overall mean of QFLID is 50.70%, higher than the average found in Charumathi & Ramesh's (2015) study, as the study found the overall mean of FLID in Indian companies was 42.12%. Notably, the average is closer to Sartawi et al. (2014), who found that the overall mean of voluntary disclosure in Jordanian companies was 49%. Furthermore, the current study employed a median value of 51.49% to classify high and low QFLID, similar to Nalikka's (2009) value of 50.46% for listed Finnish companies.

Regarding boards of directors, the average board size is around 10 members, ranging from 24 to 4 members. This indicates that Indian companies comply with the Indian Corporate Governance Code (ICGC) number (49), which recommends that a board of directors should comprise of at-least four members. It is similar to the results of Jackling & Johl (2009), who reported that the mean value of board size is 9.56, with a minimum of 4 and a maximum of 18 members among Indian listed companies. Moreover, the result is relatively comparable with the previous results of Darko et al. (2016), who found that the average board size is around 9 among Ghanaian companies. With reference to CEO duality, approximately 44% of CEOs in companies serve as board chairman. This is in line with ICGC (49), which indicates that if the CEO is also the chairman then half of the board of directors should be independent. The result is relatively higher than the mean value provided by Jackling & Johl (2009), who reported 35% among Indian listed companies. On the other hand, Chau & Gray (2010) reported an overall mean of 54% among Hong Kong listed companies, higher than this study's result. Furthermore, the results found that the average proportion of independent directors is 53%, with a range from 16% to 92%. This highlights that almost half of the board directors are independent. This is consistent with ICGC number (49), which stated that half of the board directors should be independent. This finding is quite similar to Charumathi & Ramesh (2015a), as the study reported a 50.62% average proportion of independent directors in Indian listed companies, ranging from 12.45% to 80%. Table 5.1 reports that the average number of board meetings is approximately 6 per year and ranges from 4 to 17 meetings. It is in line with ICGC number (49), which recommends that a board should hold at least four meetings a year. Similar to this study result, Jackling & Johl (2009) found the mean value of the number of board meetings among Indian companies is 6. With regard to females' presence on the board, the mean value is about 5.7% and the range is from 0% to 75%. The results indicate that Indian companies do not comply with ICGC number (49) because it recommends that boards should

have at least one woman director. This outcome is quite similar to Perryman et al. (2016), who reported that the overall mean of females on boards is 5%.

In terms of ownership structure, the overall mean of block holder ownership is about 29% and ranges between 0% and 82%. Furthermore, the overall mean of institutional ownership is 22% and ranges from 0% to 70%, which is similar to Charumathi & Ramesh (2015a), who reported that the mean of institutional ownership of Indian companies is 30.14%. The overall mean of promoters' ownership is approximately 53.41% and ranges from 0% to 97%. This result is similar to the findings of Charumathi & Ramesh (2015a) and Ganguli & Agrawal (2009), who reported 54.185% and 52.954% as overall means among Indian companies, respectively.

Regarding audit committees, the study found that the average audit committee size is 4 members and ranges from 3 to 8 members. The result follows ICGC number 49 as it suggests that an audit committee should have least three members. This result is in line with Darko et al. (2016), who provided the mean value of 4 among Ghanian companies. This study found the mean value of the number of audit committee meetings is 5, with a range of 1 to 12. This result meets the benchmark of ICGC number (49), which mentions that audit committees should organise atleast four meetings a year. As compared to Darko et al. (2016), the mean value of this study is lower, as they reported an overall mean of 7 among Ghanian companies. The descriptive results reported that the proportion of audit committee independence is about 83%, ranging from 25% to 100%. This figure complies with ICGC number (49), which indicates that at least two-thirds of the members must be independent in the audit committee. Moreover, the mean value of the proportion of audit committee who have financial expertise is about 94%, and the range is from 25% to 100% respectively. The average number of females' presence in audit committees is approximately 4.2%, with a maximum of 75% and minimum of 0%. This

outcome is closer to Ujunwa et al. (2012) who found that, among Nigerian firms, the average number of females on committees is 4.6%.

In terms of control variables the average company size (measured as natural log of total assets) is 7.595252, ranging widely from 5.115201 to 9.744242. The value found is lower as compared to Darko et al.'s (2016) findings, who found that the overall mean value is 8.202602 among Ghanian companies. In addition, leverage ranges from .00036% to 99%. The mean value of leverage is 51.96%. This is similar to the findings of Hassanein & Hussainey (2015), who reported that the overall mean is 52.70% among UK listed companies. However, the result is lower than the mean value reported by Ganguli & Agrawal (2009), who reported that the average among Indian companies is 85.5%. Furthermore, profitability ranges from -84% (loss) to 99% (profit) with a mean of 10%. Table 5.1 reports an overall mean of 2% of liquidity (current ratio), and ranges from 0.13 to 22. This outcome is similar to the findings of Hassanein & Hussainey (2015), who reported a mean value of 1.61% among UK listed companies. GROW ranges from -.49 to 2.57 with a mean of .25. Concerning the industry type, the minimum and maximum values range from 1 to 11 respectively.

Table 5. 1 Descriptive statistics

Variable	N	Mean	Median	SD.	Max	Min
QFLID	2120	.5070467	.5149583	.0764422	.6852885	0
BSIZE	2120	10.76415	10	3.174943	24	4
DP	2120	.4429245	0	.4968489	1	0
FBM	2120	6.096698	6	1.921682	17	4
BI	2120	.5375833	.5333333	.1220746	.9230769	.1666667
FPB	2120	.0570695	0	.0911046	.75	0
BloOwn	2120	.2905447	.28	.1617609	.82	0
InsOwn	2120	.2277695	.21	.1330907	.7	0
ProOwn	2120	.5341775	.5237	.1637402	.976	0
ACSIZE	2120	4.011792	4	.9400896	8	3
ACM	2120	4.825389	4	1.431699	12	1
IAC	2120	.8308458	.8	.1491018	1	.25
ACFEXP	2120	.9435579	1	.1121762	1	.25
FPAC	2120	.0428279	0	.1022903	.75	0
LEVE	2120	.5196675	.5610039	.2319884	.9933107	.0003641
LIQU	2120	2.050434	1.6	1.676653	22	.13
PROF	2120	.1016844	.0859759	.1019813	.991509	-.84
GROW	2012	.2578197	.1900197	.330587	2.571437	-.4916848
CSIZE	2120	7.595252	7.557725	.6993978	9.744242	5.115201
IndType	2120	4.662736	4	2.795015	11	1

QFLID *stands for quality of forward-looking disclosure. BSIZE is board size, measured as number of board members.* ***DP*** *is the role duality, a dummy variable: value of 1 is given if company's CEO serves as a board chairman, 0 otherwise.* ***FBM*** *is frequency of board meetings during the year.* ***BI*** *presents board independence, measured as the ratio of number of independent non-executive directors to the total number of board members.* ***FPB*** *is the ratio of females' presence on the board of directors.* ***BloOwn*** *is blockholder ownership, measured by the ratio of shares held by blockholder (5% or more).* ***InsOwn*** *is institutional ownership, measured by the ratio of shares held by institutional.* ***ProOwn*** *is promoter ownership, measured by the ratio of shares held by promoters.* ***ACSIZE*** *is audit committee size, measured by the number of audit committee members.* ***ACM*** *is the frequency of audit committee meetings during the year.* ***IAC*** *is the independence of the audit committee, measured by the ratio of independent non-executive directors on the audit committee.* ***ACFEXP*** *is audit committee financial experts, measured by the ratio of audit committee members with financial experience to audit committee size.* ***FPAC*** *is the ratio of females' presence in the audit committee.* ***LEVE is the*** *leverage ratio, measured by the ratio of a firm's total debt at the end of the year to total assets at the end of year.* ***LIQU*** *is liquidity, measured as the ratio of the company's current assets to its current liabilities.* ***PROF*** *is profitability.* ***GROW*** *is firm growth, measured by the change of sales.* ***CSIZE*** *is Firm size, measured by the natural logarithm of total assets. IndType is industry type, the sample in this study is divided into eleven types of industry and is coded from 1 to 11.*

5.3. Multicollinearity

Multicollinearity is an issue that arises when a linear relationship exists (i.e. a high degree of correlation) among two or more independent variables. Due to this issue, it is difficult to distinguish the individual impacts of explanatory variables, which may have high differences (Murray, 2005; O'brien, 2007). In addition, high multicollinearity leads to high standard errors, diminished power, and large confidence intervals (Garson, 2012). To check for a multicollinearity issue among explanatory variables, this study utilised a correlation matrix and variance inflation factors (VIF) with tolerance values.

The correlation matrix is an effective instrument for examining the association among explanatory variables. Regarding the cut-off correlation percentage, there is a difference in views among researchers (Alsaeed, 2006). Some researchers, such as Tabachnick et al. (2001), consider 70% as serious correlation, whereas others consider 80% as the correlation cut-off point (Alsaeed (2006); Gujarati (2003; 2008) . Table 5.2 presents the correlation matrix among all explanatory independent variables used in the present study. The results presented in Table 5.2 highlight that block holder ownership and promoters' ownership is highly correlated, with a coefficient of 68.21%. The result is lower than the cut-off point which indicates that a multicollinearity issue is not present among these variables (Gujarati, 2008; Tabachnick et al., 2001).

Secondly, this study uses VIF and Tolerance tests to examine whether independent variables are highly correlated or not. Gujarati (2009), Field (2009), and Gujarati (2003), indicate that if the value of VIF is more than 10 and the tolerance coefficient is greater than 10%, there is an issue. The results presented in Table 5.3 show that a multicollinearity problem is non-existent among explanatory variables. The maximum value of VIF is 2.28 and its mean is 1.39, indicating no multicollinearity issue.

Table 5. 2 Pearson Correlation Matrix: CG Mechanism and Control Variables

	QFLID	BSIZ	DP	FBM	BI	FPB	BloOwn	InstOwn	ProOwn	ACSIZ	ACM	IAC	ACEXP	FPAC	LEVE	LIQU	PROF	GROW	FSIZE	IndType
QFLID	1.000																			
BSIZ	0.063***	1.000																		
DP	-0.029	0.109***	1.000																	
FBM	0.059***	0.102***	-0.019	1.000																
BI	-0.051**	-0.195***	0.119***	-0.019	1.000															
FPB	0.107***	-0.034	-0.040	-0.005	0.019	1.000														
BloOwn	0.043**	0.158***	0.044**	0.171***	-0.002	0.010	1.000													
InstOwn	0.130***	0.208***	0.109***	0.175***	0.018	-0.035	0.590***	1.000												
ProOwn	-0.123***	-0.110***	0.013	-0.166***	-0.076***	0.017	-0.682***	-0.534***	1.000											
ACSIZ	-0.046**	0.235***	-0.004	0.021	0.037	0.029	0.082***	-0.030	0.011	1.000										
ACM	0.051**	0.154***	-0.091***	0.212***	-0.052**	-0.028	0.167***	0.237***	-0.142***	-0.008	1.000									
IAC	0.029	0.069***	0.030	0.068**	0.121***	-0.108***	-0.005	0.086***	-0.036	-0.111***	0.076***	1.000								
ACEXP	-0.005	0.129***	0.049***	0.077**	-0.023	-0.286***	0.069***	0.134***	-0.096***	-0.080***	0.083***	0.265	1.000							
FPAC	0.111***	0.030	-0.065**	0.057**	0.001	0.594***	0.036	0.013	0.002	0.062**	0.036	-0.127	-0.215***	1.000						
LEVE	0.113***	.0.108***	-0.068*	0.048**	-0.052**	-0.070***	-0.040	0.048**	0.002	0.015	0.057**	-0.060	-0.040	-0.027	1.000					
LIQU	-0.140***	-0.089***	0.039	-0.047**	0.032	0.003	-0.031	-0.069*	0.003	-0.004	-0.127***	-0.029	-0.091***	0.035	-0.220***	1.000				
PROF	0.049	0.069***	0.046**	-0.045**	0.043**	0.040	0.000	0.017	0.087**	0.028	0.017	0.054	-0.078***	0.063**	-0.259***	0.093***	1.000			
GROW	-0.058***	-0.020	0.033	-0.021	0.021	0.005	-0.016	0.008	0.023	-0.026	-0.016	-0.001	0.025	0.020	0.008	0.023	0.109***	1.000		
FSIZE	0.032	0.196***	-0.049**	0.135***	0.065**	0.069***	0.157***	0.331***	-0.073***	0.056**	0.202***	0.213	0.027	0.081***	-0.044*	-0.164***	-0.051**	-0.0197	1.000	
IndType	-0.092***	-0.010	0.001	0.038	-0.000	-0.004	-0.08***	-0.09***	0.007	0.055*	-0.092***	0.036	0.014	0.027	-0.023	0.063**	-0.006	0.0059	0.046	1.000

**** Significant at 1% level or better; ** Significant at 5% level or better; * Significant at 10% level or better. **QFLID** denotes the quality of forward-looking disclosure. **BSIZE** denotes board size, measured by the number of board members. **DP** denotes the role duality, a dummy variable: 1 if company's CEO serves as a board chairman, 0 otherwise. **FBM** denotes the frequency of board meetings during the year. **BI** denotes the independence of board, measured by the ratio of the number of independent non-executive directors to the total number of board members. **FPB** denotes the ratio of females' presence on the board of directors. **BloOwn** denotes blockholder ownership, measured by the ratio of shares held by blockholder (5% or more). **InsOwn** denotes institutional ownership, measured by the ratio of shares held by institutional. **ProOwn** denotes promoter ownership, measured by the ratio of shares held by promoters. **ACSIZE** denotes audit committee size, measured by the number of audit committee members. **ACM** denotes the frequency of audit committee meetings during the year. **IAC** denotes the independence of the audit committee, measured by the ratio of independent non-executive directors on the audit committee. **ACFEXP** denotes audit committee financial experts, measured by the ratio of audit committee members with financial experience to audit committee size. **FPAC** denotes the ratio of females' presence in the audit committee. **LEVE** denotes **the** leverage ratio, measured by the ratio of a firm's total debt at the end of the year to total assets at the end of year. **LIQU** denotes liquidity, measured as the ratio of the company's current assets to its current liabilities. **PROF** denotes profitability. **FSIZE** denotes Firm size, Measured by the natural logarithm of total assets. **IndType** denotes industry type; the sample in this study is divided into eleven types of industry and is coded from 1 to 11.*

Table 5. 3 Multicollinearity test results Variance Inflation Factor (VIF)

Variable	VIF	Tolerance 1/VIF
BSIZE	1.32	0.756636
DP	1.18	0.846992
FBM	1.11	0.898419
BI	1.25	0.799386
FPB	1.64	0.608042
BloOwn	2.28	0.439205
InsOwn	1.97	0.506835
ProOwn	2.15	0.465632
ACSIZE	1.15	0.868373
ACM	1.16	0.859807
IAC	1.19	0.836952
ACFEXP	1.24	0.806656
FPAC	1.60	0.624095
LEVE	1.21	0.823965
LIQU	1.12	0.889079
PROF	1.16	0.862205
GROW	1.02	0.980308
CSIZE	1.36	0.733489
IndType	1.05	0.952526
Mean VIF	1.38	

5.4. Multivariate Analysis

The researcher examined several tests to select the best model for the study. Following Twumasi-Ankrah et al. (2015), this study used the Chow test to choose either the panel data model or the pooled data model. In doing so, Twumasi-Ankrah et al. (2015) indicate that if F-test of Chow test is significant (F-value <0.05) then the null hypothesis will be rejected, meaning that the panel data model is better than the pooled model, and vice versa. The findings of Chow test show that F-test is significant at 1% level (see Appendix 5.1). Therefore, this study uses the panel data model to examine the association between the independent variable (CG mechanisms) and the dependent variable (QFLID). There are two types of panel data regression models: fixed effects model and random effects model. Regarding the error term, both models have various assumptions.

The random effect assumes that individual effects are random disturbances drawn from the probability distribution. However, the fixed effect model suggests that the individual effect term is constant. In panel data, the same cross-sectional units are surveyed over time as they have space (Damodar N.. Gujarati, 2003). The Hausman's test is used in the current study to decide between the random and fixed effects models (Greene, 2008). The result of the Hausman's test in this study indicates that it is significant (P-Value = 0.000), accordingly, fixed effect models are preferred (see Appendix 5.2).

