Relationship between Internal Corporate Governance Mechanisms and Shareholder Value in the Banking Sector in Bangladesh: The Mediating Effect of Non-Equity Stakeholders

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DEDICATION

I dedicate this thesis to my parents, wife, daughters and son.

ABSTRACT

Contemporary corporate governance models, namely the shareholder and stakeholder models, offer different advice on how best to manage and maximise the interests of the shareholders in a firm. While the shareholder model of corporate governance emphasises shareholder value maximisation, the stakeholder model of corporate governance emphasises value maximisation for all stakeholders (both equity and non-equity stakeholders). Over recent decades, economists, academics, corporate executives, corporate and non-corporate policy-makers and special interest groups have been involved in a high-stakes debate over the most appropriate corporate governance model for firms. Specifically, the debate concerns whether corporate governance arrangements should be merely oriented to shareholder value or stakeholder value. Both models recognise the significance of the economic success of a firm, but they prescribe different approaches to achieve it.

This study aims to shed light on this debate and, hence, advocates an alternative model, namely the "Non-Equity Stakeholder Model of Corporate Governance", which argues that corporate governance arrangements should be oriented to the value of non-equity stakeholders (e.g. customers, suppliers, employees, society and similar), instead of being oriented exclusively to shareholder or stakeholder value. Accordingly, the proposed model suggests that internal corporate governance mechanisms should be developed in such a way that they positively influence firms' non-equity stakeholders, which, in turn, have an effect on shareholder value. Hence, the hypothesis of the proposed model is that there is no direct relationship between internal corporate governance mechanisms and shareholder value; rather non-equity stakeholders mediate the relationship. Based on this hypothesis, this study attempts to examine for the first time the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value in listed banking companies in Bangladesh.

There are three key variables associated with this study. Firstly, the "internal corporate governance mechanisms", which are required of listed banks in Bangladesh under the framework of "comply or explain", are the independent variables of this study. This study examines nine internal corporate governance mechanisms including: board size, sponsor-directors' shareholding, institutional shareholding, general public shareholding, independent non-executive directors, CEOs' compensation, presence of the independent audit committee, size of the audit committee and the frequency of the audit committee meetings. Secondly, "shareholder value" is the dependent variable of this study, measured from three perspectives: (1) from an accounting return perspective, which is termed "accounting return-based shareholder value" and measured by return on equity; (2) from a market return perspective, which is termed "market-based shareholder value" and measured by Tobin's Q; and finally (3) from an economic profit perspective, which is termed "value-based shareholder value" and measured by economic value added. Finally, non-equity stakeholders are the mediating variables of this study. Four

key non-equity stakeholders, namely depositors, borrowers, employees and society associated with commercial banks, are incorporated in this study as mediating variables.

This study aimed to determine the mediating effects of each of the four non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. Panel data of 29 out of 30 commercial banks listed on the Dhaka Stock Exchange were used. All the required data were collected from the annual reports or supplementary sources of the respective banks. This study employed the random-effects GLS regression model to examine the relationships between the variables. Subsequently, the "three-step approach" suggested by Baron & Kenny (1986) was used to determine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value.

This study found that the relationship between internal corporate governance mechanisms and accounting return-based shareholder value is not mediated by any of four non-equity stakeholders (i.e. depositors, borrowers, employees and society). In contrast, all four non-equity stakeholders partially mediate the relationship between general public shareholding and market-based shareholder value. Also, all four non-equity stakeholders partially mediate the relationship between CEOs' compensation and market-based shareholder value. However, the relationship between the rest of the internal corporate governance mechanisms under analysis and market-based shareholder value is not mediated by any of the four non-equity stakeholders. Similarly, all four non-equity stakeholders partially mediate the relationship between general public shareholding and value-based shareholder value. However, the relationship between the rest of the internal corporate governance mechanisms under analysis and value-based shareholder value is not mediated by any of the four non-equity stakeholders. While the empirical results that confirm the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value support the hypothesis of the proposed model, the empirical results that do not confirm the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value do not support the hypothesis of the proposed model. A series of robustness tests also confirm that the findings of this study are statistically valid and robust.

The results of this study provide evidence on the pragmatic relationship between internal corporate governance mechanisms and shareholder value while considering the effect of non-equity stakeholders. The results may be useful in providing insights and supplementary guidance for regulators and policy-makers in Bangladesh, and possibly in other similar emerging economies, to develop internal corporate governance mechanisms oriented to non-equity stakeholder value.

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ABBREVIATIONS

ADB	Asian Development Bank
BDT	Bangladeshi Taka (Official currency name of Bangladesh)
BEI	Bangladesh Enterprise Institute
BIS	Bank for International Settlements
BSEC	Bangladesh Securities and Exchange Commission
CEO(s)	Chief Executive Officer(s)
CFP	Corporate Financial Performance
CSR	Corporate Social Responsibility
DSE	Dhaka Stock Exchange
EVA	Economic Value Added
FTSE	Financial Times Stock Exchange. FTSE is a share index of the companies listed on the London Stock Exchange
GCC	Gulf Council Countries
ibid.	Indicates that a reference is from the same source as a previous reference. *Ibid.* is the short form of the Latin *ibidem*
ICGMs	Internal Corporate Governance Mechanisms
INEDs	Independent Non-Executive Directors
KLD	Kinder, Lydenburg, Domini & Co.
LSE	London Stock Exchange
MTB	Market-to-Book Ratio
NESHs	Non-Equity Stakeholders
NGOs	Non-Government Organisations
NPM	Net Profit Margin
OLS	Ordinary Least Squares

RBV	Resource Based View
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
ROS	Return on Sales
SHV	Shareholder Value
SMEs	Small and Medium-sized Enterprises
SP	Stock Performance
TQ	Tobin’s Q
UN	United Nations
2-SLS	Two-Stage Least Squares

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.0 INTRODUCTION

The banking sector is a key component in the whole economic system of a country (Sharma, 1974). It is considered to be the hub of economics and finance, as well as an indicator of the economic outlook of a country (Demetriades, 2012). The banks of a country inevitably contribute considerably to the growth of the economy and in several different ways. They perform an essential role in the economy by acting as intermediaries for funds from savers and depositors which are redirected to activities that support business and lead economic growth (BIS, 2015). Specifically, banks mobilise savings and finances to the various economic sectors, such as agriculture, trade, industry and employment-generating activities through their networks of branch banking. "As such, they support and promote a more efficient allocation of resources in the economy. In general, a healthy, robust and stable banking sector plays a crucial role in supporting economic activity, promoting economic growth and ensuring financial stability" (Demetriades, 2012, p. 1).

The banking sector has, however, been severely criticised for its role following the collapse of a series of high-profile banks (e.g. Lincoln Savings and Loan Association, Northern Rock, Lehman Brothers, Washington Mutual, Royal Bank of Scotland Group, ABN-Amro, Bank West, Anglo Irish Bank, Banco Espírito Santo) in developed economies in the past two decades, resulting in the current economic crisis across the world. The list of collapsed banks is not limited to developed economies. This pattern of disaster in the banking sector also been replicated in developing economies like Bangladesh (e.g. Sonali Bank, Agrani Bank, Oriental Bank, BASIC Bank, Janata Bank). The list is not exhaustive, as it does not include the dozens of lower-profile banks which fail to hit the headlines in the international media, such as the *Wall Street Journal* or *Financial Times* (Larcker & Tayan, 2011). There is a strong consensus that weak

corporate governance systems are one of the key reasons behind these collapses (Cadbury, 1992; Jones & Pollitt, 2004; Ntim, 2009; Larcker & Tayan, 2011).

Given the central importance of banks, mentioned above, in the economic development of a country, the effectiveness and soundness of bank management are key to economic stability for sustainable economic growth. Effective corporate governance arrangements, which refer to a number of mechanisms or a code by which a corporation is managed and controlled, enhance bank management, ensuring that sound measures are put in place. Specifically, an effective corporate governance system typically puts in place a range of principles and guidelines, known as internal corporate governance mechanisms, for the internal control of the banking activities. These mechanisms are believed to be effective as a tool for monitoring and control to prevent anomalies in bank management, thereby boosting stakeholders' trust and confidence as a whole. A sound corporate governance system emphasises the importance of maintaining appropriate levels of responsibility, authority and accountability and checks and balances for all banking activities, including those of members of the board and other members of the senior management (BIS, 2015). Poor corporate governance systems in banks, on the other hand, may contribute to the loss of trust and confidence of depositors, borrowers, employees and the community, known as non-equity stakeholders in this study. A lack of trust and confidence on the part of non-equity stakeholders in the ability of the bank's management might, in turn, trigger a bank liquidity crisis, and thus the failure of a bank is inevitable, which eventually damages the interests of shareholders in banking firms.

This study sets out to address a key question concerning the mediating effect of non-equity stakeholders (hereafter "NESHs") on the relationship between internal corporate governance mechanisms (hereafter "ICGMs") and shareholder value (hereafter "SHV") in the banking firms listed on the Dhaka Stock Exchange (hereafter "DSE") in Bangladesh. There are three key elements in this thesis. Firstly, NESHs are those individuals, groups or other entities which are involved with a bank, but who do not participate in the shareholding or ownership of the bank, i.e. anyone involved with a bank other than its shareholders. Of particular relevance to this study, stakeholders associated with a commercial bank include depositors, borrowers, employees, relevant departments of the Government of Bangladesh (e.g. Ministry of Finance), regularity

authorities (e.g. Bangladesh Bank, Bangladesh Securities and Exchange Commission, Stock Exchange), other commercial and non-commercial banks, trade unions, community groups/societies, suppliers, board members, professional and industry associations and others. This study, however, examines only four types of NESHs: depositors, borrowers, employees and societies associated with the listed banking firms. Secondly, ICGMs are required to be complied with or explained by all banks listed on the DSE in Bangladesh. It is assumed that all ICGMs do not contribute equally to maximising SHV. This study includes nine ICGMs to be examined: board size, sponsor-directors' shareholding, institutional shareholding, general public shareholding, independent non-executive directors, CEOs' compensation, presence of the independent audit committee, the size of the audit committee and the frequency of the audit committee meetings. Thirdly, SHV is, on the whole, the value enjoyed by the stockholders as a result of a listed Bangladeshi bank's success.

The role of non-equity stakeholders in the corporate sector, including banks, is essential for the protection of shareholder interests. This is because, ultimately, the success of a corporation and shareholder value maximisation depends entirely on the attitudes of non-equity stakeholders associated with firms. For example, firms produce and sell products, and customers buy those products and, in so doing, contribute to an increase in the firms' revenue base. Firms need raw materials for production or need finished products for merchandising; suppliers deliver these raw materials or finished products, respectively, and thereby contribute to the firms' revenue base. Firms require human resources to implement decisions and employees are actively involved in the implementation of these decisions, and through this means they contribute to firms' revenue base. Firms also need a long-term cooperative relationship with the community, and the community supports firms so that they can do business, in this way contributing to firms' revenue base. Thus, no corporation can generate wealth for its shareholders without a stable and growing base of returns, which comes from firms' non-equity stakeholders (Carrillo, 2007).

Therefore, a sustainable long-term relationship between firms and their non-equity shareholders is essential to maximise shareholder value. A sustainable long-term relationship with non-equity shareholders can be developed by protecting and caring for

the interests of non-equity stakeholders. Given the indispensable contribution of non-equity stakeholders to the success of a firm and also to the interests of shareholders, corporations should adopt non-equity-stakeholder-friendly corporate governance mechanisms, which recognise and protect their interests. The interests of non-equity stakeholders are, however, recognised from the contrasting viewpoints of the two main contemporary corporate governance models, namely the shareholder model and the stakeholder model. The contrasting viewpoints of the two models of corporate governance regarding the interest of non-equity stakeholders lead to the formulation of the problem statement for this study.

1.1 PROBLEM STATEMENT

The present study is centred on the theoretical debate between two contrasting corporate governance models, namely the shareholder and stakeholder models. The shareholder model of corporate governance is instituted on the doctrine of "shareholder value and primacy" (Schwartz, 1983; Shleifer & Vishny, 1997), which implies that the primary purpose of the corporation is to maximise shareholder wealth (Shleifer & Vishny, 1997; Jensen, 2001; Tirole, 2001; Carrillo, 2007; Krishnan, 2009; Windsor, 2010; Ali, 2015). Specifically, the perspective of this paradigm is that the sole commitment of corporate management is to shareholders and that their sole corporate duty is to maximise profits, within the confines of the law and commonly agreed ethical guidelines (Friedman, 1970). The argument for shareholder value maximisation is that shareholders are distinct from non-equity stakeholders, in the sense that they are the residual claimants of corporations' wealth only after all the previous claims of every other participant have been satisfied. Consequently, they absorb all the risk of business failure; and therefore, it is rational that they get utmost priority in the business decisions and the rewards deriving from them (Krishnan, 2009). Moreover, corporate management is obliged only to shareholders in terms of its fiduciary duties: the protection of non-equity stakeholders' interests is considered beyond their responsibilities unless they are contractually obligated to do so (Carrillo, 2007). Accordingly, the shareholder model of

corporate governance focuses on those governance systems and arrangements which ensure only the interests of shareholders, referred to as "shareholder value".[1]

This model has been heavily criticised for its sole focus on shareholder value and for disregarding the social, ethical and moral responsibilities of corporations as vital societal institutions (e.g. Freeman, 1984; Blair, 1995; Vinten, 2001; Kakabadse & Korac-Kakabadse, 2002). Specifically, this model of corporate governance focuses on the corporation achieving a single objective, i.e. its value for shareholders, while the interests of non-equity stakeholders, such as customers, suppliers, employees, society, the environment and others are overlooked. The opponents of this model argue that the model is egotistic, as it considers only the well-being of shareholders and ignores the interests of non-equity stakeholders, even though the latter has an implicit and explicit role in the formation and subsequent survival of a firm.

Despite several criticisms associated with the shareholder model of corporate governance, many prior empirical studies have aimed to establish that the shareholder model of corporate governance, which focuses on this single objective (i.e. shareholder value), is the best model for corporations. Accordingly, this strand of research has examined the direct relationship between several internal corporate governance mechanisms and firms' financial performance (e.g. Dharmadasa *et al*., 1997; Laing & Weir, 1999; Weir & Laing, 2000; Hiraki *et al*., 2003; Joh, 2003; Gompers *et al*., 2003; Brown & Caylor, 2004; Chiang, 2005; Sanda *et al*., 2005; Cremers & Nair, 2005; Black *et al*., 2006; Brown & Caylor, 2006; Haniffa & Hudaib, 2006; Kyereboah-Coleman, 2007; Bhagat & Bolton, 2008; Henry, 2008; Ntim, 2009; Abdullah *et al*., 2008; Ahmed, 2010; Al-Saidi, 2010; Amba, 2011; Herly & Sisnuhadi, 2011; Nuryanah & Islam, 2011; Heenetigala & Armstrong, 2011; Yasser *et al*., 2011; Dar *et al*., 2011; Effiok *et al*., 2012; Muttakin & Ullah, 2012; Christensen *et al*., 2013; Dharmastuti & Wahyudi, 2013; Dedu & Chitan, 2013; Hoque *et al*., 2013; Vo & Nguyen, 2014; Naushad & Malik, 2015).

[1] Over the past few decades, the philosophy of shareholder value maximisation has become well-established as an attitude of corporate governance practices among corporations. In a document, namely "OECD Principles of Corporate Governance", the Organisation for Economic Cooperation and Development (OECD) lays emphasis on shareholders' interest by stating that corporations should be managed, predominantly, in the interests of shareholders (OECD, 1999). Subsequently, it further underlines that shareholders' rights should be defended and facilitated by the corporate governance framework (OECD, 2004). Further, in a revised document, it strongly focuses on the interests of the company and shareholders by stating such that "Directors should act on a fully informed basis, in good faith, with due diligence and care and in the best interest of the company and the shareholders" (OECD, 2008, p. 23).

Specifically, this strand of research examines the primacy of the shareholder model of corporate governance, in which it is postulated that the presence of various internal corporate governance mechanisms ensures maximum shareholder value.

In response to the narrowness of the shareholder model of corporate governance, the broader stakeholder model of corporate governance has emerged. The model has gained popularity within pressure groups (such as social and environmental lobby groups), some companies (such as J&J, eBay, Google, Lincoln Electric, AES) (Freeman *et al*., 2004), including those referred to in *Good to Great* (Collins, 2001) and *Built to Last* (Collins & Porras, 1994) and in a number of specific countries.[2] The stakeholder model of corporate governance is based on the notion of stakeholder theory, which emphasises protecting a much wider range of rights and values, those of all stakeholders, rather than only those of shareholders (Goodpaster, 1991; Jensen, 2001; Freeman *et al*., 2004). This means that the basic philosophy of stakeholder theory is that "companies are so large, and their impact on society so pervasive that they should discharge accountability to many more sectors of society than solely their shareholders" (Solomon, 2007, p. 23). Legitimacy theory argues that corporations have implicit contracts with stakeholders[3] about providing their long-term needs and wants. The contract is that stakeholders provide essential benefits to corporations; in return, they are obliged to promote stakeholders' interests; and hence, corporations legitimise their existence (Guthrie & Parker, 1989).

Accordingly, the stakeholder model of corporate governance focuses on governance systems and arrangements that protect the interests of all the stakeholders related to a firm, known as "stakeholder value". Specifically, the stakeholder model of corporate governance does not only protect the interests of shareholders but also the interests of non-equity stakeholders, such as customers, suppliers, employees, animal

[2] The idea of stakeholder value maximisation has gained popularity as an approach to corporate governance practices in the Civil Law of countries such as France and Germany in Europe, and Japan in Asia (Yoshimori, 1995).

[3] From the perspectives of their goals, priorities and demands, stakeholders can be categorised as primary and secondary (Clarkson, 1995). "The primary or core stakeholder group refers to stakeholders that are essential for the business itself to exist and/or have some kind of a formal contract with the business (i.e. owners/shareholders, employees, customers and suppliers). The secondary stakeholder group includes social and political stakeholders that play a fundamental role in obtaining business credibility and acceptance of business activities (i.e. non-governmental organisations, activists, communities, governments, media and competitors)" (Ayuso *et al*., 2014, pp. 419-20).

species, future generations and even the green environment[4]. This notion implies that companies' responsibility is to safeguard the interests of all stakeholders because "every stakeholder represents part of the nexus of implicit and explicit contracts that constitutes a company" (Solomon, 2007, p. 24). Therefore, unlike the shareholder model of corporate governance, which aims to achieve a single objective, the stakeholder model of corporate governance aims to achieve multiple corporate objectives, i.e. as many objectives as the number of stakeholders associated with a firm (Sternberg, 1997; Jensen, 2001).

The stakeholder model of corporate governance has also been subject to much strident criticism. Firstly, the model is not well-suited to the concept of a business that ensures the best use of its assets to maximise shareholder wealth (Letza *et al*., 2004; Sternberg, 2004). The stakeholder model defies this single objective; rather, it robustly suggests that a business must endeavour to achieve a fair balance in distributing its benefits to its multiple stakeholders (Sternberg, 1997; Jensen, 2001). This means that the theory transfers the focus of firms to the needs of both shareholders and non-equity stakeholders, instead of to the needs only of shareholders. If a firm is prevented from fulfilling the needs of its shareholders (i.e. wealth maximisation), they may certainly become disheartened and may perhaps withdraw their investment, which would simply result in the collapse of the business (Jensen, 2001). As a corollary, there would not be a single corporation left to contribute to society and to protect and care for the interests of non-equity stakeholders.

Secondly, considering the interests of multiple stakeholders equally would tend to lead to misguided business decision-making and would also increase managerial discretion, and with it, the scope for confusion, conflict and ineptitude in management. Indeed, by holding corporate directors responsible for manifold constituencies or "many masters" this approach could even conceivably to a complete breakdown in competitiveness (Sternberg, 1994; Carrillo, 2007; Jensen, 2001): "And, to paraphrase the

[4] From the viewpoint of the equity (ownership) of a firm, all stakeholders can be divided into two groups: (i) equity stakeholders, who have ownership in a firm, such as shareholders and (ii) non-equity stakeholders, who do not have ownership in a firm, such as customers, suppliers, employees, society, environment and other groups or institutions, etc.

old adage, when there are many masters, all end up being short-changed" (Jensen, 2001, p. 9). According to Jensen (2001), corporations embracing the stakeholder model of corporate governance will encounter confusion, inconsistency and incompetence, and possibly even experience disintegration of managerial functions due to the lack of a single objective purpose.

Thirdly, the identity of the stakeholders associated with a firm is still ill-defined because academics define stakeholders as those who can affect or are affected by the business (Freeman, 1984; Hummels, 1998; Sternberg, 1997, 2004). Thus, and as has been stated earlier, stakeholders may be anybody or anything from anywhere or everywhere and, as such, could range theoretically from employees, creditors and governments to terrorists, corporate armed robbers or even the sea (Ntim, 2009)[5]. In this regard, the key unanswered question is still how firms can balance the interests of divergent stakeholder groups, concentrating on them all equally, if they are not well-defined.

Finally, the model is not compatible with the concept of corporate governance. Corporate governance emphasises a distinct kind accountability: the accountability of corporate management to the board of directors; the accountability of the board of directors to shareholders; and the accountability of corporate employees and other corporate agents to shareholders through corporate management and the board of directors (Sternberg, 1997, 2004; Rossouw *et al*., 2002; Solomon, 2007). However, the stakeholder model of corporate governance emphasises that corporations ought to be accountable to shareholders and non-equity stakeholders equally (Freeman & Reed, 1983; Letza *et al*., 2004), thus implying accountability to unidentified stakeholders. Indeed, accountability to unidentified stakeholders means no accountability to anyone.

An enormous number of previous studies have attempted to establish empirically that the stakeholder model of corporate governance is the best model for corporations.

[5] Some interpretations also include terrorists, blackmailers and thieves in the list of stakeholders. For example, Freeman (1984) defines the stakeholder as follows: "A stakeholder in an organization is (by definition) any group or individual who can affect or is affected by the achievement of the organization's objectives" (p. 46). Later, for instance, he states that some organisations should include "terrorist groups" in the list of stakeholders. Driscoll & Starik (2004) have given "the natural environment" status as the primary and primordial stakeholder of a firm. Hart & Sharma (2004) extend the list by including "fringe" stakeholders. They "develop the concept of Radical Transactiveness (RT). RT is a dynamic capability which seeks to systematically identify, explore, and integrate the views of stakeholders on the 'fringe' -- the poor, weak, isolated, non-legitimate, and even non-human--for the express purpose of managing disruptive change and building imagination about future competitive business models" (p. 7).