Table 5.4 presents the outcomes related to regression analysis of the fixed effects model. QFLID is a dependent variable, while CG mechanisms (board size, CEO duality, number of board meetings, board independence, females' presence on the board, blockholder ownership, institution ownership, promoters' ownership, audit committee size, audit committee independence, audit committee financial expertise, audit committee meetings and females on the audit committee) are independent variables. The company's characteristics (firm size,

profitability, leverage, liqudity, firm growth and industry type) are control variables included in the regression model.

Table 5.4 reports R^2 value of 48.39%, which means that the independent variable explains 48.3% of the variation of dependent variables including six company characteristics as control variables. In social science research, a result of more than 20% is highly acceptable (Abd-Elsalam & Weetman, 2003; Aljifri et al., 2014). Furthermore, this result is in line with the previous studies, such as Haniffa & Cooke (2002) at 46% and Akhtaruddin (2005) at 56%. Table 5.4 also indicates that the P-Value is highly significant (0.001), indicating that this model has a good explanatory power for the model utilised in the primary analysis.

5.4.1. Findings and Discussion of CG and QFLID

This section discusses CG mechanisms, followed by the control variables. Table 5.4 illustrates a comparison of the results of the panel data. The study examined CG mechanisms (board characteristics, audit committee, and ownership structure) by employing a multivariate analysis. The results show that CG variables are associated with QFLID.

5.4.1.1. Board Characteristics

The current study examined five board characteristics, namely board size, CEO duality, frequency of board meetings, board independence and female presence on the board.

Board Size (BSIZE)

The results presented in Table 5.4 exhibit that BSIZE is significantly and positively associated with QFLID at 1% significance level *(coef. = .0013898, t = 3.39, p < 0.001)*, hence H1.1 of the study is accepted. The result suggests large board sizes tend to be more effective. Consequently, it is expected that firms with a larger BSIZE disclose more QFLID as compared to smaller BSIZE. The findings are in line with the agency theory perspective, which highlights

that senior executives are unable to dominate boards of a larger size, hence these boards disclose greater information (Allegrini & Greco, 2013; Alnabsha et al., 2017; Fama & Jensen, 1983; John & Senbet, 1998; Samaha et al., 2012). Likewise, the result is compatible with the resource dependence theory, which assumes that larger boards disclose higher quality information than smaller boards. Due to greater diversity in large boards, it improves overall corporate disclosure activities (Abeysekera, 2010; Adams & Ferreira, 2007; Alnabsha et al., 2017; Lajili & Zéghal, 2005). Empirically, this outcome is compatible with several studies which reported a positive association between BSIZE and extent of disclosure (Barako et al., 2006; Hussainey & Al-Najjar, 2011; Laksmana, 2008; Samaha et al., 2015; Wang & Hussainey, 2013). However, several studies reported no association between BSIZE and FLID, for example Alhazaimeh et al. (2014); Arcay and Muiño (2005); Cheng and Courtenay (2006); Kuzey (2018) and Liu (2015).

CEO Duality (DP)

Regarding DP, Table 5.4 shows no significant relationship between DP and QFLID *(coef. = .0001386, t = 0.05, p < 0.959)*. This outcome suggests that separation between the positions of CEO and chairman in Indian companies is unable to explain the variation in QFLID. Therefore, this result rejects hypothesis H1.2, which expected a significant negative association between DP and QFLID.

In relation to the theoretical underpinnings, this outcome is not in line with agency and resource-dependence theory, which assume that DP has a negative impact on corporate disclosure and its performance. From an agency theory perspective, separation of chairman and CEO positions reduces agency problems as it encourages managers to make decisions according to shareholders' interests (Fama & Jensen, 1983; Haniffa & Cooke, 2002; Jensen, 1993). Similarly, the resource-dependence theory suggests that separating the positions of CEO and board chairman can improve information disclosed voluntarily because DP can negatively

affect the board's disclosure policies due to a power of position (Alnabsha et al., 2017; Elzahar & Hussainey, 2012). Empirically, this result is in line with previous research (Aljifri et al., 2014; Alnabsha et al., 2017; Alotaibi & Hussainey, 2016a; Babío Arcay & Muiño Vázquez, 2005; Barako et al., 2006; Cheng & Courtenay, 2006; Ghazali & Weetman, 2006; Liu, 2015), who found no significant association between DP and disclosure. However, the result is not compatible with other prior studies (Allegrini & Greco, 2013; Gul & Leung, 2004; Haniffa & Cooke, 2002; Li et al., 2008) who reported a significant and negative association between DP and level of disclosure.

Board Independence (BI)

With regard to BI, in Table 5.4 the regression results show that the proportion of board independence is positively and significantly associated with the QFLID at 5% level of significance *(coef. = .0158821, t = 2.01, p < 0.030)*. Hence, this finding supports hypothesis H1.3, which expects to find a positive relationship between BI and the QFLID. This result is in line with the argument that independent directors act as a mechanism to monitor management's performance and decrease the information asymmetry between managers and owners (Lim et al., 2007). This positive association is consistent with the theoretical underpinnings derived from the agency and resource dependence theories. From the agency theory perspective, the existence of independent directors can decrease information asymmetry between managers and owners (Allegrini & Greco, 2013; Fama & Jensen, 1983; Jensen & Meckling, 1976). Furthermore, resource dependence theory assumes that independent directors obtain external resources through their proficiency, prestige and networking, hence providing various resources such as business contracts, experience and expertise, which lead to improve strategic decision-making of the company (Chen, 2011; Haniffa & Cooke, 2002; Nicholson & Kiel, 2007; Tricker, 1984). A board consisting of more independent directors enables

companies to get hold of crucial resources that can help them to gain a competitive advantage and improve the overall monitoring of management activities, hence improving QFLID.

This result is in line with prior studies (Adams & Hossain, 1998; Chen & Jaggi, 2001; Cheng & Courtenay, 2006; Elshandidy & Neri, 2015; Huafang & Jianguo, 2007; Jallow, Hussainey, & Aljifri, 2012; Lim et al., 2007; Liu, 2015; Patelli & Prencipe, 2007; Samaha et al., 2015; Wang & Hussainey, 2013), which reported BI is positively and significantly associated with voluntary disclosure. On the other hand, this finding contradicts other researchers who found either no association between the two variables (Aljifri et al., 2014; Ebrahim & Fattah, 2015; Kuzey, 2018; O'Sullivan et al., 2008; Uyar & Kilic, 2012), or negatively associated with each other (Barako et al., 2006; Chapple & Truong, 2015; Eng & Mak, 2003; Ghazali & Weetman, 2006; Gul & Leung, 2004; Madhani, 2015).

Frequency of Board Meetings (FBM)

As presented in Table 5.4, there is a positive and significant association between the coefficient of the FBM and QFLID at 1% significance level *(coef. = .0016248, t = 3.95, p < 0.000)*. As expected, this finding supports hypothesis H1.4, which expects to find a significant and positive relationship between the FBM and the QFLID. This result is compatible with the argument that a higher frequency of meetings improves managerial monitoring, thereby leading to a positive influence on disclosure quality (Alnabsha et al., 2017; Alotaibi & Hussainey, 2016a), and positively impacts on corporate performance (Carcello et al., 2002). Theoretically, this finding can be explained by the agency theory perspective; an increase in the frequency of board meetings enables the board to monitor management activities more effectively, hence reducing agency conflicts (Xie et al., 2003). Increased monitoring reduces information asymmetry and agency costs, thereby leading to increased disclosure (Nelson et al., 2010). Empirically, this finding is in line with previous research (Alnabsha et al., 2017; Barros et al., 2013; Brick &

Chidambaran, 2010; Kent & Stewart, 2008; Laksmana, 2008) who report a positive relationship between these two variables.

Female Presence on the Board (FPB)

Table 5.4 presents that the coefficient of FPB is positively and significantly associated with the QFLID at 1% level of significance *(coef. = . 0467019, t = 3.48, p < 0.001)*. This result supports the alignment of interest hypothesis H1.5, which proposes a positive relationship between the FPB and the QFLID among Indian listed companies. It supports the idea that FPB explains the disclosure practices in annual reports of companies (Gibbins, Richardson, & Waterhouse, 1990). This result is according to the perspective of the agency theory, which assumes that board gender diversity enhances board efficiency and prevents managers exploiting shareholders' wealth by improving board independence.(Barako & Brown, 2008; Carter et al., 2003b; Elzahar & Hussainey, 2012). Similarly, from a resource-dependence theory perspective, board diversity improves the relationship between companies and their external environment which leads to improved disclosure quality (Hillman et al., 2000; Pfeffer, 1972). In the same vein, prior studies suggest that the presence of female directors on a board increases reporting transparency (Bear, Rahman, & Post, 2010; T. Donaldson & Preston, 1995; Estélyi & Nisar, 2016), and improves the reliability of the board and corporate legitimacy (Ashforth & Gibbs, 1990; Liao et al., 2015).

Empirically, the significant and positive result is consistent with Barako & Brown (2008); Chapple & Truong (2015); Kuzey (2018) and Liao et al. (2015) who reported a positive and significant association between gender diversity and voluntary disclosure. Sartawi et al. (2014), however, found no relationship between the two variables.

5.4.1.2. Ownership Structure

Ownership structure has been suggested as an important determinant of better CG practices (Konijn et al., 2011; La Porta et al., 1999). Nevertheless, prior study results on the relationship between ownership structure and voluntary disclosure are inconclusive (Bebchuk & Weisbach, 2010). The sections below discuss ownership structures: block ownership; institutional ownership and promoters' ownership and their relationship with QFLID.

Blockholder Ownership (BloOwn)

The statistical results shown in Table 5.4 indicate that BloOwn is not associated with the QFLID in the annual reports of Indian companies *(coef. = -. 0066745, t = -1.50, p < 0.125)*. The result highlights no significant association between BloOwn and the QFLID, hence rejects hypothesis H1.6, which expects to find a negative association between them. Theoretically, the result related to BloOwn conflicts with the agency theory perspective, which suggests that BloOwn is estimated to reduce the probability of introducing more voluntary disclosure in annual reports (Eng & Mak, 2003). This finding is in line with previous studies (Abdelbadie & Elshandidy, 2013; Alqatamin et al., 2017; Eng & Mak, 2003; Hidalgo et al., 2011; Nekhili et al., 2012; Nekhili et al., 2016) who found no significant association between disclosure and BloOwn. However, the finding is inconsistent with some previous studies which found a negative association between BloOwn and voluntary disclosure (Al-Najjar & Abed, 2014; Garcia-Meca & Sanchez-Ballesta, 2010; McKinnon & Dalimunthe, 1993; Mitchell et al., 1995; Schadewitz & Blevins, 1998).

Institutional Ownership (InsOwn)

With respect to the InsOwn, Table 5.4 shows the influence of InsOwn on the QFLID *(coef. = -.0126049, t = -0.25, p < 0.212)*. The result shows that the InsOwn has no impact on the QFLID. Accordingly, the statistical result does not empirically support the hypothesis H1.7:

which proposes a positive and significant relationship between InsOwn and the QFLID. Theoretically, this finding is not in line with the agency theory, which assumes that managers disclose more information to reduce mangers' and institutional shareholders' conflicts (Alnabsha et al., 2017; Yoshikawa & Rasheed, 2009). It is also against the view that companies with large InsOwn suffer less from agency problems (Shleifer & Vishny, 1986). In the same vein, the insignificant association is not in line with the view that institutional investors benefit by monitoring the disclosure process because of their huge stake (Barako et al., 2006).

This result is consistent with prior studies such as Charumathi & Ramesh (2015a); Jouini (2013) and Wang & Hussainey (2013) who reported no association between InsOwn and the FLID. However, it conflicts with Barako et al. (2006); Guan et al. (2007); Mathuva (2012b) and Al-Bassam et al. (2015) who found a positive relationship between InsOwn and voluntary disclosure. Alqatamin et al. (2017) found a negative and significant association between InsOwn and the extent of FLID.

Promoters' Ownership (ProOwn)

Regarding the coefficient of ProOwn, the result found no association between ProOwn and the QFLID among Indian companies *(coef. = . 0153797, t = 1.49, p < 0.136)*. This finding does not confirm that companies with higher promoters' holdings have less incentive to disclose more information (Charumathi & Ramesh, 2015a). Hence, hypothesis H1.8 is rejected, which assumes negative relationship between level of ProOwn and QFLID. The insignificant finding is compatible with Charumathi & Ramesh (2015a) who found no significant association between ProOwn and FLID levels in Indian companies.

5.4.1.3. Audit Committee

The audit committee is the most important subcommittee of the board of directors. It monitors the reporting processes of financial and non-financial information; therefore, it could affect the

corporate disclosure by reducing the information asymmetry (Li et al., 2012). From the perspective of agency theory, the audit committee can be considered as an instrument to reduce agency costs (Ho & Wong, 2001b; Klein, 1998). In line with Zaman et al. (2011), this study used five dimensions to assess the audit committee effectiveness, namely audit committee size, audit committee independence, frequency of audit committee meetings, audit committee financial expertise, and ratio of females on the audit committee.

Audit Committee Size (ACSIZE)

With respect to ACSIZE, Table 5.4 indicates that the coefficient estimate on ACSIZE is insignificant with the QFLID *(coef. = -.0093003, t = -1.33, p < 0.183)*. Accordingly, the result of the current study does not support hypothesis H1.9, which postulates a significant positive relationship between ACSIZE and the QFLID among Indian listed companies. Theoretically, it is against the predictions of agency theory, which suggests that companies with an efficient audit committee disclose more information to reduce agency costs (Alotaibi & Hussainey, 2016a; Barako et al., 2006). Empirically, this result is in line with the findings reported by Aljifri & Hussainey (2007) and Magena & Pike (2005), who found no association between ACSIZE and FLID. However, the result is not in line with previous research (Abeysekera, 2010; Al-Bassam et al., 2015; Albitar, 2015; Allegrini & Greco, 2013; Beasley, 1996; Hidalgo et al., 2011; Laksmana, 2008; Li et al., 2008; Ntim et al., 2013; O'Sullivan et al., 2008; Samaha et al., 2015) which found a significant and positive relationship between ACSIZE and the extent of disclosure.

Audit Committee Independence (IAC)

Table 5.4 illustrates that the IAC is positively and significantly associated with the QFLID at a 10% significance level *(coef. = . 0013521, t = 1.66, p < 0.097)*. This result is in line with the argument that the IAC can improve the quality of disclosure to ensure the accurate evaluation of management performance (Cerbioni & Parbonetti, 2007; Forker, 1992; Ho & Shun Wong,

2001). Hence, this result accepts hypothesis H1.10, which proposes a significant and positive relationship between IAC and the QFLID. This result supports the agency theory perspective, that audit committee independence reduces agency costs, hence improving the extent of FLID. This result matches with earlier studies, such as Aljifri et al. (2014) and Ho & Wong (2001), who reported a positive and significant relationship between IAC and the extent of FLID.

Frequency of Audit Committee Meetings (ACM)

The regression results of the study found a strong positive and significant association between ACM and QFLID at 1% level of significance *(coef. = . 0017793, t = 2.89, p < 0.004)*. As expected, this finding supports hypothesis H1.11, which expects to find a positive relationship between the variables. This result highlights that ACM is a source to provide managers with useful information continuously. Moreover, ACM improves monitoring of financial statements, assures their accuracy, and improves audit quality (Beasley et al., 2009). In other words, as ACM increases monitoring, so it generates a higher quality of financial reporting (G. Chen et al., 2006). Theoretically, this finding can be explained by the agency theory; a rising audit committee activity, represented by frequency of meetings, enables an audit committee to improve its monitoring which reduces agency costs (Xie et al., 2003). Increased monitoring reduces information asymmetry and lowers agency costs, hence leading to increased disclosure (Nelson et al., 2010). Empirically, the positive and significant finding supports the results of previous studies such as Barros et al. (2013); Beasley et al. (2009); Bronson et al. (2006); Karamanou & Vafeas (2005) and Kelton & Yang (2008). However, this finding is inconsistent with Alhazaimeh et al. (2014); Madi et al. (2014) ; Othman et al. (2014) who reported no association between these two variables.

Audit Committee Financial Expertise (ACEXP)

Regarding ACEXP, Table 5.4 shows no significant relationship between ACEXP and the QFLID *(coef. = .0039175, t = 0.37, p < 0.710)*, meaning that the financial expertise of audit committees does not reflect the QFLID in the annual reports of Indian companies. Accordingly, the study rejects hypothesis H1.12, which expects to find a positive association between ACEXP and the QFLID. This outcome is not in line with agency theory, which assumes that the experienced audit committee is viewed as one of the monitoring agents within a company which improves the quality of financial reporting (Fama, 1980; Fama & Jensen, 1983; Vafeas, 2000) and is useful in reducing agency costs (Archambeault, DeZoort, & Hermanson, 2008). In the same vein, this result is not in line with the argument that the audit committee's financial expertise acts as a valuable tool in reducing financial misstatements (Abbott et al., 2004; Beasley et al., 2009; Cohen et al., 2004) and evaluating the quality of financial reporting (Chen et al., 2006; Cohen et al., 2004).

Empirically, this result is incompatible with past studies (Abbott et al., 2004; Kelton & Yang, 2008; Krishnan & Visvanathan, 2006; Liu, 2015; Smith, 2003) who found a positive and significant association between ACEXP and disclosure.

Female Presence on the Audit committee (FPAC)

Table 5.4 reports a positive and significant relationship between FPAC and the QFLID at a 10% significance level *(coef. = . 0186448, t = 1.70, p < 0.090)*. Therefore, the study accepts hypothesis H1.13, which expects significant positive relationship between FPAC and the QFLID among Indian listed companies. Additionally, the result supports agency theory, which suggests gender diversity improves monitoring of management operations and reduces the issue of information asymmetry (Carter et al., 2003a; Walt & Ingley, 2003). It also plays a vital role in attaining crucial resources from dominant stakeholders (Ntim & Soobaroyen, 2013) and raising the board's reliability and the legitimacy of the company (Bear et al., 2010).

5.4.1.2. Control Variables (Firm-Specific Characteristics)

This study uses six corporate characteristics, namely Firm size (CSIZE), Leverage (LEVE), Profitability (PRO), Liquidity (LIQUID), Growth (GROW) and Industry type (IndType) as control variables. Table 5.4 presents statistical results of company characteristics derived by using the panel data model. The multivariate findings reported that three firm-specific characteristics (size, profitability, growth and liquidity) are significantly associated with the QFLID, while leverage and industry type are not significant with the QFLID in Indian listed companies.

The result of CSIZE coefficient shows that CSIZE is positively and significantly associated with the QFLID *(coef. = . 070423, t = 32.80, p < 0.000)*. This result is compatible with earlier research (Albitar, 2015; Aljifri et al., 2014; Alkhatib, 2014; Al-Najjar & Abed, 2014; Barako, 2007; Celik et al., 2006; Dembo & Rasaratnam, 2014; Eng & Mak, 2003; Ferguson et al., 2002; Haniffa & Cooke, 2002; Hossain et al., 2005; Kent & Ung, 2003; Khlif & Hussainey, 2016; Liu, 2015; Soliman, 2013; Uyar & Kilic, 2012; Wang & Hussainey, 2013) who provide evidence of a positive influence of CSIZE on corporate disclosure.

The regression result of PRO coefficient, in Table 5.4, illustrates that PRO has a positive and significant impact on the QFLID among Indian companies at the level of 1% *(coef. = .0243281, t = 3.14, p < 0.002)*. The result of the current study is in line with prior research which found a positive relationship between PRO and corporate disclosure (Albitar, 2015; Cerbioni & Parbonetti, 2007; Charumathi & Ramesh, 2015a; Ghazali & Weetman, 2006; M. Haniffa & Cooke, 2002; Khlif & Hussainey, 2016; Mathuva, 2012b; Soliman, 2013; Wang & Hussainey, 2013). Regarding LEVE, the results in Table 5.4 present no significant relationship between LEVE and the QFLID in the annual reports of Indian companies *(coef. = -.0032019, t = -0.64, p < 0.524)*. The finding of the study is consistent with earlier research (Abraham & Cox, 2007; Al-Najjar & Abed, 2014; Celik et al., 2006; Chow & Wong-Boren, 1987; Ho & Wong, 2001a;

Huafang & Jianguo, 2007; Menicucci, 2013a; Nekhili et al., 2012; Nekhili et al., 2016; Nor et al., 2010; Uyar & Kilic, 2012; Wallace et al., 1994) which found no significant relationship between LEVE and the extent of disclosure in annual reports.

In respect to LIQU, the regression result in Table 5.4 shows that LIQU and the QFLID is negatively and significantly associated at a 1% significance level in annual reports of Indian companies *(coef. = -.0015061, t = -3.43, p < 0.001)*. The outcome of the present research is compatible with Wallace et al. (1994); Naser et al. (2002) and Menicucci (2013c) who provide evidence of negative association between LIQU and disclosure level. With regard to growth the regression result in Table 5.4 shows that GROW and the QFLID is negatively and significantly associated at a 1% significance level in annual reports of Indian companies *(coef. = -.005453, t = -3.08, p < 0.001)*. Regarding IndType, Table 5.4 shows that IndType is insignificantly associated with QFLID in annual reports of Indian companies *(coef. = . 0000221, t = 0.06, p < 0.949)*. The finding supports the results of Aljifri & Hussainey (2007); Alqatamin et al. (2017); Eng & Mak (2003); and Mathuva (2012b).

Table 5. 4 Regression analysis of the association between CG mechanisms and QFLID

QFLID	Coefficient	Std. Err	t- Statistics	P ItI	[95% Conf.	Interval
BSIZE	.0013898	.0004104	3.39	0.001***	.0005848	.0021947
DP	.0001386	.0026724	0.05	0.959	-.0051026	.0053797
FBM	.0016248	.0004115	3.95	0.000***	.0008178	.0024318
BI	.0158821	.0079019	2.01	0.030**	.0003847	.0313795
FPB	.0467019	.0134034	3.48	0.001***	.0204148	.072989
BloOwn	-.0066745	.0089365	-1.50	0.125	-.0031852	.0232016
InsOwn	.0126049	.0101036	1.25	0.212	.0324203	.0072105
ProOwn	-.0153797	.0103019	-1.49	0.136	-.0048245	.0355839
ACSIZE	-.0093003	.0069778	-1.33	0.183	-.0229854	.0043848
ACM	.0017793	.0006161	2.89	0.004***	.000571	.0029876
IAC	.0013521	.0008138	1.66	0.097*	-.000244	.0029483
ACFEXP	.0039175	.0105508	0.37	0.710	-.0246101	.016775
FPAC	.0186448	.0109832	1.70	0.090*	-.0028956	.0401852
LEVE	-.0032019	.0050227	-0.64	0.524	-.0130525	.0066487
PROF	.0243281	.007742	3.14	0.002***	.0091443	.0395119
LIQU	-.0015061	.0004394	-3.43	0.001***	-.0023678	-.0006443
GROW	-.005453	.0017699	-3.08	0.002***	-.0089242	-.0019819
CSIZE	.070423	.0021511	32.74	0.000***	.0662043	.0746418
IndType	.0000221	.0003454	0.06	0.949	-.0006552	.00006994
R^2. Adjusted			0.4839			
P. Value			0.0001			

QFLID *denotes the quality of forward-looking disclosure.* ***BSIZE*** *denotes board size, measured by the number of board members.* ***DP*** *denotes the CEO duality, a dummy variable: 1 if company's CEO serves as a board chairman, 0 otherwise.* ***FBM*** *denotes the frequency of board meetings during the year.* ***BI*** *denotes the independence of board, measured by the ratio of the number of independent non-executive directors to the total number of board members.* ***FPB*** *denotes the ratio of females' presence on the board of directors.* ***BloOwn*** *denotes blockholder ownership, measured by the ratio of shares held by blockholder (5% or more).* ***InsOwn*** *denotes institutional ownership, measured by the ratio of shares held by institutional.* ***ProOwn*** *denotes promoter ownership, measured by the ratio of shares held by promoters.* ***ACSIZE*** *denotes audit committee size, measured by the number of audit committee members.* ***ACM*** *denotes the frequency of audit committee meetings during the year.* ***IAC*** *denotes the independence of the audit committee, measured by the ratio of independent non-executive directors on the audit committee.* ***ACFEXP*** *denotes audit committee financial experts, measured by the ratio of audit committee members with financial experience to audit committee size.* ***FPAC*** *is the ratio of females' presence in the audit committee.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt at the end of the year to total assets at the end of year. PROF denotes profitability.* ***LIQU*** *denotes liquidity, measured as the ratio of the company's current assets to its current liabilities.* ***GROW*** *is firm growth.* ***CSIZE*** *denotes Firm size, measured by the natural logarithm of total assets.* ***IndType*** *denotes industry type; the sample in this study is divided into eleven types of industry and is coded from 1 to 11.*

**** Significant at the 1% level or better; ** Significant at the 5% level or better; * Significant at the 10% level or better.*

Table 5. 5 Summary of the Hypothesis Results Related to CG and QFLID

No	Hypothesis	Expected Relation
H1.1	There is a significant positive association between board size and QFLID among Indian listed companies.	Accepted
H1.2	CEO duality and the QFLID are negatively and significantly associated among Indian listed companies.	Rejected
H1.3	There is a significant positive association between the percentage of board independence and the QFLID among Indian listed companies.	Accepted
H1.4	There is a significant positive association between the number of meetings and the QFLID among Indian listed companies.	Accepted
H1.5	There is a significant positive association between the percentage of the presence of females on the board and the QFLID among Indian listed companies.	Accepted
H1.6	There is a negative association between the level of block holder ownership and the QFLID among Indian listed companies.	Rejected
H1.7	There is a positive association between institutional ownership and the QFLID among Indian listed companies.	Rejected
H1.8	There is a negative association between promoter ownership and the QFLID among Indian listed companies.	Rejected
H1.9	There is a significant positive association between the audit committee size and the QFLID among Indian listed companies.	Rejected
H1.10	There is a positive association between audit committee independence and the QFLID among Indian listed companies.	Accepted
H1.11	There is a positive association between the frequency of audit committee meetings and the QFLID among Indian listed companies.	Accepted
H1.12	There is a positive association between audit committee financial expertise and the QFLID among Indian listed companies.	Rejected
H1.13	There is a significant positive association between the percentage of females' presence on the audit committee and the QFLID among Indian listed companies.	Accepted

5.5. Aditional Analysis:

To examine the robustness of the obtained outcomes, additional sensitivity tests are performed to check the robustness of the prime analysis and, therefore, to confirm the reliability of the findings. Sensitivity analysis is meant to examine how sensitive the findings are towards using alternative model specifications or changing the statistical tests in the determination of the QFLID. In order to avoid the correlation between block holder ownership (BloOwn) and promoters' ownership (ProOwn), as well as to examine whether the main findings are changed or not, Model 1 of Table 5.4 is re-estimated by excluding block holder ownership (BloOwn) as reported in Table 5.6.

Table 5.6 shows that the results of the impact of CG mechanisms and some of the control variables on the QFLID after excluding BloOwn are consistent with the primary findings presented in Table 5.4, showing that the main findings are reliable and robust under the exclusion of BloOwn. This confirms that excluding BloOwn does not have an emotional impact on the primary findings of CG mechanisims and other control variables on the QFLID, which is similar to the primary finding. Overall, the results reported in Table 5.7 remain essentially the same as those contained in the main model of Table 5.4.

Table 5. 6 Regression analysis of the association between CG mechanisms and QFLID

QFLID	Coefficient	Std. Err	t- Statistics	P ItI	[95% Conf.	Interval
BSIZE	.0014276	.0004105	3.48	0.001***	.0006226	.0022326
DP	.0001358	.0026544	0.12	0.961	-.0055215	.00489
FBM	.0016248	.0004115	3.95	0.000***	.0008178	.0024318
BI	.0158821	.0079019	2.01	0.028**	.0003847	.0313795
FPB	.0467019	.0134034	3.69	0.000***	.0204148	.072989
InsOwn	.0100361	.097431	1.03	0.303	.0291444	.0090722
ProOwn	-.014596	.0096762	-1.51	0.132	-.0043812	.0335731
ACSIZE	-.0093003	.0069778	-1.33	0.125	-.0229854	.0043848
ACM	.0017793	.0006161	2.89	0.004***	.000571	.0029876
IAC	.0013521	.0008138	1.66	0.097*	-.000244	.0029483
ACFEXP	.0039175	.0105508	0.37	0.828	-.0246101	.016775
FPAC	.0186448	.0109832	1.70	0.090*	-.0028956	.0401852
LEVE	-.0032019	.0050227	-0.54	0.592	-.0130525	.0066487
PROF	.0243281	.007742	3.08	0.005***	.0091443	.0395119
LIQU	-.0015061	.0004394	-3.43	0.002***	-.0023678	-.0006443
GROW	-.005453	.0017699	-3.08	0.002***	-.0089242	-.0019819
CSIZE	.070423	.0021511	32.74	0.000***	.0662043	.0746418
IndType	.0000973	.0003456	0.29	0.774	-.0006552	.00006994
R^2. Adjusted			0.4832			
P. Value			0.0001			

QFLID *denotes the quality of forward-looking disclosure.* ***BSIZE*** *denotes board size, measured by the number of board members.* ***DP*** *denotes the CEO duality, a dummy variable: 1 if company's CEO serves as a board chairman, 0 otherwise.* ***FBM*** *denotes the frequency of board meetings during the year.* ***BI*** *denotes the independence of board, measured by the ratio of the number of independent non-executive directors to the total number of board members.* ***FPB*** *denotes the ratio of females' presence on the board of directors.* ***InsOwn*** *denotes institutional ownership, measured by the ratio of shares held by institutional.* ***ProOwn*** *denotes promoter ownership, measured by the ratio of shares held by promoters.* ***ACSIZE*** *denotes audit committee size, measured by the number of audit committee members.* ***ACM*** *denotes the frequency of audit committee meetings during the year.* ***IAC*** *denotes the independence of the audit committee, measured by the ratio of independent non-executive directors on the audit committee.* ***ACFEXP*** *denotes audit committee financial experts, measured by the ratio of audit committee members with financial experience to audit committee size.* ***FPAC*** *is the ratio of females' persence in the audit committee.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt at the end of the year to total assets at the end of year.* ***PROF*** *denotes profitability.* ***LIQU*** *denotes liquidity, measured as the ratio of the company's current assets to its current liabilities.* ***GROW*** *is firm growth.* ***CSIZE*** *denotes Firm size, measured by the natural logarithm of total assets.* ***IndType*** *denotes industry type; the sample in this study is divided into eleven types of industry and is coded from 1 to 11.*

**** Significant at the 1% level or better; ** Significant at the 5% level or better; * Significant at the 10% level or better.*

5.6. Endogeneity Problems

If one or more variables are linked with error terms, that leads to endogeneity problems (Gippel, Smith, & Zhu, 2015; Reeb, Sakakibara, & Mahmood, 2012; Schultz, Tan, & Walsh, 2010). The validity of findings from regression results becomes contradictory in the presence of endogeneity (Larcker & Rusticus, 2010; Wintoki, Linck, & Netter, 2012).

As stated by Wang & Hussainey (2013), a positive relationship between CG and extent of FLID may occur due to imperfectly measured factors, hence impacting both governance and disclosure. Ammann et al. (2011a) highlight that an endogeneity problem makes it difficult to examine the impact of CG on corporate voluntary disclosure and financial performance.

There are three main errors that occur due to endogeneity, termed as: simultaneity, omitted variables and measurement errors (Brown & Hillegeist, 2007; Choi, Lee, & Park, 2013; Moumen, Othman, & Hussainey, 2015; Ntim et al., 2013; Reeb et al., 2012; Schultz et al., 2010). Firstly, the error of simultaneity occurs when a dependent variable affects one or more explanatory variables (Choi, Kwak, & Choe, 2010; Gippel et al., 2015; McKnight & Weir, 2009; Ntim et al., 2012; Schultz et al., 2010). Secondly, the omission of variables arises when some unobserved omitted variables that are involved in regression that are have an impact on the association of two or more variables; such omitted variables are difficult to quantify (Ntim et al., 2012; Schultz et al., 2010; Wooldridge, 2015). Finally, if the key variables are not measured accurately, the study will lead to measurement error (Gippel et al., 2015; Larcker & Rusticus, 2010; Omar & Simon, 2011). The endogeneity problem must be taken into consideration as it leads to inefficient, inconsistent and biased inferences while examining the relationship between CG mechanisms and the QFLID.