Accordingly, this strand of research has examined the direct relationship between several internal corporate governance mechanisms and corporate social responsibility (hereafter "CSR") (e.g. Orlitzky *et al*., 2003; Aguilera *et al*., 2006; Chapple & Ucbasaran, 2007; Jamali *et al*., 2008; Spitzeck, 2009; Said *et al*., 2009; Arora & Dharwadkar, 2011; Harjoto & Jo, 2011; Sánchez *et al*., 2011; Esa & Ghazali, 2012; Jizi *et al*., 2014; Ntim & Soobaroyen, 2013; Khan *et al*., 2013; Sharif & Rashid, 2014). In particular, this branch of research examines the primacy of the stakeholder model of corporate governance, postulating that the presence of various internal corporate governance mechanisms ensures non-equity stakeholders' value along with shareholder value.

At the beginning of the current century, Jensen, a renowned financial researcher, proposes another theory to explain the relationship between firms and their associated stakeholders. Jensen (2001) states that: "We cannot maximise the long-term market value of an organisation if we ignore or mistreat any important constituency. We cannot create value without good relations with customers, employees, financial backers, suppliers, regulators, communities, and so on" (p. 16). He also states that "in order to maximize value, corporate managers must not only satisfy, but enlist the support of, all corporate stakeholders – customers, employees, managers, suppliers, local communities" (p. 9).

Based on Jensen's idea (2001), a "third way" between shareholder primacy and stakeholder management has emerged, known as "Enlightened Shareholder Value" (ESV). The ESV model takes most of the components of the stakeholder theory and also simultaneously accepts the concept of shareholder value as central to achieving firms' long-term value. As such, ESV is the idea that firms should attempt to enhance long-term shareholder value, aiming for sustainable growth and profits based on reasonable attention being paid to the interests of all the stakeholders associated with the firms (Millon, 2010). The ESV theory[6] emphasises an appropriate balance between shareholder primacy and the interests of corporate stakeholders (Williams & Conley, 2005; Andreadakis, 2012). This balancing involves expending resources for stakeholders up to the point at which the expenditure begins to exceed the benefits (Brickley *et al.*, 2002).

[6] There is another similar theory found in the corporate governance literature, known as enlightened stakeholder value theory, which is similar to the concept of enlightened shareholder value theory (Keay, 2013).

In sum, ESV encourages long-termism in firms' activities by balancing the conflicting interests of all stakeholders and also focuses on the moral dimension of business (Andreadakis, 2012). It is, therefore, evident that ESV theory is different from shareholder value theory, which only emphasises the interests of shareholders, and it also differs from stakeholder value theory to some extent, in the sense that directors are not expected to manage stakeholders' interests and needs equally, but rather to balance them more broadly (Friedman & Miles, 2006).

However, the theory of ESV has a number of flaws which cannot be ignored. Firstly, the theory has been labelled as a basis of the superior model of corporate governance compared to the shareholder and stakeholder models. This is because corporate management agrees with the ESV model and its maximisation of the long-term objectives of firms (Andreadakis, 2012). However, the ESV model is, in fact, still ambiguous as corporate managers are not clear about how to apply the model in firms, as the model fails to make clear who is accountable to whom. In particular, "the ESV fails to hold the directors accountable to stakeholders, and thus stakeholders have little or no means of bringing an action when their interests are ignored" (ibid., p.425). As a result, "concerns have been expressed regarding the efficiency of the new theory and the extent to which it really goes far enough to protect the other groups of stakeholders" (ibid., p. 425).

Secondly, the ESV model is yet to establish itself as a full, competing model. Unlike the shareholder model of corporate governance, which clearly advocates the direct relationship between corporate governance structures and shareholder value, and the stakeholder model of corporate governance, which also suggests a direct relationship between corporate governance structures and stakeholder value, the ESV model fails to clarify the relationship between corporate governance structures, shareholders and non-equity stakeholders. This means that the overall conceptual framework of the ESV model is ambiguous, indicating a considerable weakness in the application of the model (Andreadakis, 2012). Consequently, there have so far been no notable empirical studies carried out to test the efficacy of ESV model. It can be presumed that the lack of a conceptual framework of this model makes it impossible for academics and researchers to undertake empirical studies.

Finally, ESV emphasises balancing the interests of all the stakeholders associated with firms. The key question in this regard is "how this balancing will take place in practice, avoiding conflicts of interest and disappointment of certain stakeholder groups and at the same time keeping shareholders confident that the success of the company is properly promoted" (Andreadakis, 2012, p. 425). Balancing the interests of all stakeholders has been the subject of extensive criticism over the decades (Siems, 2002; Andreadakis, 2012), because it is innately a subjective course of action (Parkinson, 2003).

Over recent decades, economists, academics, corporate executives, corporate and non-corporate policy-makers and special interest groups have been involved in a high-stakes debate over the appropriate corporate governance arrangements for corporations (Jensen, 2001). In particular, the debate has been over whether corporate governance models should be oriented to shareholder value, stakeholder value, or enlightened shareholder. All models of corporate governance recognise the significance of the economic success of corporations, but they prescribe divergent approaches to achieve it. All are models of value creation and are based on the postulate that corporations should generate as much value as possible within the boundaries of the relevant legislation.

Given these contradictory orientations of all models of corporate governance and their associated limitations, this study argues that the corporate governance model should not be solely oriented to shareholder value or stakeholder value. Instead, this study moves to a new premise, that the corporate governance model should be oriented to non-equity stakeholder value in order to create value for them and protecting their interests, which, in turn, enhances shareholder value. This means that the interests of shareholders are best served by protecting the interests of non-equity stakeholders. The line of reasoning is that non-equity stakeholders have an independent power to influence a firm's activities; thus, if corporations concentrate exclusively on the interests of shareholders, non-equity stakeholders might withdraw their support in the long run; denying their inputs into the firm and attempting to take out the resources they control (Carrillo, 2007). According to Carrillo (2007), for instance, consumers will prefer to purchase goods from firms they can rely on; suppliers will trade with firms they can depend on; workers will engage themselves honestly with firms they like; institutional

investors will prefer socially responsible firms; and well-known non-government organisations will favour collaborating with firms which reconciling their own benefit with wider social goals. Otherwise, customers will prefer not to purchase goods from the firms they cannot rely on; suppliers will not continue to do business with firms they cannot trust; workers will not commit their full effort for the firms that do not value them; and the community will prefer not to cooperate the companies if they ignore the interests of the community. Hence, and as has been stated before, a company's success, which results in the maximisation of shareholder value, eventually depends on the attitudes of its customers, suppliers, employees, of society and other such non-equity stakeholders which will be considered in this study.

If the corporate governance model fails to establish and continue a productive relationship with non-equity stakeholders, it is a failure of the model in dealing effectively with corporations' capacity to create wealth for shareholders. Specifically, failing to develop and sustain their relationship with customers means they may not buy products, suppliers may not be interested in a business partnership, employees may not be loyal to the firm and dedicated to work, and the community may not demonstrate positive attitudes towards the company resulting in shrinkage of shareholder value. This situation, therefore, requires a good corporate governance model, which will reconcile the interests of non-equity stakeholders with those of shareholders, resulting in a long-term and sustainable maximisation of shareholder value.

Given this fact, the present study theorises that the corporate governance structure/model should focus on the interests of non-equity stakeholders in order to maximise shareholder value. From this perspective, this study focuses on a new model, namely the "Non-Equity Stakeholder Model of Corporate Governance", which suggests that firms should adopt the kind of corporate governance mechanisms or guidelines that enhance non-equity stakeholder value, which, in turn, maximises shareholder value. Therefore, the hypothesis of the proposed model is as follows: there is no direct relationship between internal corporate governance mechanisms and shareholder value; rather, the relationship is mediated by non-equity stakeholders. This means that internal corporate governance mechanisms first affect non-equity stakeholders, who, in turn, affect shareholder value.

The proposed “Non-Equity Stakeholder Model of Corporate Governance” contains some features similar to those of the models of shareholder, stakeholder and enlightened shareholder value. However, it also contains some additional features, which make it distinctive from the other models. Firstly, the Non-Equity Stakeholder Model of Corporate Governance provides a precise and definite indication of the responsibilities and accountability of firms’ management towards shareholders and non-equity stakeholders. The model advocates that the responsibility of firms’ management is to enhance shareholder value by enhancing value for non-equity stakeholders. Therefore, firms’ management is accountable to shareholders through their accountability to non-equity stakeholders.

Secondly, it gives an idea of the extent to which firms should be loyal to non-equity stakeholders. As with the stakeholder and enlightened shareholder value models, firms should be loyal to them up to the point where the benefits become greater than the costs associated with non-equity stakeholders.

Thirdly, despite substantial criticism, the non-equity stakeholder model of corporate governance model recognises the primacy of shareholders, as with the shareholder and enlightened shareholder value theories. This is because of the practical point that the shareholders will dismiss the firm’s managers at the annual general meeting (AGM) if they are believed to be not oriented to shareholder value. At the same time, the model also recognises the essential contribution of non-equity stakeholders to the interests of shareholders, as with stakeholder and enlightened shareholder theory. The proposed model argues that the interests of non-equity stakeholders cannot be overridden; however, shareholders’ interests cannot be considered before the interests of non-equity stakeholders.

Fourthly, the proposed model argues that the interests of shareholders can be protected and enhanced only through protecting and enhancing the interests of non-equity stakeholders. The theories of stakeholder and enlightened shareholder value-added a moral dimension, but this was not enough to motivate firms’ managers to orient themselves to non-equity stakeholder value, particularly in underdeveloped economies. This is for the practical reason that morality alone cannot compel managers to be oriented to non-equity stakeholder value. Rather, only after realising that there are no alternatives

to enhancing shareholder value without first enhancing the value of non-equity stakeholders, will they become interested and obliged to think about the interests of non-equity stakeholders.

Finally, and as has been mentioned above, the shareholder model of corporate governance argues that there is a direct relationship between internal corporate governance mechanisms and shareholder value, and the stakeholder model of corporate governance contends that there is a direct relationship between internal corporate governance mechanisms and stakeholder value (i.e. value for shareholders and non-equity stakeholders). There is an ambiguity in the enlightened shareholder model of corporate governance about the relationship between internal corporate governance mechanisms, shareholder value, and non-equity stakeholder value. In contrast, the proposed Non-Equity Stakeholder Model of Corporate Governance denies the direct relationship between internal corporate governance mechanisms and shareholder value and the direct relationship between internal corporate governance mechanisms and stakeholder value. Instead, the model argues that non-equity stakeholders mediate the relationship between internal corporate governance mechanisms and shareholder value.

The banking sector in Bangladesh represents an appropriate single-country case study, where the mediating role of non-equity stakeholders in ensuring the efficacy of internal corporate governance mechanisms on shareholder value is important for policy-makers, corporate regulators and watchdog groups. The outcomes are impactful for them, as they are involved in designing and developing a corporate governance code and mechanisms, which may require modification based on these findings. That modification would be particularly needed if they understand from this study that the current internal corporate governance mechanisms are not effective enough to increase the value of non-equity stakeholders, which subsequently does not have a positive effect on shareholder value. Previous studies, which view shareholder and stakeholder models of corporate governance as representing divergent interests, have not examined the mediating role of non-equity stakeholders in the relationship between internal corporate governance mechanisms and shareholder value, and this is a gap that this study seeks to fill.

1.2 MOTIVATION FOR THE STUDY

Four factors motivated the researcher to carry out the current study. The Code of Corporate Governance for Bangladesh represents the first motivating factor for this study to examine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. The Bangladesh Enterprise Institute (hereafter "BEI") (2004) states that "companies that demonstrate international standard corporate governance practices are better able to attract greater capital from banks and equity investors. Such companies will also attract the best-qualified professionals to work in their organisations. These implicit rewards will lead in turn to more explicit benefits: a successful organisation with higher profits" (BEI, 2004, p. 5). Furthermore, the BEI states that "FIs have an essential social as well as economic function in national life. Hence, they have an obligation to observe the highest standards of customer care and efficiency while ensuring their own commercial competitiveness. Financial institutions should publish a Code of Best Practice for Customers and a Code of Corporate Social and Environmental Responsibility" (BEI, 2004, p. 31).

These statements imply corporate governance arrangements which consist of a number of internal corporate governance mechanisms that attract investors and protect their funds and that positively influence customers, employees, wider society and the environment (known as non-equity stakeholders in this study), who, subsequently, contribute to higher profits for the firm. Thus, it is important for the regulators of the banking sector, researchers and academics, watchdog groups and institutions involved in designing corporate governance principles and guidelines and policy-makers to examine the efficacy of current internal corporate governance mechanisms in protecting the interests of non-equity stakeholders, which, in turn, influence shareholder value. Therefore, the current Code of Corporate Governance for the Bangladeshi banking sector has led this study to examine the mediating effect of non-equity stakeholders in the relationship between internal corporate governance mechanisms and shareholder value in the banking sector in Bangladesh.

The second motivating factor for the current study is that, as with most other developing and Commonwealth countries, Bangladesh has mostly adopted corporate governance principles and guidelines from developed countries, in particular from the

UK and the USA as well as some other developing countries (such as India, Pakistan and Malaysia).[7] However, a significant difference can be noted between Bangladesh and other countries in corporate structures, cultural attitudes to corporate management and economic factors. It is a common scenario in non-industrialised and frontier market economies that firms are managed by family members or their heirs (Claessens *et al*., 2000). For instance, the ownership structure of most Bangladeshi firms takes a relatively concentrated form, where individual investors own the firm. Farooque *et al*. (2007) find that the corporate sector of Bangladesh consists mostly of small and medium-sized firms, which are mainly (more than 85%) founded and managed by family members or their heirs.

Unlike developed economies, the banking sector in Bangladesh is also established and managed by founding family members, known as the sponsor-directors (Hossain, 2014). The majority of the chief executive officers (CEOs) and other executive directors of banks are members of the controlling families, and they hold a significant number of equity shares (Ahmed, 2010; Muttakin *et al*., 2014). For example, Ahmed (2010) shows that an average of 40.19% of ordinary shares are held by the family members in the banking sector in Bangladesh, with a maximum limit of 96.15%. Those who are appointed as independent non-executive directors unable to offer an independent judgment as they have a family relationship with the dominant shareholder groups (Farooque *et al*., 2007; Hossain, 2014). This scenario indicates that, realistically, the board is not independent because of the control of the family-appointed directors who determine the agenda of board meetings in favour of their interests (Hoque *et al*., 2013). Key decisions are taken at family meetings and then inscribed as the decision of the board meeting (ADB, 2003). Moreover, the management and the board are intertwined, a situation in which conflicts of interest cannot be avoided and insider trading cannot be prevented. As a result, the rights of the minority shareholders are not protected, but rather are marginalised (Farooque *et al*., 2007).

[7] "The Code was developed with intensive consultation with other Codes of Corporate Governance and international experts on corporate governance" (BEI, 2004, p. 7).

In contrast, although almost all UK firms exist in a concentrated form, they are owned by institutional investors (such as insurance companies, pension funds and other institutional shareholders), and ownership is dispersed, as it is uncommon for investors to hold a large number of equity shares (Mayer, 2000; Ntim, 2009). Thus, corporate owners in emerging or less-developed market economies, like Bangladesh, exercise significantly greater influence over the management of corporations than in developed market economies, like the UK and USA (Hossain, 2014).

Furthermore, the Dhaka Stock Market has a smaller number of firms listed with a lower volume of total market capitalisation in comparison to the London Stock Market. For instance, there are only 566 firms listed on the Dhaka Stock Exchange, with a total market capitalisation of about $43,470.59 billion in 2016 (DSE, 2016a). By contrast, about 3,041 firms are listed on the London Stock Exchange, with a total market capitalisation of about $3.50 trillion in 2016 (LSE, 2016). The statistics imply that the Dhaka Stock Market is significantly smaller compared to the UK Stock Market. Consequently, the existing corporate governance structures of the two countries may not behave in the same way to enhance shareholder value. Moreover, and as with other less developed countries, Bangladesh does not have a strong record of implementing sets of corporate laws. This situation leads to two important policy questions as to whether existing Bangladeshi corporate governance mechanisms are robust and effective in achieving non-equity stakeholder value, and whether the present system of voluntary compliance (i.e. “comply or explain”), instead of a mandatory system (i.e. “comply or else”), is effective in ensuring good corporate management that satisfies non-equity stakeholder, without subverting the interests of shareholders. Therefore, prevailing corporate structures, cultural attitudes to corporate management and economic factors in Bangladesh require an exploration of the role of non-equity stakeholders in the relationship between internal corporate governance mechanisms and the shareholder value in the banking sector in Bangladesh. This fact provides further motivation to carry out this study, as it may yield a divergence in results from the developed world and from other developing countries from which Bangladeshi corporate governance principles and guidelines have been adopted.

The third motivating factor for the current study is that the corporate sector of Bangladesh is a part of the country's economy constituted by financial and non-financial companies. The financial companies are made up of different banking and non-banking companies. The banking sector, as with other emerging economies, plays a pivotal role as the principal financier for industry and for other commercial activities in the economy of Bangladesh (Ahmed, 2010). However, and as will be discussed in subsection 2.2.1 of chapter 2, the sector is characterised by numerous negative features, such as poor risk diversification, poor loan or investment appraisal, pervasive corruption and deceitful practices and a lack of accountability and transparency which has eroded overall banking discipline (Hassan, 1994; USAID, 1995; Haque *et al*., 2007). Consequently, and has been stated earlier, the country has experienced a number of scandals in the banking sector in recent times. These scandals have destabilised trade and commerce, resulting in the erosion of economic development. These scandals have also affected the trust of stakeholders, including depositors, which opens up new challenges for bank management of Bangladesh to mitigate risk. These circumstances require a long-term view of the banks' relationship with shareholders, in particular, and non-equity stakeholders, in general, responding to and recognising the call for greater transparency and greater concern for stakeholders (Jizi *et al.*, 2014). The current study will examine the efficacy of the prevailing internal corporate governance mechanisms, which require listed banks to "comply or explain", in building trust and positive attitudes among non-equity stakeholders towards the banking sector in Bangladesh, something which eventually affects shareholder value. Various internal corporate governance mechanisms are expected to ensure transparency and accountability in management activity, resulting in less disorder in banking activities, which helps to enhance the confidence of non-equity stakeholders. Consequently, non-equity stakeholders will be keen to make themselves partners of banks, which will improve the performance of banks and thereby increase shareholder value.

Over recent decades, a number of studies have been carried out to examine the effect of corporate governance structures on the performance of Bangladeshi firms. For example, Ahmed (2010), Muttakin & Ullah (2012) and Hoque *et al.* (2013) have examined the relationship between corporate governance mechanisms and the financial performance of banks, while Farooque *et al.* (2010) have examined the co-deterministic

relationship between ownership concentration and corporate financial performance. Farooque *et al.* (2010) investigate whether corporate financial performance and corporate governance mechanisms contribute to the shape of the ownership structure. Earlier, Imam & Malik (2007) examined the relationship between ownership structure, firms' financial performance and the dividend payout policy of the listed non-financial firms, while Farooque *et al.* (2007) examined the relationship between the corporate ownership of the listed non-banking firms in Bangladesh and the firms' financial performance, using simultaneous equations. Ferdous (2012) investigates the attitude of Bangladeshi listed firms towards the Code of Corporate Governance for Bangladesh by assessing the level of compliance with the code and looking for the factors that influence conformity.

Recently, Muttakin *et al.* (2014) have carried out a study to differentiate between the board patterns in family and non-family listed firms in Bangladesh, while Rahim & Alam (2014) have investigated the convergence between corporate social responsibility and corporate governance in the self-regulation of companies in the less vigilant environment in Bangladesh. Sobhan (2014) examines the effect of corporate governance reform on financial performance and lending decisions, Tareq (2013) investigates discriminatory party transactions and corporate governance reform, while Chowdhury (2015) examines the relationship between corporate governance and CEO remuneration in Bangladesh.

In addition, a number of other pertinent studies (e.g. Belal, 1999, 2001; Ahmed & Yusuf, 2005; Reaz, 2006; Belal & Owen, 2007; Uddin & Choudhury, 2008; Sobhani *et al*., 2009; Siddiqui, 2010) have focused on the current state of corporate governance compared to several regulatory provisions, while a small number of studies (e.g. Imam *et al*., 2001; Uddin & Hopper, 2003) have looked into issues related to accounting and auditing. These previous studies, however, have not discerned the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value in the banking sector in Bangladesh. This situation has led to the focus of this study addressing the mediating role of non-equity stakeholders in the relationship between internal corporate governance mechanisms and shareholder value in listed banking firms in Bangladesh.

The final motivation for the current study emanates from previous studies which have commonly looked into the effect of internal corporate governance mechanisms on firms' financial performance, the proxy for shareholder value. These studies measured shareholder value by using either (1) accounting return-based methods (e.g. return on assets – ROA, return on equity – ROE, return on sales – ROS or stock performance – SP), or (2) market-based methods (e.g. Tobin's Q – TQ) (Hossain, 2014). As will be discussed in detail in chapter five, the accounting return-based methods are backwards-looking measures of shareholder value or firms' financial performance (Farooque *et al*., 2007), as they are profit-related techniques that measure short-term financial performance, while the market-based measures, i.e. Tobin's Q, assess a firm's financial performance based on market perception (Lang *et al*., 1996; Haniffa & Hudaib, 2006; Ntim, 2009; Ahmed, 2010). The existing corporate governance literature shows that a high ratio of Tobin's Q is an indication of a firm's enhanced financial performance. However, and as will be discussed in detail in chapter five, Dybvig & Warachka (2012) argues in theoretical terms that Tobin's Q is misleading about firms' financial performance. This is because firms' financial performance has a confusing effect on Tobin's Q, particularly when there is under-investment in a firm. This means that, despite the better financial performance, the Tobin's Q may yield a low or high value, "depending on the relative importance of scale decisions versus cost discipline, respectively. In contrast, the existing literature's interpretation of a high Tobin's Q does not address the endogenous nature of its denominator with respect to managerial scale decisions. In particular, the existing literature does not account for the possibility that under-investment is able to inflate Tobin's Q" (ibid., p. 20).

Therefore, a good method to quantify shareholder value is needed, and, so, unlike prior studies of Bangladesh, this study uses a new variable, namely the "Economic Value Added (EVA)" as part of a value-based approach. This study will differentiate shareholder value empirically using this value-based measure from accounting return-based measures and market-based measures. As will be discussed further in chapter five, EVA is a value-based performance measure, which, unlike the accounting return-based and market-based measures, directly measures the creation of shareholders' wealth over time. It places particular emphasis on the calculation of how much economic value is added to the investment of shareholders because of the activities of firms' managers. In

order to overcome the limitations associated with the return-based and market-based measures, EVA is calculated after adjusting different accounting data, which may have no direct relation to the real financial significance of a company (Shil, 2009). This issue also motivates the researcher to find out how the mediating role of non-equity stakeholders affects the relationship between internal corporate governance mechanisms and shareholder value using this value-based approach, which may be different empirically from shareholder value as defined by accounting return-based approaches and market-based approaches.