In order to address endogeneity problems, earlier research has used two econometric methods (Ammann, Oesch, & Schmid, 2011b; Beiner et al., 2006; Carter et al., 2003b; Moumen et al., 2015; Ntim et al., 2012; Ntim, 2015; Sheu et al., 2010; Shi et al., 2014). Firstly, employing a

lagged structure to tackle the simultaneity error and omitted variables (Ammann et al., 2011b; Elmagrhi et al., 2016; Ntim et al., 2012). Then, an Instrumental Variable (IV) is used to deal with issues occurring due to measurement errors and omitted variables (Black et al., 2006; Renders, Gaeremynck, & Sercu, 2010). Based on this, the present study uses the lagged values of the endogenous independent variable (CG) as an IV to investigate whether or not the endogeneity issue affects the relationship between CG and the QFLID.

The study conducts Durbin and Wu-Hausman tests to examine whether there is an existence of biasedness for independent and endogenous variables (Beiner et al., 2006; Elmagrhi et al., 2016; Gujarati, 2008; Moumen et al., 2015; Ntim, 2015). The test presents that the null hypothesis which expects no endogeneity between CG (independent variable) and FLID (dependent variable) is rejected (see appendix 5.3). Therefore, the existence of such a problem may affect the findings thus leading to ineffective, biased and inconsistent results. The result of the two-stage (2SLS) regression of CG on QFLID is reported in Table 5.7.

Table 5.7 presents that coefficients of explanatory variables in the lagged model have similar significance and magnitude as the un-lagged structure estimation model in Table 5.4. The findings of the instrumental variable two-stage model are compatible with the main outcomes presented in Table 5.4, indicating that an endogeneity problem between CG mechanisims and QFLID does not impact the primary findings of CG mechanisims and other control variables on the QFLID. Overall, the robustness analyses denote that the findings of the present research are fairly robust.

Table 5. 7 Instrumental variables Two-Stage (2SLS) regression model based on QFLID

QFLID	Coefficient	Std. Err	t- Statistics	P ItI	[95% Conf.	Interval
BSIZE	.0002798	.0007359	2.38	0.051**	-.0011625	.0017221
DP	.0023848	.004175	0.57	0.568	-.0105676	.005798
FBM	.0017658	.00013543	1.98	0.090*	.0008887	.0044202
BI	.0557027	.0200437	2.78	0.005***	.0949877	.0164178
FPB	.0807793	.0311046	2.60	0.009***	.0198155	.1417431
BloOwn	.0093216	.0089365	1.30	0.218	-.041852	.033201
InsOwn	.0260493	.0161367	1.45	0.115	.0324987	.0172675
ProOwn	-.0153797	.0115437	-2.34	0.097*	-.1401675	-.0660728
ACSIZE	-.0038572	.0028155	-1.37	0.171	-.0093754	.001661
ACM	.0012761	.0018369	1.69	0.087*	.0048763	.0023242
IAC	.0012407	.0016019	1.50	0.099*	-.008976	.0538174
ACFEXP	.0044971	.0206511	0.22	0.828	-.0359782	.0449725
FPAC	.073406	.0275177	2.67	0.008***	.0194722	.1273397
LEVE	.0298324	.0077671	0.84	0.000***	.146091	.0450556
PROF	.0680175	.0173358	3.92	0.000***	.03404	.101995
LIQU	-.0056774	.001024	-5.54	0.000***	-.0076844	-.0036704
GROW	-.005453	.0017699	-3.01	0.009***	-.0089242	-.0019819
CSIZE	.0021485	.0027809	0.77	0.440	.0075989	.0033019
IndType	.0000568	.0034348	0.14	0.880	-.0006678	.00006765
R^2. Adjusted	0.3645					
P. Value	0.0001					

QFLID *denotes the quality of forward-looking disclosure.* ***BSIZE*** *denotes board size, measured by the number of board members.* ***DP*** *denotes the CEO duality, a dummy variable: 1 if company's CEO serves as a board chairman, 0 otherwise.* ***FBM*** *denotes the frequency of board meetings during the year.* ***BI*** *denotes the independence of board, measured by the ratio of the number of independent non-executive directors to the total number of board members.* ***FPB*** *denotes the ratio of females' presence on the board of directors.* ***BloOwn*** *denotes blockholder ownership, measured by the ratio of shares held by blockholder (5% or more).* ***InsOwn*** *denotes institutional ownership, measured by the ratio of shares held by institutional.* ***ProOwn*** *denotes promoter ownership, measured by the ratio of shares held by promoters.* ***ACSIZE*** *denotes audit committee size, measured by the number of audit committee members.* ***ACM*** *denotes the frequency of audit committee meetings during the year.* ***IAC*** *denotes the independence of the audit committee, measured by the ratio of independent non-executive directors on the audit committee.* ***ACFEXP*** *denotes audit committee financial experts, measured by the ratio of audit committee members with financial experience to audit committee size.* ***FPAC*** *is the ratio of females' presence in the audit committee.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt at the end of the year to total assets at the end of year.* ***PROF*** *denotes profitability.* ***LIQU*** *denotes liquidity, measured as the ratio of the company's current assets to its current liabilities.* ***GROW*** *is firm growth.* ***CSIZE*** *denotes Firm size, measured by the natural logarithm of total assets.* ***IndType*** *denotes industry type; the sample in this study is divided into eleven types of industry and is coded from 1 to 11.*

**** Significant at the 1% level or better; ** Significant at the 5% level or better; * Significant at the 10% level or better.*

5.7. Summary

To achieve the first objective of the current research, this chapter examines the association between CG mechansims and QFLID in non-financial Indian listed companies for the period 2006-2015. In doing so, this study used three CG mechanisms, namely board of directors' characteristics (board size, CEO duality, board meeting, board independence and presence of female members on the board), ownership structure (blockholder ownership, institution ownership and promoters' ownership) and audit committee (audit committee size, audit committee independence, audit committee financial expertise, audit committee meetings and females' presence on the audit committee). Furthermore, this study uses the firm's characteristics (firm size, profitability, leverage, liqudity, growth and industry type) as control variables to include in the regression model. In general, the results show that CG variables are associated with QFLID. Moreover, the study uses previous literature and theoretical framework related to CG mechanisms and QFLID to explain the result of the regression model.

Additionally, the findings related to endogeneity problems showed no impact on the main statistical analysis. Sensitivity analysis confirms the consistency and generalisation of this study's findings.

Chapter Six: The consequences of QFLID

6.1. Introduction

The present chapter focuses on the consequences of QFLID and addresses the second and third objectives. In doing so, the chapter is classified into two sections. **The first section, 6.4,** deals with the second objective, examining the impact of QFLID on FV. **The second section, 6.5,** deals with the third objective, examining the impact of QFLID on ACUAF. To achieve this purpose, this chapter begins with descriptive statistics in section 6.2, followed by multicollinearity in section 6.3. Section 6.4 discusses the results and dissection of examining the impact of QFLID on FV. Section 6.5 covers the results and dissection of examining the impact of QFLID on ACUAF. Moreover, section 6.6 provides additional analyses. Section 6.7 provides the robustness test. Section 6.8 deals with the endogeneity problem and, finally, the chapter ends with the summary in section 6.9.

6.2. Descriptive Statistics

The total number of observations; mean, median, standard deviation, minimum and maximum values for all variables utilised in this study, are presented in Table 6.1.

Regarding the dependent variable TQ ratio (as proxy for FV), Table 6.1 illustrates that the TQ ratio ranges from 0.011 to 9.787 with an average of 1.940 for the overall sample, and with a median of 1.415. This finding is closer to the result of Ganguli & Agrawal (2009), who reported a value of 2.083 and 1.778 value for the mean and median of the TQ ratio respectively, among Indian listed companies. Likewise, this outcome is consistent with the findings of Clacher et al. (2008), who documented that the overall mean of the TQ ratio is 1.38 among UK listed companies. Similarly, Darko et al. (2016) reported that the average of the TQ ratio is 1.45 among Ghanaian listed firms. In addition, the result is relatively similar to the finding of Chung

et al. (2015), who report that the mean value is 1.40 among Taiwanese companies and ranges from 0.29 to 12.87.

Concerning the dependent variable ACUAF, Table 6.1 illustrates that the ACUAF ratio ranges from -.767 to .000 with an average of -.036 for the overall sample, and with a median of -.002. The result is relatively similar to the findings of Lang & Lundholm (1996) who report that the mean value is -.042.

In terms of the independent variable (QFLID), the maximum FLID score is 68% while the minimum score is 0%, which is similar to the results of Aljifri and Hussainey (2007). They reported that value of FLID ranges from 0% to 70% among UAE firms. The mean value of the QFLID is 50.70%, which is higher than the averages reported by Bozanic et al (2013); Charumathi & Ramesh (2015a) and Menicucci (2013c), who documented that the overall mean of FLID is 31.4%, 42.12% and 32.5% in US, Indian and Italian companies respectively. Notably, the average is closer to Sartawi et al. (2014), who reported that the overall mean of voluntary disclosure in Jordanian companies was 49%. Furthermore, the median value of QFLID is 51.49%, which is closer to Nalikka's (2009) score of 50.46% among Finnish listed companies.

Regarding control variables (firm characteristics); the average company size is 7.595252 ranging widely from 5.115201 to 9.744242. In addition, leverage ranges from .00036% to 99%, with a mean leverage value of 51.96%. The table also shows that the overall mean of liquidity (current ratio) is 2%, with a minimum value of 0.13 and a maximum value of 22. Furthermore, profitability ranges from -84% (loss) to 99% (profit) with a mean of 10%. GROW ranges from -.49 to 2.57 with a mean of .25. Concerning the industry type, the minimum and maximum values are 1 and 11, respectively.

Table 6. 1 Descriptive statistics

Variable	N	Mean	Median	SD.	Max	Min
TQ ratio	2120	1.940082	1.415526	1.572902	9.78762	.011101
ACUAF	2120	-.03692	-.0021926	0.157592	0	-.767487
QFLID	2120	.5070467	.5149583	.0764422	.6852885	0
LEVE	2120	.5196675	.5610039	.2319884	.9933107	.0003641
LIQU	2120	2.050434	1.6	1.676653	22	.13
PROF	2012	.1016844	.0859759	.1019813	.991509	-.84
GROW	2012	.2578197	.1900197	.330587	2.571437	-.4916848
FSIZE	2120	7.595252	7.557725	.6993978	9.744242	5.115201
IndType	2120	4.662736	4	2.795015	11	2

TQ ratio *denotes the Tobin's Q, used as proxy to measure FV.* ***ACUAF*** *denotes the accuracy of analyst forecast.* ***QFLID*** *denotes the quality of forward-looking disclosure.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt divided by its total assets.* ***LIQU*** *denotes liquidity, measured through the current assets of the firm divided by its current liabilities.* ***PROF*** *denotes profitability, measured by ROA.* ***GROW*** *denotes firm growth, measured by the ratio change of sales.* ***FSIZE*** *denotes Firm size, measured through the natural log of the firm's total assets.* ***IndType*** *denotes industry type; the sample in this study is divided into eleven types of industry and is coded from 1 to 11.*

6.3. Multicollinerity

Before conducting the regression analysis, this research tested whether there is any multicollinearity issue between independent variables. As mentioned earlier in Chapter Five, the present study used the correlation matrix and VIF with Tolerance. The correlation matrix is considered to be a powerful instrument for investigating the association among the explanatory variables. Researchers have different views regarding the cut-off correlation percentage (Alsaeed, 2006). Some of them, such as Tabachnick et al. (2001), consider 70% as serious correlation, while others consider 80% as the cut-off point for correlation; among these are Alsaeed (2006) and Gujarati (2003; 2008). In addition, Gujarati (2009), Field (2009), and

Gujarati (2003), highlight that if the VIF value is greater than 10 and the coefficient of Tolerance is above 10%, multicollinearity is expected to be a problem.

Tables 6.2 and 6.3 below illustrate the correlation matrix between independent variables (QFLID and control variables). The results presented in Tables 6.2 and 6.3 illustrate that the highest correlations are between the LEVE and LIQU, with a coefficient of 22.1%, and between LEVE and PROF, with a coefficient of 25.9%, respectively. These are less than the cut-off correlation percentage, indicating that there is no multicollinearity between independent variables (Gujarati, 2008; Tabachnick et al., 2001). Therefore, the problem of multicollinearity does not exist among the data set used in these models. Furthermore, the outcomes of the VIF test, reported in Tables 6.4 and 6.5, show that the maximum values of VIF are very low (1.11) and (1.05), with means of 1.15 and 1.07, respectively. Thus, the findings of the VIF test confirm that the multicollinearity problem does not exist in these models.

Table 6. 2 Correlation Matrix (QFLID and TQ ratio).

	TQ ratio	**QFLID**	**LEVE**	**LIQU**	**GROW**	**FSIZE**	**IndType**
TQ ratio	1.000						
QFLID	0.024	1.000					
LEVE	-0.005	0.113***	1.000				
LIQU	0.052**	-0.140***	-0.221***	1.000			
GROW	-0.028	0.058**	0.008	0.109***	1.000		
FSIZE	-0.191***	0.032	-0.044*	-0.164***	-0.019	1.000	
IndType	0.013***	-0.092**	-0.098**	0.008	0.005	-0.001	1.000

TQ ratio *denotes the Tobin's Q, uses as proxy to measure FV.* ***QFLID*** *denotes the quality of forward-looking disclosure.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt divided by its total assets.* ***LIQU*** *denotes liquidity, measured through the current assets of the firm divided by its current liabilities.* ***PROF*** *denotes profitability, measured by ROA.* ***GROW*** *denotes firm growth, measured by the ratio change of sales.* ***FSIZE*** *denotes Firm size, measured through the natural log of firm's total assets.* ***IndType*** *denotes industry type, the sample in this study is divided into eleven types of industry and is coded from 1 to 11. *** Significant at the 0.01 level; ** Significant at the 0.05 level; * Significant at the 0.10 level.*

Table 6. 3 Correlation Matrix (QFLID and ACUAF).

	ACUAF	QFLID	LEVE	LIQU	PROF	GROW	FSIZE	IndType
ACUAF	1.000							
QFLID	0.076**	1.000						
LEVE	-0.020	0.113***	1.000					
LIQU	0.017	-0.140***	-0.221***	1.000				
PROF	-0.002	0.049**	-0.259***	0.093***	1.000			
GROW	0.004	0.058**	0.008	0.109***	0.023	1.000		
FSIZE	-0.006	0.032	-0.044*	-0.164***	-0.051*	-0.019	1.000	
IndType	0.010***	-0.092**	-0.098**	0.000**	0.023	0.005	-0.001	1.000

ACUAF *denotes the accuracy of analyst forecast.* ***QFLID*** *denotes the quality of forward-looking disclosure.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt divided by its total assets.* ***LIQU*** *denotes liquidity, measured through the current assets of the firm divided by its current liabilities.* ***PROF*** *denotes profitability, measured by ROA.* ***GROW*** *denotes firm growth, measured by the ratio change of sales.* ***FSIZE*** *denotes Firm size, measured through the natural log of the firm's total assets.* ***IndType*** *denotes industry type, the sample in this study is divided into eleven types of industry and is coded from 1 to 11. *** Significant at the 0.01 level; ** Significant at the 0.05 level; * Significant at the 0.10 level.*

Table 6. 4 VIF Test Results (QFLID and TQ ratio).

Variable	VIF	Tolerance 1/VIF
QFLID	1.04	0.963706
LEVE	1.08	0.927782
LIQU	1.11	0.897190
GROW	1.02	0.984619
CSIZE	1.04	0.965688
IndType	1.02	0.984619
Mean VIF	1.05	

Table 6. 5 VIF Test Results (QFLID and ACUAF).