1.3 RESEARCH QUESTIONS

Given the gaps stated above, the present study sheds light on the following key question: *Do non-equity stakeholders mediate the relationship between internal corporate governance mechanisms and shareholder value in the listed banking companies in Bangladesh?* In order to obtain the answer to this central question, the following four sub-questions have been formulated.

1. Is there any direct relationship between internal corporate governance mechanisms and shareholder value in the listed banking companies in Bangladesh?
2. Is there any direct relationship between internal corporate governance mechanisms and non-equity stakeholders[8] in the listed banking companies in Bangladesh?
3. Do internal corporate governance mechanisms and non-equity stakeholders explain shareholder value in the listed banking companies in Bangladesh?
4. Do non-equity stakeholders have a mediating effect on the relationship between internal corporate governance mechanisms and shareholder value in the listed banking companies in Bangladesh?

1.4 AIM AND OBJECTIVES OF THE STUDY

This study aims to shed light on the current debate on whether the shareholder or stakeholder model of corporate governance should be followed by firms to ensure

[8] Non-equity stakeholders indicate the attitudes of non-equity stakeholders (e.g. depositors, borrowers, employees and society) towards banks.

maximum value for shareholders. For this purpose, and as has been discussed above, this study focuses on the "Non-Equity Stakeholder Model of Corporate Governance", which proposes that the corporate governance model be oriented to non-equity stakeholder value, instead of being oriented exclusively to shareholder or stakeholder value. The proposed model argues that internal corporate governance mechanisms should be developed in such a way that they develop a positive relationship with the non-equity stakeholders of firms, which, in turn, has an effect on shareholder value. Hence, the proposed model hypothesises that there is no direct relationship between internal corporate governance mechanisms and shareholder value; rather, non-equity stakeholders mediate that relationship. Based on this hypothesis, the current study attempts for the first time to examine empirically the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value in the listed banking companies in Bangladesh. Unlike prior studies, and as has been stated earlier, this study attempts to measure shareholder value using a value-based approach, along with the accounting return-based and market-based approaches. This study also takes a unique position in operationalising the attitudes of the key non-equity stakeholders in the banking sector in Bangladesh.

This study, therefore, addresses the following four objectives[9] to determine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value.

1. To examine the direct relationship between internal corporate governance mechanisms and shareholder value in the listed banking companies in Bangladesh.
2. To examine the direct relationship between internal corporate governance mechanisms and non-equity stakeholders (e.g. depositors, borrowers, employees and society) in the listed banking companies in Bangladesh. This objective involves determining whether each internal corporate governance

[9] The study follows Baron & Kenny's (1986) "three-step approach" (discussed in detail in chapter five) to examine the mediating effect of NESHs on the relationship between ICGMs and SHV. This approach posits that there are three steps that the researcher must take to observe this mediating effect. Accordingly, objectives 1-3 have been formulated to achieve the research aim.

mechanism tested accounts for the change in the attitudes of non-equity stakeholders towards the sampled banks.

3. To ascertain the effect of internal corporate governance mechanisms and non-equity stakeholders on shareholder value. This objective involves assessing whether each internal corporate governance mechanism would explain the shareholder value in the listed banking companies in Bangladesh while considering the attitudes of non-equity stakeholders towards the sampled banks.
4. Finally, to determine whether non-equity stakeholders mediate the relationship between internal corporate governance mechanisms and shareholder value in the listed banking companies in Bangladesh.

1.5 THESIS ORGANISATION

The remainder of the thesis is divided into seven chapters, organised as follows.

Chapter Two presents an overview of the economic, legal and regulatory frameworks of Bangladesh that have contributed to the development of the country's corporate governance structures. The key objective of this chapter is to provide a comprehensive description of the corporate legal and governance frameworks in Bangladesh.

Chapter Three focuses on the review of the existing theoretical frameworks and empirical literature on internal corporate governance mechanisms and shareholder value. The main focus of this chapter is to identify gaps in the existing literature, which lead to the development of the conceptual framework and hypotheses for this study. It maps out the relationship between the independent variables and dependent variables. Specifically, it seeks to attain two main objectives. Firstly, it endeavours to review the existing theoretical frameworks that attempt to link different internal corporate governance mechanisms with shareholder and stakeholder value. Secondly, it attempts to perform a comprehensive review of the existing empirical literature on the relationship between internal corporate governance mechanisms and shareholder value, followed by the relationship between internal corporate governance mechanisms and non-equity stakeholders.

Chapter Four focuses on the development of the conceptual framework and hypotheses on the basis of which this study is conducted. It elaborates the logical relationship between the independent and dependent variables, followed by the independent and mediating variables, and then the independent, mediating and dependent variables. Specifically, this chapter seeks to achieve three main objectives: firstly, legitimising the possible relationship between various internal corporate governance mechanisms and shareholder value; secondly, rationalising the probable relationship between different internal corporate governance mechanisms and non-equity stakeholders; finally, justifying the apparent relationship between internal corporate governance mechanisms, non-equity stakeholders and shareholder value. In this study, nineteen hypotheses are developed to validate the relationship between the variables, with one attribute being examined under each hypothesis.

Chapter Five discusses the research methodology and design with the aim of achieving three related objectives. Firstly, it aims to offer a broad description of the data collection, the reliability of the data and the research methods used in this study to show how the research is carried out. Secondly, it attempts to present the rationale for the various data collection procedures and methodological choices made at each phase of this study. Finally, it also seeks to describe the strengths and limitations of different data collection procedures and methodological choices that have been made throughout this study.

Chapter Six presents and discusses the empirical results of this study. This chapter covers a summary of the descriptive statistics of the dependent (shareholder value), independent (internal corporate governance mechanisms), mediating variable (non-equity stakeholders) and control variables. It also presents the results of the bivariate analysis using Pearson's correlation matrix. Finally, it focuses on the multivariate results, i.e. the results of the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value.

Chapter Seven presents the results of a series of tests to confirm the robustness of the findings obtained in chapter six. The key aim of this chapter is to confirm the validity of the results presented in chapter six and to determine the extent to which the findings are robust and insensitive to alternative models and measurements.

Finally, **Chapter Eight** presents the conclusions of this study. Specifically, it formulates the key findings in detail, followed by a discussion of the policy implications and recommendations deriving from those findings. At the end of the chapter, the limitations of this study are highlighted, and potential avenues for future research are discussed.

CHAPTER TWO

OVERVIEW OF THE ECONOMY, CORPORATE SECTOR AND CORPORATE GOVERNANCE IN BANGLADESH

2.0 OVERVIEW OF THE CHAPTER

This chapter focuses on an overview of the economic, legal and regulatory frameworks of Bangladesh that have contributed to the development of the country's corporate governance structures. The key objective of this chapter is to provide a comprehensive description of the corporate legal and governance frameworks of Bangladesh. The rest of the chapter is divided into five sections. Section 2.1 presents an overview of the economy, while section 2.2 presents the existing situation of the corporate sector in Bangladesh. Section 2.3 describes the scenario of corporate governance in Bangladesh, section 2.4 describes the development of the code of corporate governance for Bangladesh, and, finally, section 2.5 summarises the chapter.

2.1 OVERVIEW OF THE ECONOMY OF BANGLADESH

Bangladesh is a developing country in South Asia. It lies in the north-eastern part of South Asia and is surrounded by India to the west, the north and the northwest, by Myanmar to the southeast and by the Bay of Bengal to the south (Akter, 2016). In recent years, the country has achieved remarkable growth in its macroeconomic environment and has made considerable advances across all economic sectors (Sobhan, 2014). Since achieving independence in 1971 from East Pakistan, the country has enjoyed consistent annual growth in Gross Domestic Product (GDP) (see Figure 1), with steady annual GDP growth of over 6% in the most recent decade (2004–2016), indicating a revolutionary change in the economy of Bangladesh.

"Bangladesh has an agrarian economy; however, the contribution of the agriculture sector to GDP has been declining over the last few years" (BBS, 2016). An analysis shows that the service sector, which is comparatively less capital-intensive (e.g.

education, and public administration), is a leading contributor to the growth of GDP (CPD, 2016).

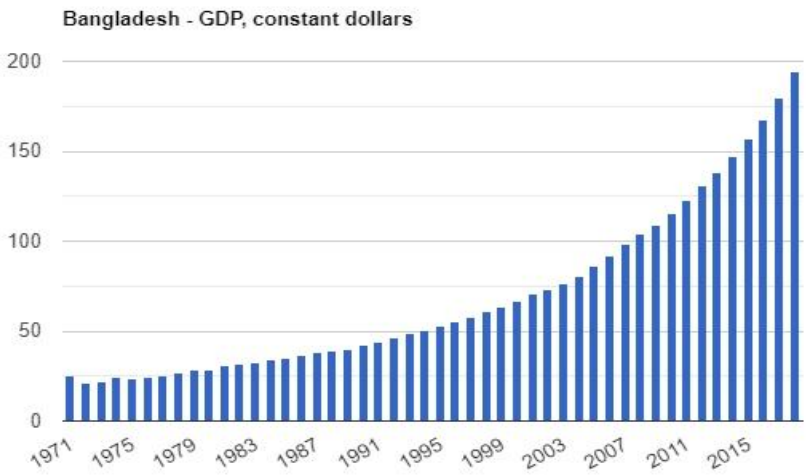

Figure 1: GDP growth in Bangladesh, Source: World Bank, 2019

According to CPD (2016), the contribution of the industrial sector to GDP has also improved at a modest rate, while that of the agriculture sector has slowed down (see Table 1).

Table 1: Incremental contribution to GDP growth in Bangladesh by sector

Sectors	2012	2013	2014	2015	2016(p)
Agriculture Sector	0.52	0.41	0.70	0.53	0.40
Industries Sector	2.47	2.59	2.27	2.74	2.95
Manufacturing	1.69	1.80	1.60	1.93	1.99
Services Sector	3.43	2.88	2.92	3.00	3.44
Public Administration and Defense	0.24	0.21	0.22	0.32	0.53
Education	0.16	0.13	0.16	0.17	0.30
Health and Social Works	0.07	0.09	0.09	0.09	0.15
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	0.42	0.28	0.23	0.25	0.21
Financial Intermediations	0.28	0.28	0.29	0.29	0.29
GDP Growth	6.52	6.01	6.06	6.55	7.05

Note: p denotes provisional estimates. Source: CPD (2016, p. 10)

The service sector, which accounted for 56.69% of GDP in 2015–16, dominates the economy of Bangladesh, followed by the industrial (28.56%) and agricultural sectors (14.75%) (BBS, 2016). This means that the economy of the country is being transformed

from its agricultural base towards manufacturing and services, suggesting that a rapid structural transformation is taking place in the economic sector of Bangladesh.

Bangladesh has been continuing its economic progress despite the global economic recession in the last decade. The economic growth of the country over the last few years can be considered impressive compared to that of the least developing countries (LDCs) and developing countries (see Table 2) (CPD, 2016). Factor accumulation (e.g. labour, land, capital and entrepreneurship) and factor productivity are the two key reasons, along with the favourable macroeconomic environment (e.g. moderate level of inflation, a reasonable balance of payments and high forex reserve), which account for the economic growth (ibid.). Because of the persistent growth over the last few years, the market-based economy of Bangladesh reached the lower-middle-income level in 2015, with a Gross National Product (GNP) per capita of $1,190 (BBS, 2016). The country's economy was the second fastest-rising economy of 2016, the 46th biggest in the world in nominal terms and the 33rd largest in terms of purchasing power parity (PPP). Thus, the country is classified among the next eleven promising economies in the world (Devnath, 2016).