Variable	VIF	Tolerance 1/VIF
QFLID	1.05	0.958149
LEVE	1.15	0.866770
LIQU	1.12	0.906311
PROF	1.09	0.920645
GROW	1.02	0.983937
CSIZE	1.04	0.962155
IndType	1.02	0.982587
Mean VIF	1.07	

6.4. The Impact of QFLID on FV

This section discusses the results based on the association between the independent variable (QFLID) and the dependent variable (FV), which is measured by the TQ ratio. In addition, the present study used corporate characteristics, namely Firm size (CSIZE), Leverage (LEVE), Liquidity (LIQU), Growth (GROW), Profitability (PROF) and Industry type (IndType) as control variables because of their effect on QFLID and FV as in prior studies (Alotaibi & Hussainey, 2016b; Belgacem & Omri, 2014; Hassanein & Hussainey, 2015; Uyar & Kilic, 2012).

This study conducted various tests to select the most efficient model to investigate the impact of QFLID on the TQ ratio. The Chow test was conducted in this study to decide between the panel data model and the pooled model. The result of F-Value is significant at a 1% level (see Appendix 6.1). Therefore, the panel data model is the appropriate model in this study. The Hausman's test is also used to decide between the random and fixed effects models (Greene, 2008). The result of the Hausman's test in this study indicates that the P-Value is significant at

a 1% level (P-Value = 0.000) and, hence, the null hypotheses (fixed effects) is accepted. Accordingly, the fixed effect model is preferred (see Appendix 6.3).

Table 6.6 illustrates that the value of R^2 is 18.12%. The R^2 value shows that the combination of the independent variables (QFLID), with the company characteristics as control variables, demonstrate 18.12% of variation in the dependent variable (FV). This result is considered favourable compared with similar studies, such as Hassanein & Hussainey (2015) at R^2 14.51%. Table 6.6 also indicates that the P-Value is significantly higher (0.001), indicating that this model has a good explanatory power for the model utilised in the primary analysis.

To examine the second objective of this study, Table 6.6 shows that the coefficient of QFLID is significantly and positively associated with the TQ ratio *(coef. = 5.156462, t = 5.63, p < 0.000)*. As expected, this finding provides evidence that FV should be increased as a result of quality of FLID through either decreasing the cost of capital, or increasing the cash flow to its shareholders, or both (Elzahar et al., 2015). Consequently, firms with a high QFLID are more likely to increase FV than those with a low QFLID. The study finding is also consistent with suggestions that a positive influence in terms of enhanced disclosure upon firm valuation, through the mitigation of information asymmetry between managers and shareholders (Healy et al., 1999). Furthermore, this finding is in line with the argument that the quality of disclosure is value-relevant information to market participants (Baek et al., 2004; Healy et al., 1999). This finding supports the hypothesis H2, that there is a positive and significant association between QFLID and FV in Indian listed companies. Accordingly, the current study accepts hypothesis H2.

In relation to theoretical underpinning, the result of QFLID on FV is consistent with the agency theory, suggesting that the information released by FLID mitigates the information asymmetry, which leads to reduction in the agency costs (Hassanein & Hussainey, 2015; Kuzey, 2018). This decreases the uncertainty related to a firm's future performance and thereby minimises

the private benefits that controlling shareholders and management could possibly use to increase the anticipated cash flow to shareholders, which leads to higher FV (Hassanein & Hussainey, 2015; Kuzey, 2018; Sheu et al., 2010). In addition, the study result is in line with the signalling theory, which assumes that managers disclose more FLID to mitigate information asymmetry between managers and investors, also among the stock market participants, hence improve FV (Elzahar & Hussainey, 2012; Kuzey, 2018; Wang & Hussainey, 2013).

Empirically, the result of QFLID on the TQ ratio is in line with several previous studies (Cheung et al., 2010; Elzahar et al., 2015; Mendes-Da-Silva & de Lira Alves, Luiz Alberto, 2004; Nekhili et al., 2016; Plumlee et al., 2015; Uyar & Kiliç, 2012; Wang & Hussainey, 2013) who found a positive association between voluntary disclosure and FV.

Concerning control variables, as can be seen in Table 6.6 the regression result shows that the coefficients of CSIZE and LIQU are positively and significantly associated with the TQ ratio *(coef. = 1.452718, t = 13.85, p < 0.000), (coef. = .0300039, t = 1.70, p < 0.088),* respectively. On the other hand, the coefficients of LEVE, GROW and IndType have no relationship with the TQ ratio *(coef. = . 0283899, t = 0.14, p < 0.886), (coef. = -.0630588, t = -0.89, p < 0.376), (coef. = . 0183764, t = 1.33, p < 0.182),* respectively.

Table 6. 6 Regression analysis of the association between QFLID and the TQ ratio.

TQ ratio	Coefficient	Std. Err	t- Statistics	P ItI	[95% Conf.	Interval
QFLID	5.156462	.9159874	5.63	0.000***	3.360008	6.952915
LEVE	.0283899	.1987695	0.14	0.886	-.3614409	.4182207
LIQU	.0300039	.0175977	1.70	0.088*	.0645169	.0045091
GROW	-.0630588	.0711498	-.89	0.376	-.2025986	.076481
CSIZE	1.452718	.1048622	13.85	0.000***	1.658376	1.24706
IndType	.0183764	.0137708	1.33	0.182	-.0086311	.0453839
R^2. Adjusted	0.1812					
P. Value	0.001					

TQ ratio *denotes the Tobin's Q, used as proxy to measure FV.* ***QFLID*** *denotes the quality of forward-looking disclosure.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt divided by its total assets.* ***LIQU*** *denotes liquidity, measured through the current assets of the firm divided by its current liabilities.* ***GROW*** *denotes firm growth, measured by the ratio change of sales.* ***FSIZE*** *denotes Firm size, measured through the natural log of the firm's total assets.* ***IndType*** *denotes industry type; the sample in this study is divided into eleven types of industry and is coded from 1 to 11.*

6.5. The impact of QFLID on ACUAF

This section discusses the findings of the statistical analysis to examine the association between the independent variable of QFLID and the dependent variable ACUAF in the main analysis. Following prior studies (Barron et al., 1999; Beretta & Bozzolan, 2008; Bozzolan et al., 2009; Lang & Lundholm, 1996), the present study uses corporate characteristics, namely Firm size (CSIZE), Leverage (LEVE), Liquidity (LIQU), Growth (GROW), Profitability (PROF) and Industry type (IndType) as control variables to examine the relationship between the QFLID and ACUAF.

Before examining the impact of QFLID on ACUAF, some tests are considered to select the best model for the current study. These are the same tests described in the above section. The Chow test is conducted in this study to decide between the panel data model and the pooled

model. The result shows the F-Value is significant at 1% (see Appendix 6.2). Therefore, the panel data model is the appropriate model in this study. The fixed effects model and the random effects model are two of the main types of panel data regression models. These two models are based on various assumptions about the error term. The Hausman's test is used to decide between the random and fixed effects models (Greene, 2008). The result of the Hausman's test indicates that it is significant (P-Value = 0.000) and hence the null hypotheses (fixed-effects) is accepted. Accordingly, the fixed effect model is preferred (see Appendix 6.4).

The results of the fixed-effects panel regression presented in Table 6.7 illustrate that the value of R^2 is 45.95%. The R^2 value shows that the combination of the independent variables (QFLID), with company characteristics as control variables, demonstrate 45.95% of variation in the dependent variable (ACUAF). This result is considered favourable compared with similar studies, such as Beretta & Bozzolan (2008), Lang & Lundholm (1996) and Vanstraelen et al. (2003). Table 6.7 also indicates that the P-Value is highly significant (0.001), implying that this model has a good explanatory power for the model utilised in the primary analysis.

To examine the third objective of this research, Table 6.7 shows that the coefficient of QFLID is positively and significantly associated with ACUAF *(coef. = .0018376, t = 2.06, p < 0.039)*. As expected, this finding is consistent with the argument that the quality of information disclosed is high if it is statistically significant and positively correlated with ACUAF (Beretta & Bozzolan, 2008), which suggest that disclosure quality is value-relevant information to market participants (Baek et al., 2004; Healy et al., 1999). This suggests that when companies disclose higher QFLID, it improves ACUAF. Accordingly, this outcome can help users to evaluate the QFLID when making their decisions, which is a positive event for stock markets. Therefore, companies with higher QFLID are more likely to increase ACUAF than those having lower QFLID. This finding supports the hypothesis H3, which proposed that the QFLID

is positively associated with ACUAF in Indian listed companies. Accordingly, the current study accepts hypothesis H3.

Theoretically, the result of the impact of QFLID on ACUAF is consistent with the signalling theory, suggesting that managers increase FLID disclosure as it reduces information asymmetry and improves the accuracy of analysts' forecasts (Bozzolan et al., 2009; Lang & Lundholm, 1996; Lundholm & Myers, 2002). By the same token, Lang & Lundholm (1996) indicate that there is negative relationship between disclosure of information and information asymmetry, which helps financial analysts to increase the accuracy of earnings forecasts.

Empirically, the positive result of QFLID on ACUAF is in line with several previous studies (Beretta & Bozzolan, 2008; Bozzolan et al., 2009; Vanstraelen et al., 2003) who found that corporate disclosure has a positive impact on ACUAF.

In terms of control variables, in Table 6.7 the regression result shows that the coefficients of CSIZE, PROF and GROW are positively and significantly associated with ACUAF *(coef. = .0748772, t = 36.68, p < 0.000), (coef. = .0266883, t = 3.39, p < 0.001), (coef. = .0055945, t = 3.11, p < 0.002),* respectively. However, the coefficient of LIQU is negatively and significantly associated with the ACUAF *(coef. = -.0018308, t = -4.14, p < 0.000).* On the other hand, the regression outcomes show that the coefficient of IndType is found to be insignificant related to the ACUAF *(coef. = . 0000377, t = .11, p < 0.914).*

Table 6. 7 Regression analysis of the association between QFLID and ACUAF

ACUAF	Coefficient	Std. Err	t- Statistics	P ItI	[95% Conf.	Interval
QFLID	.0018376	.0008901	2.06	0.039**	.0000919	.0035833
LEVE	-.0042729	.0050558	-0.85	0.398	-.0141884	.0056427
LIQU	-.0018308	.0004423	-4.14	0.000***	-.0026982	-.0009633
PROF	.0266883	.0078788	3.39	0.001***	.0112364	.0421402
GROW	.0055945	.0017984	3.11	0.002***	.0091216	.0020675
CSIZE	.0748772	.0020413	36.68	0.000***	.0708737	.0788807
IndType	.0000377	.00035	.11	0.914	-.0006488	.0007242
R^2. Adjusted	0.4595					
P. Value	0.001					

ACUAF *denotes the accuracy of analysts' forecast.* ***QFLID*** *denotes the quality of forward-looking disclosure.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt divided by its total assets.* ***LIQU*** *denotes liquidity, measured through the current assets of the firm divided by its current liabilities.* ***PROF*** *denotes profitability, measured by ROA.* ***GROW*** *denotes firm growth, measured by the ratio change of sales.* ***FSIZE*** *denotes Firm size, measured through the natural log of the firm's total assets.* ***IndType*** *denotes industry type; the sample in this study is divided into eleven types of industry and is coded from 1 to 11. *** Significant at the 0.01 level; ** Significant at the 0.05 level; * Significant at the 0.10 level.*

6.6. Additional Analyses

In order to provide reasonable assurance that the primary findings in Tables 6.6 and 6.7 are robust, further analyses are required to investigate the robustness of the main findings. The current study tests whether the dependent variables (TQ ratio and ACUAF) can differ influenced by high QFLID and low QFLID or not. Following the study by Chung et al. (2015), the present research identifies high QFLID firms as firm-years which have a QFLID score higher than the median of all samples, while low QFLID firms are identified as firm-years which have a QFLID score less than the median of all samples.

Columns 1 and 2 of Table 6.8 present the results of the regressions of both high and low QFLID on FV (TQ ratio), while outcomes of the regression of both high and low QFLID on ACUAF are presented separately in columns 1 and 2 of Table 6.9, respectively.

Tables 6.8 and 6.9 shows the results of the effect of the QFLID, by dividing the sample into high and low QFLID, and some of the control variables on both TQ ratio and ACUAF (as dependent variables) are consistent with the main results reported in Tables 6.6 and 6.7, respectively. These findings suggest that firms with high QFLID enhance both FV and ACUAF compared to firms with low QFLID and vice versa. This means that the main findings are reliable and robust under the category of high and low QFLID.

Table 6. 8 Regression analysis of the association between (High and Low) QFLID and TQ ratio

	High Quality			**Low Quality**		
TQ ratio	**Coefficients**	**t- Statistics**	**P-Value**	**Coefficients**	**t- Statistics**	**P-Value**
QFLID	8.108124	5.63	0.000***	2.995285	2.34	0.020**
LEVE	-.019632	-0.03	0.979	.294655	1.01	0.310
LIQU	.0010448	0.32	0.748	-.041743	-1.86	0.063*
GROW	-.7493740	-0.93	0.235	-.6238504	-0.85	0.421
CSIZE	-1.156785	-7.63	0.000***	-1.739223	-11.16	0.000***
IndType	.0264393	1.44	0.150	.0279877	1.38	0.169
R^2. Adjusted	0.1986			0.2211		
P. Value	0.001			0.001		

TQ ratio *denotes the Tobin's Q, used as proxy to measure FV.* ***QFLID*** *denotes the quality of forward-looking disclosure.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt divided by its total assets.* ***LIQU*** *denotes liquidity, measured through the current assets of the firm divided by its current liabilities.* ***PROF*** *denotes profitability, measured by ROA.* ***GROW*** *denotes firm growth, measured by the ratio change of sales.* ***FSIZE*** *denotes Firm size, measured through the natural log of the firm's total assets.* ***IndType*** *denotes industry type; the sample in this study is divided into eleven types of industry and is coded from 1 to 11.*

Table 6. 9 Regression analysis of the association between (High and Low) QFLID and ACUAF

	High Quality			Low Quality		
ACUAF	**Coefficients**	**t- Statistics**	**P-Value**	**Coefficients**	**t- Statistics**	**P-Value**
QFLID	.0044222	1.99	0.047**	.0016107	1.66	0.097*
LEVE	-.032816	-5.14	0.000***	.0379515	4.94	0.000***
LIQU	-.0019364	-3.33	0.001***	-.0013225	-2.11	0.035**
PROF	.0316254	3.38	0.001***	.0269033	1.97	0.049**
GROW	.0083537	3.77	0.000***	.0059325	2.15	0.032**
CSIZE	.0659645	24.46	0.000***	.0766436	22.55	0.000***
IndType	.0001612	.38	0.707	-.0006117	-1.04	0.300
R^2. Adjusted	0.4562			0.4378		
P. Value	0.001			0.001		

ACUAF *denotes the accuracy of analyst forecast.* ***QFLID*** *denotes the quality of forward-looking disclosure.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt divided by its total assets.* ***LIQU*** *denotes liquidity, measured through the current assets of the firm divided by its current liabilities.* ***PROF*** *denotes profitability, measured by ROA.* ***GROW*** *denotes firm growth, measured by the ratio change of sales.* ***FSIZE*** *denotes Firm size, measured through the natural log of firm's total assets.* ***IndType*** *denotes industry type, the sample in this study is divided into eleven types of industry and is coded from 1 to 11. *** Significant at the 0.01 level; ** Significant at the 0.05 level; * Significant at the 0.10 level.*

6.7. Robustness Test

This section used alternative measurement for the dependent variables that used in the main analysis in order to robust essential results. **Firstly,** previous studies have used market capitalization (MC) as proxy to measure FV (Alotaibi & Hussainey, 2016b; Anam, Fatima, & Majdi, 2011; Uyar & Kiliç, 2012). Based on this. This study used MC as alternative measurement of dependent variable (FV) in order to test whether main results are robustness by applying different measurement or not. The findings of fixed-effects panel regression analysis of QFLID and the control variables on the MC are presented in Table 6.10. Regression

analysis indicates that the value of R^2 is 31.52%, which is less than the results of Alotaibi & Hussainey (2016b). Furthermore, Table 6.10 reported that the P-Value is significantly higher (0.001). The finding shows that the QFLID and MC is positively and significantly associated (*coef. = 2.205913, t = 4.06, p < 0.000)*, suggesting that firms with high QFLID is more likely to increase MC compared to those firms with low QFLID. This finding is confirms the main analysis reported in Table 6.6.

Secondly, the current study used dispersion (DISAF) as alternative measurement of dependent variable (ACUAF) in order to test whether main results are robustness by applying different measurement or not. Beretta & Bozzolan (2008) argue that the quality of information disclosed by the firm will be high if it is negatively and significantly related to DISAF. A number of prior researchers (Beretta & Bozzolan, 2008; Bozzolan et al., 2009; Lang & Lundholm, 1996; Lee, 2017; Vanstraelen et al., 2003) indicating that DISAF is likely to decrease when firms publish high quality of information disclosure. Based on this, an alternative measure of the dependent variable (DISAF) is used to test whether the main results are robust to different measures or not. Table 6.11 presents the results generated by fixed-effects panel regression analysis of QFLID and control variables on the DISAF. The result reported that the value of R^2 is 45.88%, which is similar to the results of (Beretta & Bozzolan, 2008; Lang & Lundholm, 1996; Vanstraelen et al., 2003). Table 6.8 also indicates that the P-Value is highly significant (0.001). The results show that the QFLID is negatively and significantly associated with DISAF *(coef. = -.0016227, t = -1.81, p < 0.07),* suggesting that high QFLID enable companies to help financial analysts to reduce DISAF compared to those firms with low QFLID. The findings are in line with the primary analysis and confirms the argument that the quality of FLID is high when it is negatively and significantly related to DISAF (Beretta & Bozzolan, 2008). This confirm that the results are consistent with the primary results presented in Table 6.7.

The above discussion highlighted that the outcomes regarding the impact of QFLID and some control variables on both MC and DISAF (as an alternative measure for dependent variables) are in line with the essential results presented in Tables 6.6 and 6.7, respectively. This suggests that the main findings are reliable and robust under using MC and DISAF as alternative measures.

Table 6. 10 Regression analysis of the association between QFLID and MC

MC	Coefficient	Std. Err	t- Statistics	P ItI	[95% Conf.	Interval
QFLID	2.205913	.2736708	4.06	0.000***	1.669186	2.74264
LEVE	.3785414	.0599187	2.32	0.014**	-.4960546	.2610282
LIQU	.0098817	.0053383	1.85	0.064*	-.0005878	.0203512
GROW	-.0087217	.021592	-.40	0.686	-.0510682	.0336248
CSIZE	.3478507	.0311423	11.17	0.000***	.2867741	.4089274
IndType	.0035237	.0041789	.84	0.399	-.0046721	.0117195
R^2. Adjusted	0.3152					
P. Value	0.001					

MC *denotes the market capitalization, measured as the market value of common equity of a firm's operations at the end of the year.* ***QFLID*** *denotes the quality of forward-looking disclosure.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt divided by its total assets.* ***LIQU*** *denotes liquidity, measured through the current assets of the firm divided by its current liabilities.* ***PROF*** *denotes profitability, measured by ROA.* ***GROW*** *denotes firm growth, measured by the ratio change of sales.* ***FSIZE*** *denotes Firm size, measured through the natural log of firm's total assets.* ***IndType*** *denotes industry type, the sample in this study is divided into eleven types of industry and is coded from 1 to 11. *** Significant at the 0.01 level; ** Significant at the 0.05 level; * Significant at the 0.10 level.*

Table 6. 11 Regression analysis of the association between QFLID and DISAF

DISAF	Coefficient	Std. Err	t- Statistics	P ItI	[95% Conf.	Interval
QFLID	-.0016227	.0008951	-1.81	0.070*	-.0033781	.0001328
LEVE	-.0031498	.0055797	-0.95	0.494	-.013423	.0058795
LIQU	-.0027348	.0008936	-3.13	0.002***	-.0026962	-.0009608
PROF	.0266494	.0078809	3.11	0.002***	.0011933	.0421055
GROW	.0056044	0017989	3.77	0.002***	.0091324	.0020764
CSIZE	.0249022	.0056589	20.69	0.000***	.0087378	.0789065
IndType	.0005867	.0003501	.23	0.784	-.0007586	.0005768
R^2. Adjusted	0.4588					
P. Value	0.001					

DISAF *denotes the dispersion of analyst forecast.* ***QFLID*** *denotes the quality of forward-looking disclosure.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt divided by its total assets.* ***LIQU*** *denotes liquidity, measured through the current assets of the firm divided by its current liabilities.* ***PROF*** *denotes profitability, measured by ROA.* ***GROW*** *denotes firm growth, measured by the ratio change of sales.* ***FSIZE*** *denotes Firm size, measured through the natural log of firm's total assets.* ***IndType*** *denotes industry type, the sample in this study is divided into eleven types of industry and is coded from 1 to 11. *** Significant at the 0.01 level; ** Significant at the 0.05 level; * Significant at the 0.10 level.*

6.8. Endogeneity Problems

When one or more variables are linked with the errors terms, it leads to endogeneity problem (Gippel et al., 2015; Reeb et al., 2012; Schultz et al., 2010). This problem raises concerns regarding validity of the results generated from regression model (Larcker & Rusticus, 2010; Wintoki et al., 2012).

Earlier literature suggests three main causes for endogeneity problems that are: simultaneity, omitted variables and measurement errors (Brown & Hillegeist, 2007; Choi et al., 2013; Moumen et al., 2015; Ntim et al., 2013; Reeb et al., 2012; Schultz et al., 2010).

Furthermore, earlier studies reported that the models utilized to examine corporate disclosure and FV suffer from endogeneity problem (Moumen et al., 2015; Sheu et al., 2010; Shi et al., 2014)

In order to address endogeneity problems, prior studies have used two econometric methods (Ammann et al., 2011a; Ntim et al., 2012; Renders et al., 2010). The first method uses a lagged structure that deals with omitted variables and simultaneity problems (Ammann et al., 2011a; Ntim et al., 2012). Instrumental Variable (IV) is used as a second method, which deals with potential issues generated by measurement errors and omitted variables (Black et al., 2006; Renders et al., 2010). The lagged values of endogenous independent variable (FLID) as an instrumental variable is used in this study to examine whether the endogeneity problem have an impact on the relation between the QFLID and both TQ ratio and ACUAF or not.

Similarly, Durbin and Wu-Hausman tests were carried out to check whether bias for the endogenous and independent variables exists (Beiner et al., 2006; Gujarati, 2008; Moumen et al., 2015; Ntim, 2015). The results show that the null hypothesis of no endogeneity between QFLID as the independent variable and both TQ ratio and ACUAF as the dependent variables is rejected (see appendix 6.5 and 6.6). Accordingly, the existence of this problem might be affecting the findings, making them ineffective, biased and inconsistent. Therefore, IV and 2SLS with lagged QFLID are utilized to control for the endogeneity problem.

The outcomes of the 2SLS regression of QFLID with both TQ ratio and ACUAF are reported in Table 6.12 and 6.13, respectively. After controlling for the endogeneity, the coefficient of QFLID is significantly and positively associated with TQ ratio *(coef. = 1.4851, t = 2.80, p < 0.005),* confirming that the results are in line with the main results reported in Table 6.6. Concerning the control variables, the results reported in Table 6.12 display similar outcomes to those reported in Table 6.6. In addition, the coefficient of QFLID is significantly and positively associated with ACUAF *(coef. = .943684, t = 3.10, p < 0.002),* indicating that the

result are consistent with the main findings presented in Table 6.7. Regarding control variables, the results presented in Table 6.13 are in line with the results reported in Table 6.7.

In summary, the findings of 2SLS regression for both models are consistent with the primary outcomes reported in Tables 6.6 and 6.7, respectively, showing that the endogeneity problem between QFLID and both TQ ratio ACUAF does not affect the main findings of the QFLID and other control variables. Overall, the analyses showed that the main results are robust to potential endogeneity problems.

Table 6. 12 Instrumental variables Two-Stage regression model based on TQ ratio.

TQ ratio	**Coefficient**	**Std. Err**	**t- Statistics**	**P ItI**	**[95% Conf.**	**Interval**
QFLID	1.4851	.5306596	2.80	0.005***	.4450262	2.525174
LEVE	.0283899	.1442455	1.01	0.311	-.3614409	.4182207
LIQU	.0399881	.0175977	1.70	0.046**	.0006568	.0793194
GROW	-.0547355	.0854289	-0.74	0.450	-.3754069	.0734859
CSIZE	.710535	.051752	13.73	0.000***	.811967	.609103
IndType	.0061653	.0114599	0.54	0.591	-.0162957	.0286262
R^2. Adjusted	0.1559					
P. Value	0.001					

TQ ratio *denotes the Tobin's Q, uses as proxy to measure FV.* ***QFLID*** *denotes the quality of forward-looking disclosure.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt divided by its total assets*. ***LIQU*** *denotes liquidity, measured through the current assets of the firm divided by its current liabilities.* ***PROF*** *denotes profitability, measured by ROA.* ***GROW*** *denotes firm growth, measured by the ratio change of sales.* ***FSIZE*** *denotes Firm size, measured through the natural log of firm's total assets*. ***IndType*** *denotes industry type, the sample in this study is divided into eleven types of industry and is coded from 1 to 11. *** Significant at the 0.01 level; ** Significant at the 0.05 level; * Significant at the 0.10 level.*

Table 6. 13 Instrumental variables Two-Stage regression model based on ACUAF.

ACUAF	Coefficient	Std. Err	t- Statistics	P ItI	[95% Conf.	Interval
QFLID	.943684	.2847436	3.10	0.002***	.5855964	1.701771
LEVE	-.1308763	.0811368	-1.61	0.107	-.2899015	.0281489
LIQU	-.0128814	.0110128	-1.17	0.242	-.0087033	-.0344661
PROF	.1806162	.1794306	1.01	0.314	.5322937	.1710613
GROW	.009561	.0534505	.18	0.858	-.0952	.1143219
CSIZE	.0009203	.0002891	3.18	0.001***	.0014869	.0003537
IndType	.0006364	.0255224	0.02	0.980	-.0493866	.0506594
R^2. Adjusted	0.3586					
P. Value	0.001					

ACUAF *denotes the accuracy of analyst forecast.* ***QFLID*** *denotes the quality of forward-looking disclosure.* ***LEVE*** *denotes the leverage ratio, measured by the ratio of a firm's total debt divided by its total assets.* ***LIQU*** *denotes liquidity, measured through the current assets of the firm divided by its current liabilities.* ***PROF*** *denotes profitability, measured by ROA.* ***GROW*** *denotes firm growth, measured by the ratio change of sales.* ***FSIZE*** *denotes Firm size, measured through the natural log of the firm's total assets.* ***IndType*** *denotes industry type; the sample in this study is divided into eleven types of industry and is coded from 1 to 11.*

6.9. Summary

The current chapter presents the empirical findings of usefulness of QFLID in order to achieve the third and fourth objectives, thus this chapter is divided into two parts. **The first part** examines the association between QFLID and FV in non-financial Indian listed companies for the period 2006-2015. In doing so, this study used the TQ ratio as proxy to measure FV in the main analysis. The result showed that QFLID and the TQ ratio are positively and significantly associated. This outcome is consistent with the perspective of agency and signalling theories that managers tend to disclose more FLID to reduce the issue of information asymmetry and improve stakeholders' confidence regarding a company's future performance. This, in turn, improves FV (Hassanein & Hussainey, 2015; Wang & Hussainey, 2013). Furthermore,

high/low QFLID is used as an additional analysis. The results of the effect of the QFLID, by dividing the sample into high and low quality, and some of the control variables on the TQ ratio are in line with the essential results. The additional analysis confirmed that the main results are reliable and robust under high and low QFLID. Moreover, MC is used as an alternative measure of dependent variable (FV) to examine whether these results are robust to the main outcomes or not. The findings of the impact of the QFLID on MC confirm the essential results. Finally, the outcome regarding the endogeneity problem confirmed the results of the main analysis.

The second part examines the association between QFLID and ACUAF in non-financial Indian listed companies for the period 2006-2015. In doing so, this study used the ACUAF in the main analysis. The resutls indicated that QFLID and ACUAF are positively and signifanctly associated with each other. The study finding is in line with signalling theory; managers disclose more FLID to mitigate asymmetric information and thus increase the accuracy of analysts' forecasts (Lundholm & Myers, 2002; Wang & Hussainey, 2013). In addition, high and low QFLID are used as additional analyses. The outcomes of the effect of the QFLID, by dividing the sample into high and low quality, and some of the control variables on ACUAF are consistent with the main results. The results confirmed that the main findings are robust and reliable under both high and low QFLID. Moreover, the present research used DISAF as an alternative measurement of dependent variable to examine whether these findings are robust to the main results or not. The outcomes of the impact of the QFLID on DISAF confirm the argument that the quality of FLID will be high when it has a negative and significant relationship with DISAF (Beretta & Bozzolan, 2008). This suggests that the main findings are reliable and robust by using DISAF. Finally, dealing with endogeneity problems, the results confirm the outcomes of the main analysis.

Chapter Seven: Conclusion

7.1. Introduction

This chapter provides a summary of this study. The current research covers the following objectives: firstly, to investigate the association between CG mechanisms and QFLID; secondly, to investigate the impact of QFLID on FV; thirdly, to examine the impact of QFLID on ACUAF. To achieve these objectives, this study adopts a multidimensional framework to measure the quality of FLID, based on a sample of 212 non-financial Indian listed companies over the period 2006-2015. Thus, this chapter is organised as follows: section 7.2 summarises the study's findings; section 7.3 provides reserch contribution; section 7.4 highlights the limitations of this study; section 7.5 describes this study's implications and section 7.6 suggests future research related to this study.

7.2. Study's Findings

To achieve the purpose of this research, the empirical study objectives were addressed in chapters five and six. The next sections provide the main findings of the two empirical chapters.

7.2.1. Findings Related to CG and QFLID

The first objective of the study is to examine the association between CG (the board of director's characteristics, ownership structure and audit committee) and QFLID. In order to achieve this objective, thirteen hypotheses were developed. This research adopts both univariate and multivariate analyses to investigate the relationship between CG and QFLID. The regression analyses show mixed results (significant and insignificant association) between CG explanatory variables and QFLID among Indian companies.

The statistical results show that CG mechanisms and firm characteristics affect QFLID. Four out of five board characteristics (Board size, board meetings frequency, board independence and female presence on the board) were found as significantly and positively associated with QFLID. This indicates that hypotheses H1.1, H1.3, H1.4, and H1.5 are accepted. However, the findings indicate that CEO duality is not related to QFLID, meaning that hypothesis H1.2 is rejected. In addition, this study examines three ownership structures, termed as block holder, institutional and promoter's ownership, in relation to QFLID. The results show that none of these structures are associated with QFLID. This means that hypotheses H1.6, H1.7 and H1.8 are not supported.

Concerning the audit committee, three variables (independence of the audit committee, frequency of audit committee meetings and female presence on the audit committee) have positive and significant associations with QFLID. This means that this study accepts hypotheses H1.10, H1.11 and H1.13. However, the study found that audit committee size and audit committee financial expertise have no relationship with the QFLID, meaning that hypotheses H1.9 and H1.12 are rejected. With regard to control variables, firm size and profitability have a positive relationship with QFLID, whereas liquidity and growth have a negative association with QFLID. On the other hand, leverage and industry type have no relationship with QFLID.

The results that relate to hypotheses H1.1, H1.3, H1.4, H1.5 H1.10, H1.11 and H1.13 are in line with the theoretical framework of this study, which is based on the agency, signalling and resource-dependence theories. These theories recommend that CG mechanisms improve overall governance and help companies to minimise agency costs and reduce information asymmetry (Alnabsha et al., 2017; Fama & Jensen, 1983; Hafsi & Turgut, 2013; Jensen & Meckling, 1976; Siddiqui et al., 2013). In the same vein, good CG leads to a higher quality of disclosure (Elzahar et al., 2015; Hui & Matsunaga, 2014), which leads to an increase in QFLID

In terms of the endogeneity problems, the study tested whether the presence of an endogeneity problem affected the results. The study found that an endogeneity problem has no effect on examining the association between CG and QFLID, as the main results are consistent and robust.

7.2.2. Findings Related to QFLID and FV

The second objective of the current research is to investigate the influence of QFLID on FV. In order to achieve this objective, hypothesis H2 was developed. H2 expects a positive link between the QFLID and FV. The regression results of this study show that the coefficient of QFLID is positively and significantly associated with the TQ ratio (proxy for FV). Therefore, this study accepts hypothesis H2. This finding supports the argument that FV should be increased as a result of quality of FLID, either through decreasing the cost of capital, increasing the cash flow to its shareholders, or both (Elzahar et al., 2015). This means that QFLID improves FV. Consequently, firms with a high QFLID increase FV more than those with a low QFLID.