Table 2: Real GDP growth of Bangladesh and other economies (%)

Economies	2010	2011	2012	2013	2014	Average
World	4.1	2.8	2.2	2.3	2.5	2.7
Developing economies (excluding LDCs)	7.8	5.8	4.7	4.6	4.3	5.3
LDCs	6.0	3.9	4.1	5.5	5.1	4.9
Bangladesh	6.1	6.5	6.5	6.0	6.2	6.3

Source: CPD (2016, p. 3)

Despite the positive macroeconomic environment, there are many threats which may slow the growth of the country's economy. These include declining investment in the private sector, reduction in agricultural growth, appreciation of the real effective exchange rate, weak performance in the banking sector and poor efficiency in the use of development funds, which all constitute cause for concern regarding the economic potential and growth prospects of the country (CPD, 2016). In order to sustain and further strengthen the current momentum of economic growth, effective use of resources is essential.

2.2 OVERVIEW OF THE CORPORATE SECTOR OF BANGLADESH

The history of the corporate sector of Bangladesh indicates that several changes have been made based on practical aspects of the country and in response to changes in global economies. Soon after independence, the country nationalised almost all its industries, with total assets of more than BDT[10] 2.5 million, as part of its "socialist" economic policy (Ahmed, 1978; Mir & Rahaman, 2005; Chowdhury, 2015). Accordingly, the government suspended the activities of the Dhaka Stock Exchange (DSE) and limited the contribution of the private sector to the economy (Rahim, 1978; Khan, 1992). After a short period, the initiative turned into a disaster, as the management of state-owned enterprises (SOEs) turned out to be highly politicised and corrupt (Ghafur, 1976; Ahmad, 1976). In addition, bureaucrats in the government with little or no prior professional experience in business were appointed to operate state-owned enterprises (Chowdhury, 2015). As a result, firms' operating efficiency declined, resulting in a high volume of operating losses amounting to about 30% of annual project aid (Uddin & Hopper, 2003).

After realising the devastating situation of the SOEs in 1976, the government of Bangladesh abandoned its "socialist" economic policy and focused on a market-based economy, adopting a privatisation policy to increase the role of the private sector in the economy (Ahmed, 1978; Rahim, 1978; Chowdhury, 2015). About 400 nationalised corporations were sold to private businessmen. The government also allowed the operation of multinational corporations (MNCs), e.g. British American Tobacco and Glaxo SmithKline (Islam, 1986-1987). The privatisation policy in the industrial sector enriched the country's economy. The statistics show that the contribution of the industrial sector to GDP was 28.56% in 2016 (BBS, 2016), up from 7.58% in 1974, 10.65% in 1980 and 27.64% in 2004.

The trend of privatisation has continued to the present and in some cases has even been intensified. The denationalisation of state-owned banks and permission to float new banks under private initiatives began in 1982, giving rise to a flourishing private banking sector (Sobhan, 2014). Since then, successive governments have allowed many financial institutions to run in the private sector along with non-financial firms. There are still a

[10] BDT refers to Bangladeshi Taka – the official currency of Bangladesh.

few state-owned corporations; however, some of them are partially privatised, while others remain wholly state-owned (known as the reserved sector), e.g. "arms and ammunitions and other military equipment and machineries, nuclear power, security printing and minting, afforestation and mechanized extraction within the boundary of reserved forest" (BBS, 2016, p. 22).

The structural arrangements of industries in Bangladesh show that most of the sectors are medium and small in scale with a few large-scale industries. The principal industries are ready-made garments, textiles, chemical fertilisers, pharmaceuticals, tea processing, paper and newsprint, cement, light engineering, sugar and leather goods (BBS, 2016).

Table 3: Listed companies on the DSE and CSE

	Sector Classification	DSE		CSE	
		No. of listed Cos.	%	No. of listed Cos.	%
Financial Companies (FCs)	Banking Cos.	30	5.30	29	9.48
	Non-banking Cos.:				
	(i) Insurance Cos.	47		42	
	(ii) Leasing & Investment Cos.	23	12.37	22	20.92
	Total Financial Companies (FCs)	**100**	**17.67**	**93**	**30.40**
Non-Financial Companies (NFCs)	Engineering	34		28	
	Food and Allied	18		12	
	Fuel and Power/Energy	18		16	
	Pharmaceuticals and Chemicals	28		23	
	Textile	48		43	
	IT and Telecommunication	10		10	
	Cement, Ceramic, Jute and Paper & Printing	17		16	
	Tannery & Leather	6		6	
	Services & Real Estate, Travel & Leisure	8		7	
	Miscellaneous	12		14	
	Total Non-Financial Companies (NFCs)	**199**	**35.16**	**175**	**57.20**
	Total FCs and NFCs	**299**	**52.83**	**268**	**87.58**
	Bonds, Debentures and Mutual Funds	267	47.17	38	12.40
	Total Listed Companies	**566**	**100**	**306**	**100**

Sources: DSE (2016b); CSE (2017)

The capital market has been enriched because of privatisation and several economic reform policies. The total market capitalisation of the capital market has increased to BDT 31,597.58 billion in 2016 from BDT 11.485 billion in 1991, suggesting a positive growth of the capital market in Bangladesh. The market capitalisation as a percentage of GDP has also increased from 1.4% in 1991 to 10.2% in 2006 (Bepari & Mollik, 2008) with a further, surprising increase to 37.08% in 2011. In recent years,

however, the ratio has started to decrease gradually from 26.27% in 2012 to 19.73% in 2016.

The capital market of Bangladesh is made up of two stock exchanges, namely the Dhaka Stock Exchange (DSE) and the Chittagong Stock Exchange (CSE). There were 566 companies listed on the DSE as of 19th July 2016 (DSE, 2016b) and 306 listed on the CSE as of 25th October 2017. Most of the companies are dual-listed companies. According to Chowdhury (2013), only 10% of the total public limited companies in Bangladesh are listed on stock exchanges. Table 3 presents the firms listed on the DSE and CSE by sector.

The industrial sector has been divided into two key sub-sectors – financial companies (FCs) and non-financial companies (NFCs). Figure 2 shows that among the listed companies on the DSE, FCs represents total 17.67% of which 5.30% are banking companies and 12.37% are non-banking financial companies, while NFCs represent 35.16%, and bonds, debentures and mutual funds represent 47.17% of the listed companies.

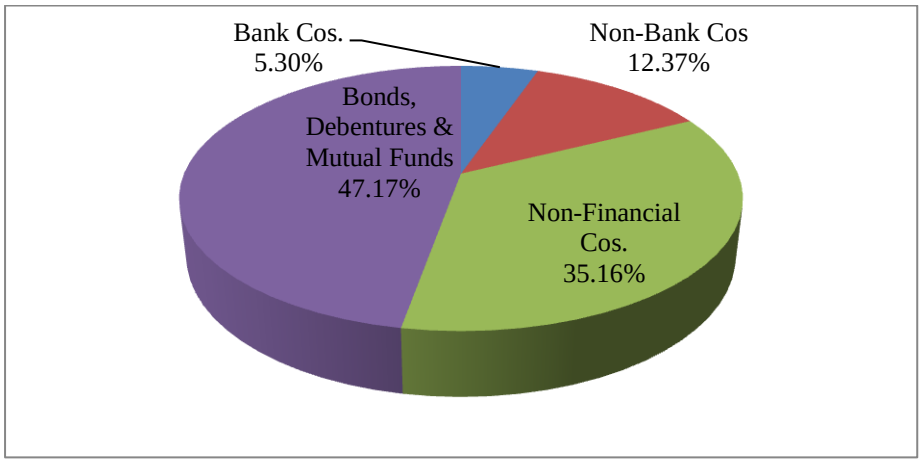

Figure 2: Size of companies listed on the DSE (by sector), Source: DSE (2016b)

Meanwhile, Figure 3 shows related statistics for the CSE, where FCs represent a total of 30.40%, of which 9.48% are banking companies and 20.92% are non-banking financial companies, while NFCs represent 52.20%, and bonds, debentures and mutual funds represent 12.42% of the listed companies.

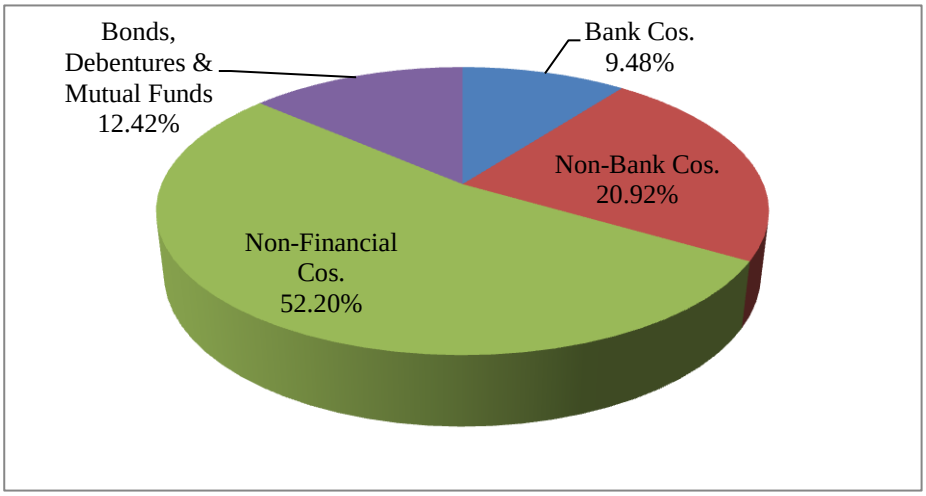

Figure 3: Size of companies listed on the CSE (by sector), Source: CSE (2017)

In the interest of investors, the capital market of Bangladesh has classified all the listed companies into five groups, based on several attributes, such as the frequency of annual general meetings (AGM) and declaration of dividends. Based on these attributes, all the listed companies are categorised as 'A' 'B' 'G' 'N' or 'Z' companies (Ferdous, 2012).

Table 4: Companies listed (by category) on the DSE and CSE

Categories of Companies	Number of Listed Companies	
	DSE	CSE
A Categories	268	250
B Categories	16	14
G Categories	0	0
N Categories	6	6
Z Categories	45	36

Sources: DSE (2016b); CSE (2017)

"A" category companies hold an annual general meeting (AGM) regularly and declared a dividend of 10% or more in the last year, while "B" category companies are those who hold an AGM regularly but failed to declare a dividend of 10% or more in the last year. Companies which have failed both to hold their AGM regularly and to declare a dividend fall into the "Z" category. "G" category companies are Greenfield companies, which are yet to start their operations but have a call on their subscribers to invest. Finally, companies which have started their operations and entered the primary market to collect money are categorised as "N".