The result of the impact of QFLID on FV is consistent with the agency theory, suggesting that the information released by FLID mitigates information asymmetry, which leads to reduced agency conflicts between managers and stakeholders (Hassanein & Hussainey, 2015; Kuzey, 2018). It also decreases uncertainty about a firm's future performance and minimises the opportunities for management to gain private benefits, hence resulting in higher FV (Hassanein & Hussainey, 2015; Kuzey, 2018; Sheu et al., 2010). Moreover, this finding is in line with the signalling theory, which assumes that managers disclose more FLID to mitigate information asymmetry between managers and investors, as well as among the stock market participants, hence improving FV (Elzahar & Hussainey, 2012; Kuzey, 2018; Wang & Hussainey, 2013).

This study splits the sample into two parts: high quality FLID and low quality FLID. The findings confirm the primary analysis. Furthermore, this study uses market capitalisation (MC) as an alternative measurement of the dependent variable (FV) to test the robustness of the main results. The result reveals a positive and significant association between QFLID and MC, confirming that the main findings are reliable and robust to the alternative measurement of FV. In terms of an endogeneity problem, the study results indicate that the main analysis is robust and is not affected by the problem of endogeneity between QFLID and TQ ratio.

7.2.3. Findings Related to QFLID and ACUAF

The third objective of the present research is to investigate the impact of QFLID on ACUAF, addressed in Chapter Six. In order to achieve this objective, hypothesis H3 was formulated, which has expected a positive association between the QFLID and ACUAF. Both univariate and multivariate analyses are used to test this hypothesis. The regression findings show that the coefficient of QFLID is positively and significantly associated with ACUAF. Therefore, this study accepts hypothesis H3. This finding confirms the argument that the quality of information disclosed is high if it is statistically significant and positively correlated with ACUAF (Beretta & Bozzolan, 2008), which suggests that disclosure quality is value-relevant information to market participants (Baek et al., 2004; Healy et al., 1999). Therefore, firms with high QFLID increase ACUAF as compared to those with low QFLID. This result is consistent with the signalling theory, suggesting that managers increase FLID disclosure as it reduces information asymmetry and improves the accuracy of analysts' forecast (Bozzolan et al., 2009; Lang & Lundholm, 1996; Lundholm & Myers, 2002).

The study divides the sample into two parts, high QFLID and low QFLID, and examines its impact on ACUAF to test the robustness of the main findings. The results confirm the main findings. In addition, this study uses dispersion of analysts' earnings forecast (DISAF) as an

alternative measurement of ACUAF to test whether the main results are robust or not by applying different measurements. The result indicates that the QFLID is positively and significantly associated with DISAF, which confirms the robustness of the main results. The study confirms that the main results are not affected by the problem of endogeneity between QFLID and ACUAF.

7.3. Research Contribution

This study contributes to the body of knowledge in several ways. **Firstly,** the present study adds a contribution to the literature in terms of determinants of FLID. It is noted that previous researchers have addressed the relationship between CG and the level of FLID. Most of them used the level or quantity of FLID as a proxy for its quality (Aljifri & Hussainey, 2007; Al-Najjar & Abed, 2014; Hassanein & Hussainey, 2015; Mathuva, 2012b; Qu et al., 2015; Wang & Hussainey, 2013). It is noted that there is no previous study which focuses on the association between CG and quality of FLID in developing countries, specifically in India. Thus, this study attempts to investigate the impact of CG on QFLID in Indian non-financial listed companies.

Secondly, limited research has attempted to examine the association between FLID and FV (Bravo, 2015; Hassanein & Hussainey, 2015; Kent & Ung, 2003; Wang & Hussainey, 2013). However, these studies focused mainly on the quantity or the level of FLID. As per the researcher's knowledge, this is the only study which examines the impact of the QFLID on FV in developing countries, particularly in India. This study attempts to bridge this gap by examining the impact of the QFLID on FV in Indian non-financial listed companies.

Thirdly, a few studies have investigated the relationship between FLID and ACUAF (Bozzolan et al., 2009). However, no study has taken QFLID into consideration in relation to ACUAF. Therefore, this is the first study to examine the impact of QFLID on ACUAF in a developing country (India).

Finally, the majority of the prior studies which have examined the above relationships (the relationship between CG and FLID; the relationship between FLID and FV; and the relationship between FLID and ACUAF) were conducted in developed countries. However, not much is known about these relationships in developing countries. Thus, this study has bridged this gap by examining the determinants and consequences of QFLID among Indian listed companies.

7.4. Study's Implications

This study provides significant implications for practitioners, policy makers and academics. **Firstly,** this research offers important implications for the practitioners of annual reports in Indian companies. Practitioners may understand the roles and importance of CG to improve QFLID. Furthermore, the results of this study provide evidence that the QFLID affects FV. The results may be useful for different users to make effective decisions regarding a firm's future performance. Regulators can consider the importance of QFLID and improve financial reporting quality which will enable them to increase FV. It also provides guidance for Indian companies' managers that they should consider QFLID to increase FV. This provides an important implication for managers of Indian companies; they should pay more attention to QFLID as it will help them to build investors' confidence by providing valuable information. It also implies that shareholders and other stakeholders should evaluate QFLID as it will improve the decision-making process. In addition, with regard to the effect of QFLID on ACUAF, the results can help financial analysts to see how QFLID increases ACUAF and affects capital market decisions. As higher QFLID enables generation of high quality financial reporting, the market considers published information more trustworthy and credible when making decisions. This study also provides necessary implications for annual report users of

Indian companies and other developing nations. Publishing QFLID may improve the relationship between managers and stakeholders, as it reduces information assymetry.

Secondly, this study has many policy implications. The results of this study could have important implications for regulatory bodies within India. For instance, enhancing the understanding of the impact of CG on QFLID may help regulators and authorities, particularly in India, to improve their regulations on the roles and the code of CG. This means that regulators should pay more attention regarding the roles of CG to ensure the standard of quality information in financial reporting. Furthermore, this study has policy implications for standard setters and regulators to continue improving the guidance and frameworks to assist firms to provide high-quality financial reporting and FLID. There should be certain guidelines set for Indian companies' managers, while preparing disclosure information, to ensure it is of high standard and show how QFLID can help them to gain investors' confidence. In addition, the stock market authorities can use this study's results to evalute current QFLID and take certain steps to improve both QFLID and financial disclosure quality. The findings can help academics to further investigate FLID and its role in improving FV and ACUAF. This research covers various issues related to QFLID, CG mechanisms, FV and ACUAF; there has been limited research done on these issues, especially in developing countries such as India. Therefore, it contains guidance for developing countries' regulatory bodies and authorities to evalute the importance of these issues.

Finally, this study also contains important implications for academics and future researchers. The empirical evidence on the effect of CG on QFLID may present a stepping-stone for future research to consider the role of CG on the quality of voluntary disclosure, in general, and QFLID in particular, for increasing QFLID to protect investors. Moreover, QFLID is important for increasing both FV and ACUAF, as different stakeholders raise an issue related to the

definition of disclosure quality, since different users have different perspectives of disclosure quality. Accordingly, the QFLID needs to be taken into consideration by further research.

7.5. Study's Limitation

This research made several contributions to the previous studies and assures that all the objectives were achieved. However, this study recognises that it suffers from various limitations, discussed below

Firstly, one of the limitations of this study is that the sample size is restricted to only non-financial Indian firms listed on the BSE-500 index. It does not take financial companies into consideration due to their distinct characteristics of financial statements, as explained in the methodology chapter. Hence, the generalisation of this study's results may be limited due to this issue. However, this exclusion is in line with the previous studies (Al-Najjar & Abed, 2014; Alqatamin et al., 2017; Athanasakou & Hussainey, 2014; Hui & Matsunaga, 2014). As Patelli & Prencipe (2007) highlight that the extent of disclosure differs across countries, so the findings of this study regarding QFLID may not be suitable for companies operating in other countries. However, previous studies have given strong evidence that may enable the generalisation of this study's results to a large number of developing countries that have same the standards and regulations.

This study used a single country, India, as its sample. As India is a developing country, this is an important contribution, as most of the earlier studies were conducted in developed countries. However, this distinct feature limits the generalisation of the results. Due to the use of a single country, more research in other developing nations is required. Nonetheless, this is the first study conducted in India, so it significantly contributes to the body of knowledge.

Secondly, the data collected for the analysis in this study is mainly from annual reports, which are available on firms' websites, and from other databases. Therefore, any issues or problems of significance which affect the QFLID might have a negative impact on the validity of the research results. However, Botosan (1997 p. 331) recognises that annual reports are the most reliable and trustworthy information source. The use of annual reports is in line with the previous studies (Adjaoud et al., 2007; Alnabsha et al., 2017; Alqatamin et al., 2017; Eng & Mak, 2003; Kuzey, 2018; La Rosa & Liberatore, 2014).

Thirdly, further limitations might be linked to the scoring procedures of the FLID index. This research follows the procedures that were broadly used in prior research. As clarified in the methodology chapter, this research employs a scoring process that is considered to be subjective. Conversely, every effort is made by the current study to minimise subjectivity which might affect the findings.

Finally, the models which are used to test the study hypotheses are likely to suffer from the omission of particular variables, leading to a factor bias related to CG, QFLID, FV and ACUAF. However, this research has taken several steps to decrease the occurrence possibility of this problem, including tests for the fixed or random effects models, using alternative measurements, robustness tests and controlling endogeneity problems. Adopting various methods is in line with the earlier studies (Beiner et al., 2006; Gippel et al., 2015; Ntim et al., 2015; Schultz et al., 2010; Wintoki et al., 2012).

7.6. Suggestions for Future Research

This study highlights potential areas that can be used by future researchers to conduct further research. **Firstly,** as this research examines the association between CG mechanisms and QFLID among non-financial Indian firms listed on the BSE-500 index, any future research can focus on financial companies to provide a broader understanding of the association between

QFLID and CG mechanisms. This would significantly contribute to the literature of both QFLID and CG. This research also investigates the association between QFLID and both FV and ACUAF, therefore it suggests that future research can examine this relationship by taking financial firms into consideration to provide comprehensive understanding of these areas. Since the current study focuses on the impact of QFLID on both FV and ACUAF, it will be more interesting for future research to examine the impact of QFLID on earnings management. Based on the researcher's knowledge, no other study has examined this relationship.

Secondly, the current study investigates the relationship between QFLID and CG mechanisms. However, future research could consider examining the influence of CG mechanisms by using other voluntary disclosure contexts, such as the quality of corporate social responsibility disclosure. In addition, this research investigates the association between CG mechanisms and QFLID but it does not examine the relationship between CG and both FV and ACUAF. It would be interesting to conduct a study to investigate the impact of CG mechanisms on FV and ACUAF, as it would provide new insight information for academics and regulators.

Finally, this study focuses on only one country: India. The current study's designs can be conducted in other nations. Since previous studies have argued that a number of factors such as culture, religion and other societal norms may influence FLID (Gautam & Singh, 2010; Hastings, 2000), the present study might be an interesting topic for future research. This may also encourage academic researchers to examine the influence of countries' characteristics. India has different environmental contexts, religions, and cultures as one of the developing nations. Therefore, future research might expand the present research's designs by using samples from different nations in the analysis. Cross-country analysis might offer wider evidence in terms of managers' incentives to disclose more QFLID which would increase both FV and ACUAF. This would provide a better understanding and contribute significantly to the body of knowledge.

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Appendices

Appendix 4.1: 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 4.2: FLID categories and items

No	Item	Studies which used the items
A	**Environmental around the company:**	
1	General economic factors affecting future business.	Abed and Al-Najjar (2014), Beretta and Bozzolan (2007), Bozzolan and Mazzola (2007), Lim et al. (2007), Hossain et al. (2005), Hutton et al. (2003), Vanstraelen et al. (2003), Robb et al. (2001)
2	General industry factors affecting future business.	Abed and Al-Najjar (2014), Beretta and Bozzolan (2007), Bozzolan and Mazzola (2007), Hossain et al. (2005), Hutton et al. (2003), Vanstraelen et al. (2003), Robb et al. (2001)
3	Social factors affecting future business	Abed and Al-Najjar (2014), Lim et al., (2007), Hutton et al. (2003), Vanstraelen et al. (2003), Robb et al. (2001), Cahan and Hossain (1996)
4	Firm-specific factors affecting future business	Abed and Al-Najjar (2014), Vanstraelen et al. (2003), Robb et al. (2001)
5	Forecast of potential future risk.	Alqatamin et al. (2017), Abed and Al-Najjar (2014), Bozzolan and Ipino (2007)
6	Technological factors affecting future business	Abed and Al-Najjar (2014), Lim et al., (2007), Hossain et al. (2005), Vanstraelen et al. (2003), Robb et al. (2001), Cahan and Hossain (1996)
7	Legislation with future positive or negative consequences (political factors affecting future business).	Alqatamin et al. (2017), Abed and Al-Najjar (2014), Beretta and Bozzolan (2007), Lim et al. (2007), Hossain et al. (2005), Vanstraelen et al. (2003), Robb et al. (2001), Cahan and Hossain (1996)
9	Competitive position.	Alqatamin et al. (2017), Vanstraelen et al. (2003), Robb et al. (2001)
9	Discussion about firm's next year's operating plans.	Abed and Al-Najjar (2014)
B	**Company trend:**	
1	Value of firm increase or decrease	Abed and Al-Najjar (2014), Kent and Ung (2003)
2	Discussion of future industry trend	Abed and Al-Najjar (2014), Walker and Tsalta (2001)
3	Growth or shrinkage in market share	Abed and Al-Najjar (2014), Hossain et al. (2005), Vanstraelen et al. (2003), Robb et al. (2001), Walker and Tsalta (2001), Cahan and Hossain (1996)
4	Future growth rate	Abed and Al-Najjar (2014), Hossain et al. (2005)
5	Forecast of production and innovation	Abed and Al-Najjar (2014), Kent and Ung (2003), Cahan and Hossain (1996)
C	**Strategic information:**	
1	Discussion about corporate strategy.	Abed and Al-Najjar (2014),
2	Mission, broad objectives and strategy to achieve broad objective	Alqatamin et al. (2017), Abed and Al-Najjar (2014), Vanstraelen et al. (2003), Robb et al. (2001)

3	Description of capital projects	Abed and Al-Najjar (2014), Hossain et al. (2005), Clarkson et al (1999), Cahan and Hossain (1996)
4	Discussion of future business opportunity of disposal and acquisition	Abed and Al-Najjar (2014), Lim et al., (2007)
5	Expansion of line of business	Abed and Al-Najjar (2014), Hossain et al. (2005), Clarkson et al. (1999)
D	**Financial information:**	
1	Forecast of profit	Alqatamin et al. (2017)
2	Forecast of income	Alqatamin et al. (2017)
3	Forecast of sales and revenue	Alqatamin et al. (2017), Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013), Bozzolan and Mazzola (2007), Lim et al. (2007), Hossain et al. (2005), Mek and Eng (2003), Meek et al. (1995), Kent and Ung (2003), Walker and Tsalta (2001), Cahan and Hossain (1996), Clarkson et al. (1994)
4	Forecast of earning.	Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013), Bozzolan and Mazzola (2007), Lim et al. (2007), Hossain et al. (2005), Hutton et al. (2003), Kent and Ung (2003), Mek and Eng (2003), Walker and Tsalta (2001), Cahan and Hossain (1996), Meek et al. (1995), Clarkson et al. (1994)
5	Forecast of cash flows	Alqatamin et al. (2017), Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013), Bozzolan and Mazzola (2007), Lim et al., (2007), Hossain et al. (2005), Hutton et al. (2003), Cahan and Hossain (1996), Meek et al. (1995), Chow and Wong-Boren (1987)
6	Forecast of investment activities.	Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013), Bozzolan and Mazzola (2007), Walker and Tsalta (2001)
7	Forecast of capital structure	Alqatamin et al. (2017), Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013), Bozzolan and Mazzola (2007), Bozzolan and Ipino (2007)
8	Forecast of dividend per share	Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013), Hossain et al. (2005), Kent and Ung (2003), Walker and Tsalta (2001), Cahan and Hossain (1996)
9	Forecast of Capital expenditure	Alqatamin et al. (2017), Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013), Hutton et al. (2003), Walker and Tsalta (2001)
10	Factors affecting future tax	Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013), Clarkson et al. (1999)
11	Forecast of cost reduction	Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013), Bozzolan and Mazzola (2007)
12	Forecast of losses	Alqatamin et al. (2017), Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013)
13	Forecast of margin	Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013)
14	Forecast of interest rate	Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013)
15	Future contribution	Hassanein and Hussainey (2015), Abed and Al-Najjar (2014), Hussainey and Wang (2013)

Appendix 5.1: The Result of Chow Test (CG and FLID)

sigma_u	.087316
sigma_e	.02420119
rho	.92865855 (fraction of variance due to u_i)

F test that all u_i=0: F(211, 1888) = 81.79 Prob > F = 0.0000

Appendex 5.2: The Result of Hausman's Test (CG and FLID)

```
. hausman fixed random
```

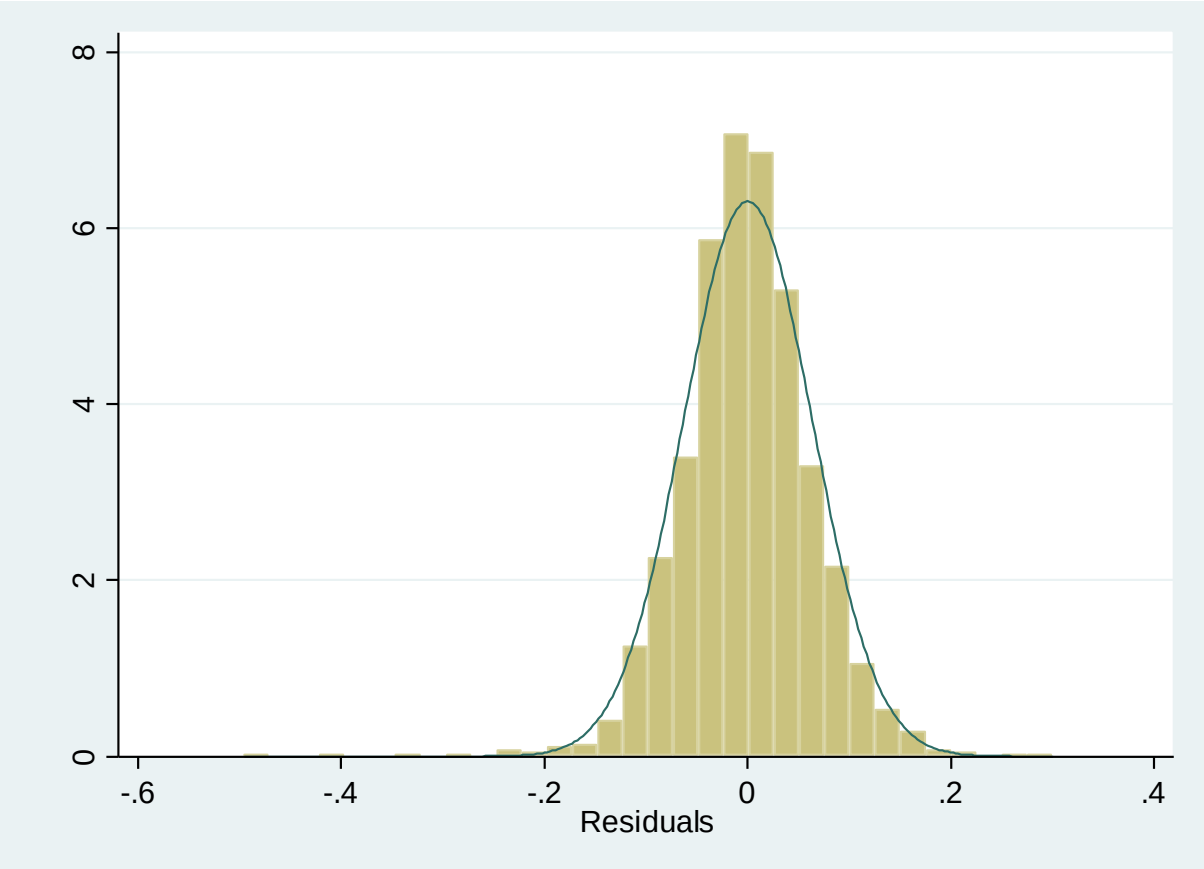
	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
BSIZ	.0013649	.0013424	.0000224	.
DP	-1.31e-06	.0004853	-.0004866	.0000877
FBM	.0015604	.0016965	-.000136	.
BI	.0157804	.015536	.0002444	.
GB	.047909	.0561815	-.0082725	.
BloOwn	.0040454	8.17e-06	.0040372	.
InsOwn	-.0121895	-.0099293	-.0022602	.
ProOwn	.0155141	.0085039	.0070102	.
ACSIZ	.0012351	.0011111	.000124	.
ACM	.0018843	.0017697	.0001146	.
IAC	-.0099656	-.0114432	.0014776	.
ACEXP	-.0015596	.0008976	-.0024572	.
GAC	.0178765	.0168938	.0009827	.
Leverge	-.0025405	.0003295	-.00287	.
ROA	.024128	.0208814	.0032466	.
Liquidaty	-.0013653	-.0016724	.0003071	.
Growth	-.005453	-.0059869	.0005338	.
size	.0698989	.0635114	.0063875	.0002162
companytype	.0000364	-.0000765	.0001129	.

```
                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(19) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                       =      375.37
             Prob>chi2 =      0.0000
             (V_b-V_B is not positive definite)
```

Appendix 5.3: Endogeneity (Wu-Hausman test) (CG and FLID)

```
. estat endog

  Tests of endogeneity
  Ho: variables are exogenous

  Durbin (score) chi2(13)        =   49.689  (p = 0.0000)
  Wu-Hausman F(13,2085)          =  3.85494  (p = 0.0000)
```

Appendix 5.4: The result of normality test (CG and QFLID)



Appendix 5.5: Breusch-Pagan / Cook-Weisberg test for heteroscedasticity (CG and QFLID)

```
1  . estat hettest

   Breusch-Pagan / Cook-Weisberg test for
            heteroskedasticity Ho: Constant variance
            Variables: fitted values of Accuracy

            chi2(1)      =    44.11
            Prob > chi2  =   0.1436
```

Appendix 6.1: The Result of Chow Test (FLID and FV)

sigma_u	1.4680023
sigma_e	.97450607
rho	.69412043 (fraction of variance due to u_i)

F test that all u_i=0: F(211, 1902) = 16.12 Prob > F = 0.0000

Appendix 6.2: The Result of Chow Test (QFLID and ACUAF)

sigma_u	.08799883
sigma_e	.02468786
rho	.92703586 (fraction of variance due to u_i)

F test that all u_i=0: F(211, 1901) = 82.39 Prob > F = 0.0000

Appendix 6.3: The Result of Hausman's test (FLID and FV)

```
. hausman fixed random
```

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Quality	5.437819	2.197201	3.240618	.5902906
Leverge	-.0751075	-.134772	.0596645	.0796825
Liquidaty	-.0357241	-.0251333	-.0105908	.0029606
Growth	-.0630588	-.0504991	-.0125597	.
size	-1.447385	-.9700118	-.4773735	.0681598
companytype	.0216629	.0204903	.0011726	.0044951

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(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 49.82
Prob>chi2 = 0.0000
(V_b-V_B is not positive definite)

Appendix 6.4: The Result of Hausman's Test (FLID and ACUAF)

```
. hausman fixed random
```

	Coefficients			
	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Quality	.0017646	.0020229	-.0002583	.
Leverge	-.0033289	-.0006264	-.0027025	.
ROA	.0264383	.0232913	.003147	.
Liquidaty	-.0016766	-.0020016	.000325	.
Growth	-.0055945	-.0060975	.000503	.
size	.0744221	.0682846	.0061375	.0002402
companytype	.0000498	-.0000606	.0001104	.

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(7) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 604.08
Prob>chi2 = 0.0000
(V_b-V_B is not positive definite)

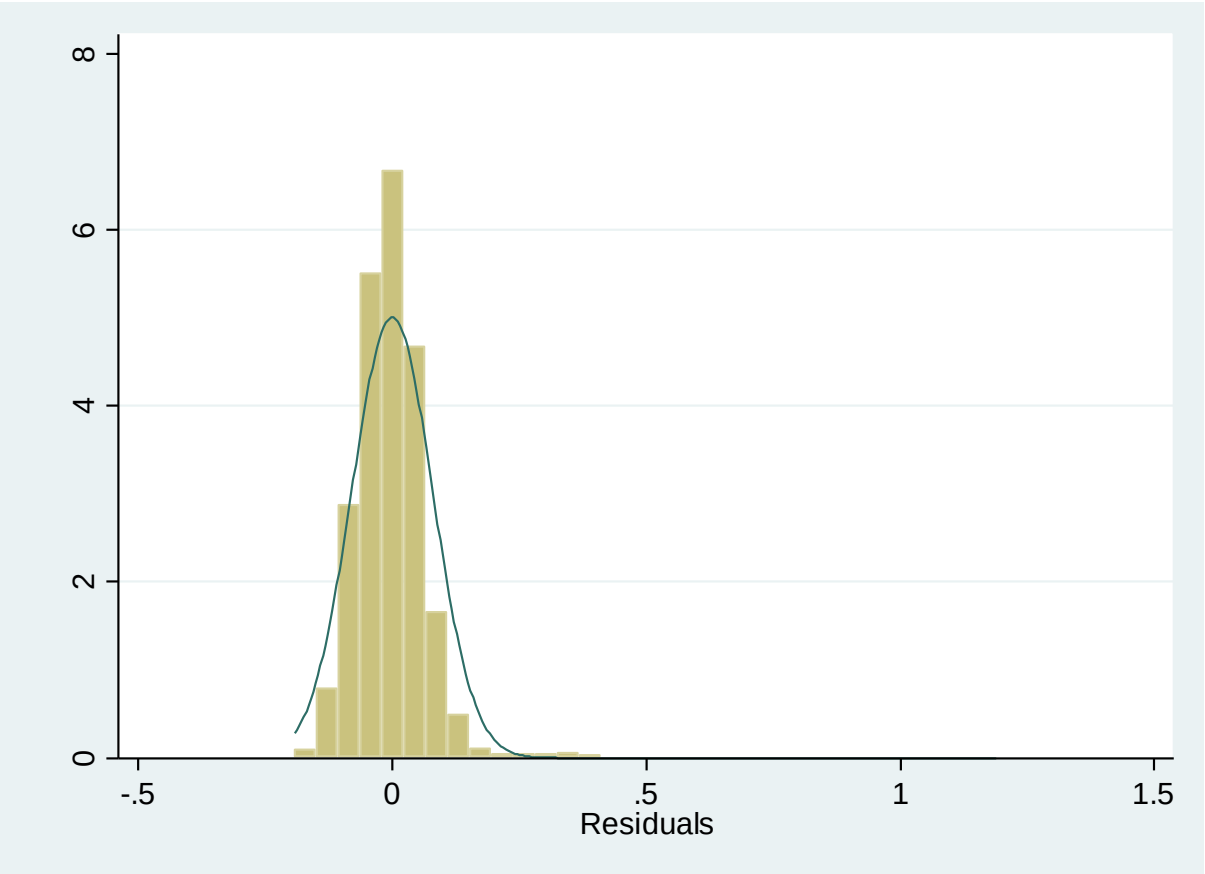
Appendix 6.5: Endogeneity (Wu-Hausman test) (FLID and FV)

```
. estat endog

  Tests of endogeneity
  Ho: variables are exogenous

  Durbin (score) chi2(1)          =  7.2636  (p = 0.0070)
  Wu-Hausman F(1,2097)            =  7.21633 (p = 0.0073)
```

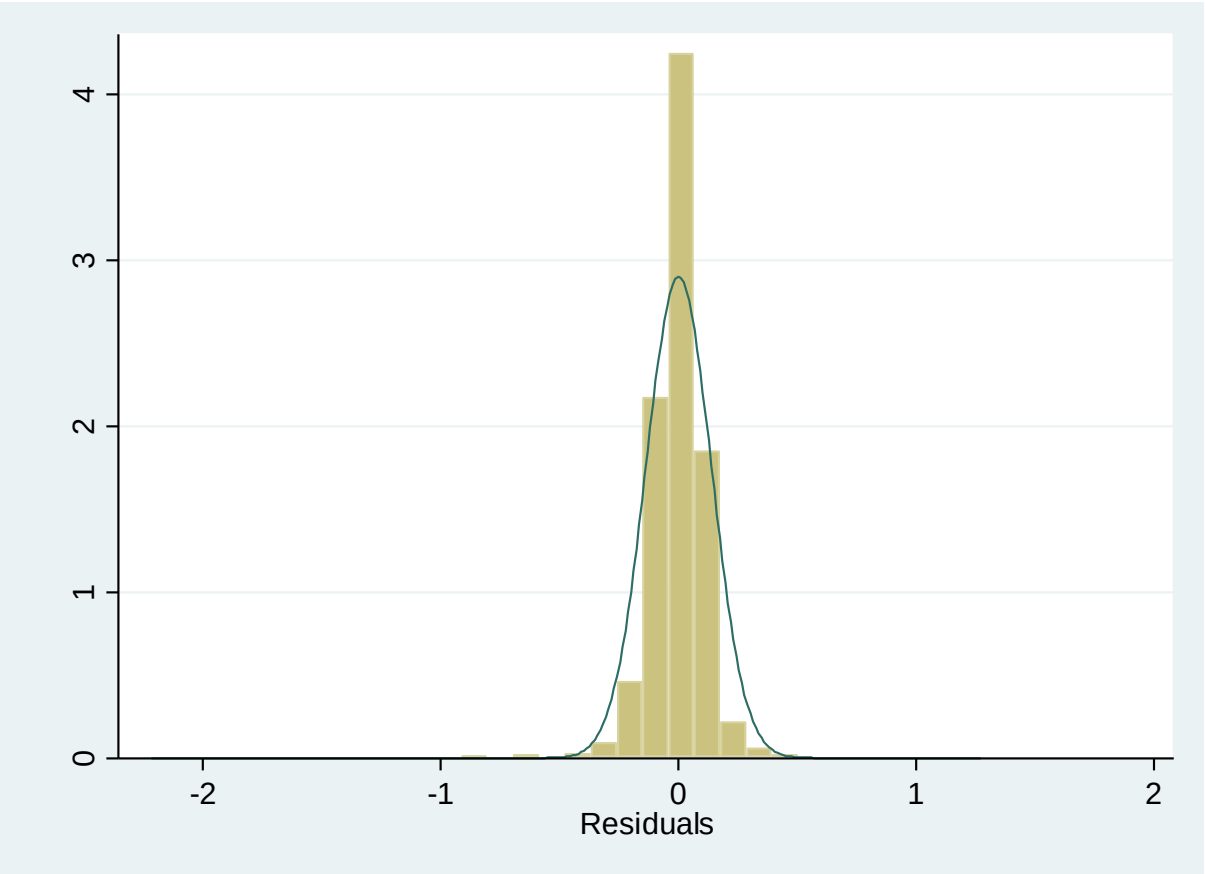
Appendix 6.6: Endogeneity (Wu-Hausman test) (QFLID and ACUAF)

```
. estat endog

  Tests of endogeneity
  Ho: variables are exogenous

  Durbin (score) chi2(1)          =  11.5768 (p = 0.0007)
  Wu-Hausman F(1,2110)            =  11.591  (p = 0.0007)
```

Appendix 6.7: The result of normality test (QFLID and FV)



Appendix 6.8: The result of normality test (QFLID and ACUAF)



Appendix 6.9: Breusch-Pagan / Cook-Weisberg test for heteroscedasticity (QFLID and FV)

```
1 . estat hettest

  Breusch-Pagan / Cook-Weisberg test for
           heteroskedasticity Ho: Constant variance
           Variables: fitted values of Accuracy

           chi2(1)      =     2.04
           Prob > chi2  =   0.1529
```

Appendix 6.10: Breusch-Pagan / Cook-Weisberg test for heteroscedasticity (QFLID and ACUAF)

```
1 . estat hettest

  Breusch-Pagan / Cook-Weisberg test for
           heteroskedasticity Ho: Constant variance
           Variables: fitted values of Accuracy

           chi2(1)      =    29.30
           Prob > chi2  =   0.1678
```