2.2.1 The Banking Sector in Bangladesh

The history of the banking sector in Bangladesh is intimately associated with the country's independence, as the sector consists of several banks of the then East Pakistan (the former official name of Bangladesh before independence) (Hossain, 2014). The sector gained legal entity rights after the country's independence in 1971 (ibid). The central bank of the country, Bangladesh Bank (BB), was previously known as the "State Bank of Pakistan" before independence (Nguyen *et al.*, 2011). Currently, the sector consists of 57 scheduled banks and 6 non-scheduled banks (Bangladesh Bank, 2016b), of which 30 banks were listed on the Dhaka Stock Exchange as of July 2016 (DSE, 2016a). Almost all of these are privately owned commercial banks, except for the six largest banks which are state-owned (Bangladesh Bank, 2016b). The six non-schedule banks are Grameen Bank (Microfinance Bank), Kormoshangsthan Bank (Employment Bank), Jubilee Bank, Ansar VDP Unnayan Bank, Polli Sanchay Bank and Probashi Kollyan Bank (ibid).

As has been stated before, the country has recently achieved remarkable growth in its macroeconomic environment (Sobhan, 2014). In particular, it has been enjoying steady annual GDP growth of over 6% in the last decade. The banking sector has made a significant contribution to the annual GDP growth of the country. According to the statistics of the BBS (2016), the sector has contributed more than 8% to the country's GDP over the financial period 2012–2013 to 2015–2016.

The banking sector dominates the financial sector of Bangladesh in terms of financial strength (Khatun, 2017). After the independence of the country, particularly after 1975, when financial liberalisation began, there was a significant development of the banking sector in Bangladesh that led to the economic growth of the country. The sector has improved its performance across various dimensions of financial development. A number of indicators of the development of the banking sector in Bangladesh, along with other similar Asian countries, are presented in Table 5. These include bank credit to the private sector as a percentage of GDP, bank assets as a percentage of GDP, broad money (M2) as a percentage of GDP, and domestic credit to the private sector as a percentage of GDP.

Table 5: Depth of the banking system

Areas of contribution/ indicators	Countries	Financial Years						Average	Rank
		2011	2012	2013	2014	2015	2016		
Bank credit to private sectors, percentage of GDP	Bangladesh	42.26	42.76	41.58	43.51	44.20	45.09	43.23	3
	India	51.29	51.89	52.39	51.88	51.87	49.19	51.42	2
	Pakistan	18.03	16.84	16.02	15.49	15.31	16.41	16.35	5
	Sri Lanka	34.91	34.92	34.64	35.75	41.48	45.22	37.82	4
	Vietnam	101.8	94.83	96.08	100.3	111.93	123.81	104.79	1
Bank assets, percentage of GDP	Bangladesh	50.75	51.29	52.38	54.65	55.71	55.87	53.44	3
	India	66.04	67.34	68.35	68.68	68.76	69.67	68.14	2
	Pakistan	33.70	36.63	36.88	37.04	39.90	43.14	37.88	5
	Sri Lanka	33.97	36.36	39.62	39.72	43.63	56.39	41.62	4
	Vietnam	106.88	100.65	103.56	108.74	118.06	130.45	111.39	1
Broad money (M2), percentage of GDP	Bangladesh	59.81	60.74	61.40	63.34	64.51	65.85	62.61	3
	India	78.84	76.91	78.18	77.90	78.01	74.69	77.42	2
	Pakistan	48.10	51.48	52.24	51.82	53.32	57.81	52.46	4
	Sri Lanka	43.45	42.25	44.71	47.39	52.48	55.66	47.66	5
	Vietnam	99.80	106.46	117.02	127.55	137.65	151.09	123.26	1
Domestic credit to the private sector, percentage of GDP	Bangladesh	42.47	43.00	41.79	43.74	44.41	45.28	43.45	3
	India	51.29	51.89	52.39	51.88	51.90	49.55	51.48	2
	Pakistan	18.13	16.94	16.12	15.59	15.39	16.53	16.45	5
	Sri Lanka	35.01	35.02	34.75	35.87	41.60	45.71	37.99	4
	Vietnam	101.80	94.83	96.80	100.3	11.93	123.82	88.25	1

Source: Extracted from business and economic data, World Bank (2019)

Firstly, bank credit to the private sector as a percentage of GDP shows that the average banking credit for new investments and for purchasing houses, cars and other household items for the period 2011–2016 was 43.23% of GDP. The minimum bank credit to the private sector was 41.58% in 2013, and the maximum was 45.09% in 2016.

Secondly, bank assets as a percentage of GDP show that the average access of the central, state and local governments, nonfinancial public enterprises and private sector to bank assets during the period 2011–2016 was 53.44%, with a minimum of 50.75% in 2011 and a maximum of 55.87% in 2016. Thirdly, the broad money (M2) measure as a percentage of GDP shows that the average ability of Bangladeshi financial institutions to mobilise savings for investment purposes during the period 2011–2016 was 62.61%, with a minimum of 59.81% in 2011 and a maximum of 65.85% in 2016. Finally, Table 5 shows that the average value of domestic credit to the private sector as a percentage of GDP during the same period was 43.45%, with a minimum of 42.47% in 2011 and a maximum of 45.28% in 2016.

In order to evaluate the development of the financial sector of Bangladesh, the values of the indicators for the period 2011–2016 can be compared with those of the

previous periods. According to the World Bank (2019), the average value of bank credit to the private sector as a percentage of GDP during the period 1974–2016 was 21.46%, with a minimum of 1.92% in 1975 and a maximum of 45.09% in 2016. Similarly, the average value of bank assets as a percentage of GDP during the same period was 23.39%, with a minimum of 8.25% in 1975 and a maximum of 55.87% in 2016. The average value of domestic credit to the private sector as a percentage of GDP during the same period was 21%, with a minimum of 1.92% in 1975 and a maximum of 45.28% in 2016. Also, the average value of broad money (M2) as a percentage of GDP during the same period was 32.88%, with a minimum of 8.35% in 1975 and a maximum of 65.85% in 2016.

The above statistics related to the depth of the banking system reveal that the financial sector of Bangladesh has developed moderately during the period 2011–2016, although the statistics related to bank credit to the private sector as a percentage of GDP and bank assets as a percentage of GDP indicate a slow rise in bank credit to the private and public sectors (e.g. central, state and local government, and nonfinancial public enterprises). Both sectors did not have adequate access to bank credit during the period 2011–2016, because, according to the yardstick of the World Bank (2019), a country is said to have a relatively well developed financial system if its banking credit to the private sector is about 70 percent of GDP or more.

The statistics on broad money (M2) to GDP indicate that a moderate level of money supply (e.g. total amount of currency and other liquid instruments) is available in the Bangladeshi financial market which contributes to the moderate economic development of the country. The same scenario is observed in the case of domestic credit to the private sector to GDP. The indicators related to the financial development of Bangladesh are comparable with those of four other Asian countries. It is evident that four indicators for Bangladesh are lower than the corresponding measures for Vietnam and India, but higher than those of Pakistan and Sri Lanka. This indicates that the contribution of the banking sector of Bangladesh to the economy tends to be lower compared with India and Vietnam, but higher compared with Pakistan and Sri Lanka.

The banking sector of Bangladesh has been experiencing difficulties over the last few years due to a number of anomalies (Appendix 1) which have affected the overall

performance of the sector. The majority of banks have failed to demonstrate satisfactory progress since 2010 on indicators such as return on assets, return on equity, non-performing loans, expenditure-income ratio, liquid assets and excess liquidity, even with numerous programmes having been adopted by the central bank (Mahmud, 2013; Khatun, 2017). All state-owned banks, some private commercial banks and two specialised banks have been experiencing severe problems related to a high volume of non-performing loans, low profitability, huge capital deficits and weaknesses in other balance sheet items.

According to the Bangladesh Bank (2018), the proportion of non-performing loans of state-owned commercial banks (SCBs) to the end of the financial year 2017–18 was 28.2%, of which 47% were confined to five particular banks, the highest rate in the last decade. Moreover, classified loans are more than 10% for nine banks during the period 2016–2018. Banks' cost to income ratio was almost 0.5, and a fluctuating advance-deposit ratio (ADR) can be observed in the last decade. Three fourth generation banks, such as The Farmers Bank, NRB Global Bank, and NRB Commercial Bank, faced a liquidity crisis during the financial year 2016–2017. Consequently, depositors failed to get their money back in time, which damaged their trust in the banks. These results are indications of the lack of effectiveness of bank management and, more specifically, the ineffectiveness of liquidity management. The reasons for the unusual occurrences in the sector include inadequate risk analysis, poor credit assessment, deceptive measures and political pressure on bank management (Haque *et al.*, 2007). These anomalies suggest that good corporate governance is absent.

The central bank has introduced a number of regulations, known as prudential regulations for banks, on several occasions as a part of its reform initiatives. Three of the prudential regulations are (1) a Credit Risk Grading (CRG) manual; (2) restrictions on lending to a director of a bank or to his/her relatives; and (3) prohibition on providing loans to a company with any director who is a loan avoider (Sobhan, 2014). Previous studies, however, provide evidence that the reforms have failed to ensure accountability in the banks' credit management, in particular, to reduce the undue interference of political elites and sponsor-directors in lending decisions (Reaz & Arun, 2006). As a

result, there has been no substantial improvement in the credit management system of Bangladeshi banks.

Given the above problems in the banking sector of Bangladesh, an effective legal framework and reform of the bank governance system are inevitable. These include the strengthening of financial regulations and the monitoring of subsequent compliance with regulations by an independent body, focusing on loan recovery, and eventually the establishment of a sound and effective corporate governance structure.

2.2.2 Salient Features of the Corporate Sector in Bangladesh

The corporate sector in Bangladesh contains a number of salient features, which may be different from other less developed, developing and developed economies. Some of the key features are discussed below in brief in order to explain the importance of sound corporate governance in the corporate sector in Bangladesh.

Ownership and control: Previous studies have documented that the ownership patterns of Bangladeshi companies are concentrated and that most of the leading shareholders are sponsor family members (Imam & Malik, 2007; Ahmed, 2010). For example, Hoque *et al.* (2013) find that 61.70% of board members in non-financial firms are sponsor family members. Farooque *et al.* (2007) find that 38.70% of shareholders in financial and non-financial firms are sponsor family members, and Ahmed (2010) reports an average of 40.19% in banking firms. These studies also find that sponsor-members exercise strong control of the board.

Institutional ownership: There is an absence of well-developed institutional investors in the corporate sector in Bangladesh, and those who have invested do not play a contributory role in corporate management. Prior studies show that these categories of investors possess only 10–15 percent equity ownership, suggesting they have poor control over corporate management (Farooque *et al.*, 2007; Ahmed, 2010).

Rights of shareholders: The rights of shareholders, particularly minority shareholders, have been written into the papers of firms and are protected by the Companies Act 1994, but the reality is that they are mostly ignored. They are invited to the AGM but have limited opportunity to talk openly about relevant issues. This is

because “most shareholders are not aware of their rights or how to exercise them. In addition, they often misunderstand their function as shareholders, focusing instead on the corollary benefits of equity ownership (such as attending the AGM in a nice location) rather than the substance of company management” (BEI, 2004, p. 21). As a result, their presence is just cosmetic and an opportunity to enjoy food and drinks.

Weak capital market: The capital market of Bangladesh with its two stock exchanges, Dhaka Stock Exchange and Chittagong Stock Exchange, is the smallest and weakest in South Asia (Sobhan, 2014). As we have seen, only 10% of the total public limited companies in Bangladesh are listed on the stock exchanges(Chowdhury, 2013), which accounts for 566 companies on the Dhaka Stock Exchange (DSE, 2016b) and 306 on the Chittagong Stock Exchange (CSE, 2017). The markets have collapsed twice within a short period as a result of the same vested groups, and they are still keeping their distance from a proper inquiry, let alone judicial action.

Financial reporting and auditing environment: All Bangladeshi companies prepare their financial statements following the Bangladesh Accounting Standards (BAS) and Bangladesh Financial Reporting Standards (BFRS). An externally qualified audit team reviews the financial statements under Section 181 of the Companies Act 1994 (Sobhan, 2014). However, it is evident from several discussions and incidents that many companies do not follow all the BAS or BFRS properly, and that auditors nonetheless give their opinion that the financial statements are presented according to the prescribed accounting standards and reflect the true and fair financial position. This means that the financial statements are seen to be factual and free from material errors and that they truly reflect the financial performance and position of companies, even though the reality is different in many cases. This indicates a lack of integrity, objectivity and professional competence that endangers the ethics of accounting and auditing practices. The reasons for this can be identified as unfair competition among auditors, inadequate monitoring by the regulatory body of auditors (i.e. ICAB), poor payment structures, pressure from the client companies and a weak legal framework, all of which often leads auditors to collude with the management by sacrificing their independence and integrity (Mir & Rahman, 2005; Uddin & Choudhury, 2008; Ferdous, 2012). This situation suggests that the first

obstacle in Bangladesh in this area is the poor quality and lack of reliability of financial statements and disclosures.

High politicisation with the right people not in the right positions: Bangladeshi society is patrimonial and based on a patron-client relationship, so that the success of individuals depends mostly on their loyalty to the higher authority and the good grace offered to them in return (Franda, 1982). Consequently, less competent but highly loyal people hold important positions in the corporate sector. Moreover, family members also hold important positions in what is a family-based corporate sector despite not having sufficient experience and capabilities. The situation in state-owned and state-regulated firms situations is worse, as the chairmen and CEOs are appointed by the government, taking into account their political orientation and ignoring quality, qualifications, experience and competence. For example, the chairmen and CEOs of many commercial banks are appointed by the government considering their political ideology, even though they lack prior experience in the banking sector.

Widespread corruption: Transparency International Bangladesh[11] (TIB) ranks the country "as one of the most corrupt countries in the world" (Ferdous, 2012, p. 66). The corruption has spread everywhere, from household to institutions, regardless of their nature and size. The widespread corruption is a negative product of poor accountability and governance in the corporate sector (Mir & Rahman, 2005; Hoque *et al.*, 2013). As has been pointed out earlier, there is a lack of integrity and objectivity in accounting and auditing activities and an absence of the right people in the right positions, and these are the result of corruption. Ultimately, the extent of corruption endangers the development of the corporate sector and the economy of the country. In sum, the corporate sector of Bangladesh is characterised by a number of anomalies and irregularities; nevertheless, the sector continues to try and achieve its expected goals.

2.3 CORPORATE GOVERNANCE IN BANGLADESH

This section highlights the history of corporate governance in Bangladesh and related institutions, together with the legal framework and the Code of Corporate

[11] Transparency International Bangladesh is the Bangladeshi branch of the Berlin-based Transparency International, a civil society organisation dedicated to fighting against corruption.

Governance for Bangladesh. The section is, therefore, divided into four subsections. Subsection 2.3.1 briefly discusses the history of corporate governance in Bangladesh, while subsection 2.3.2 focuses on the institutions involved with corporate governance in Bangladesh. Finally, subsection 2.3.3 concentrates on the legal framework for banks in Bangladesh.

2.3.1 Brief History of Corporate Governance in Bangladesh

Since the mid of the 1990s, in particular, after the stock market collapse of 1996, the issue of corporate governance has received considerable attention from regulatory bodies, practitioners, academics, investors and international development partners. The collapse indicated a severe weakness in the stock market, in which investors had lost confidence. In order to reform the stock market, the Asian Development Bank (ADB), one of the International Development Partners (IDPs) of Bangladesh, has funded a transformation of country's capital markets towards an Anglo-American model. The changes include reforms within the Bangladesh Securities and Exchange Commission (BSEC), automation of the activities of stock exchanges and a modification of the laws and regulations related to the capital markets (ADB, 1997).

The ADB has implemented this transformation project with the cooperation of a consultant from the USA, namely The Aries Group Ltd., which has set out a comprehensive corporate governance manual for listed companies and security issuers (Sobhan, 2014). The manual includes corporate governance guidelines similar to the OECD's Principles of Corporate Governance (ADB, 2005). Subsequently, the Bangladesh Securities and Exchange Commission adopted the guidelines in 2006 and circulated them for compliance by listed companies (No. SEC/CMRRCD/2006-158/Admin/02-08 dated 20th February 2006). In 2012, it issued a notification containing a number of modifications to enhance corporate governance in the interests of investors (ICAB, 2017). Earlier, the Bangladesh Enterprise Institute (BEI), a donor-funded private think-tank[12], had carried out an extensive study on corporate governance practices in Bangladesh and documented that the country's corporate sector suffers from manifold

[12] Three donors, namely the Department for International Development (DFID), the Commonwealth Secretariat and the Global Corporate Governance Forum (GCGF) funded the BEI to conduct the study and develop guidelines for corporate governance in Bangladesh (BEI, 2004).

difficulties, such as a lack of a qualified accounting and auditing professionals, lack of professionalism and inefficiency in government-funded regulatory agencies, ineffective financial media, and weak shareholder groups who lack awareness of their role (Sobhan, 2014). Based on the findings of the study, the BEI developed and issued several corporate governance guidelines and principles in 2004 similar to the OECD Principles of Corporate Governance-1999.

The attitude of the corporate sector in Bangladesh towards compliance with the Code of Corporate Governance, including the banking sector, is not satisfactory, as most of the companies have failed to comply with the Code of BEI-2004 and BSEC-2006 (World Bank, 2009). Ahmed & Yusuf (2005) have identified a number of reasons, such as corporate ownership being dominated by family members, inadequate bankruptcy laws, poor compliance with accounting and audit standards, inconsistency between the requirements of the Companies Act, the BAS and the BSEC, limited or no disclosure regarding transactions between related parties, a weak regulatory system, the poor role of the capital market, a lack of shareholder activism, no market for corporate control, weak pressure groups, a lack of auditor independence, and poor audit reporting. However, corporate governance practices in Bangladesh are gradually improving. For example, Khan (2007) reports that 66.7 percent of listed companies have adopted corporate governance and 43.3 percent have achieved policy compliance with national or international benchmarks.

2.3.2 Key Institutions Involved in Developing the Corporate Governance Framework in Bangladesh

Six institutions or bodies are involved in developing and subsequently enforcing frameworks for corporate governance to regulate all categories of corporations – financial and non-financial – in Bangladesh (Ferdous, 2012). They are: (1) The Registrar of Joint Stock Companies and Firms (RJSC); (2) Bangladesh Bank; (3) Bangladesh Securities and Exchange Commission (BSEC); (4) Stock Exchanges; (5) The Institute of Chartered Accountants of Bangladesh (ICAB); and (6) Bangladesh Enterprise Institute (BEI).

In developing and enforcing frameworks for corporate governance in Bangladesh, the government of Bangladesh (GoB) and their international development partners (IDPs) (e.g. World Bank, ADB, IMF) influence the institutions directly and indirectly (Ferdous, 2012). Figure 4 shows the extent of the influence of the GoB and IDPs on the key institutions. The solid arrows indicate direct influence, while the dotted line indicates indirect influence. The GoB exercises its direct and indirect influence over the institutions through the Ministry of Finance, while IDPs exert their influence through their local agents. IDPs contribute to developing corporate governance in Bangladesh by providing funds to the relevant organisations and bodies.

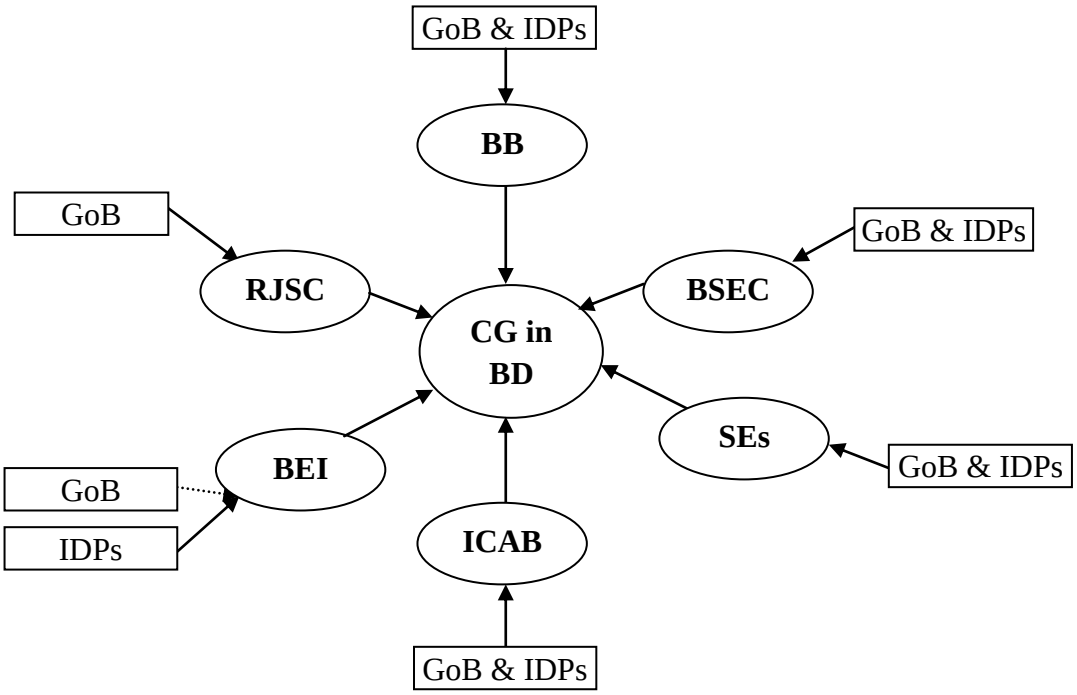

Figure 4: Institutions involved in developing corporate governance frameworks in Bangladesh

The Registrar of Joint Stock Companies and Firms (RJSC): The RJSC performs activities in relation to the formation and registration of public and private limited companies in Bangladesh (Ferdous, 2012; Chowdhury, 2015). It is governed by the Ministry of Commerce of Bangladesh and operates under the Companies Act 1994. It provides directives for filing the necessary statutory documents for forming companies. In addition, it has the authority to call for information and further explanation from potential entrepreneurs.

Registered companies are required to submit all their financial and non-financial information to the RJSC, and it is empowered to enforce and monitor compliance with the provisions of the Companies Act, 1994, relating to the accounting and auditing of a company's financial statements and other relevant regulations (World Bank, 2003; Chowdhury, 2015). However, it is not possible for it to enforce its authority at all times because of inadequate resources. For example, because of a lack of technical capacity and sufficient staff, it is not always able to recognise companies' violations of accounting and auditing principles and to identify the companies which fail to submit annual audited financial statements in time (World Bank, 2011).

Bangladesh Bank: The Bangladesh Bank is the central bank of Bangladesh, which was established in 1972 under the Bangladesh Bank Order (P.O. No. 127 of 1972) with effect from 16th December 1971. It is the highest regulatory body for the country's monetary and financial systems and supervises the activities of the country's banks and non-banking financial institutions (NBFIs). "The Bangladesh Bank has the statutory power to regulate commercial banks to reduce systemic risk and the moral suasion to encourage high standards of probity and competitiveness among them" (BEI, 2004, p. 31).

In addition, it performs a number of key activities, such as managing the country's reserve fund, issuing currency notes, regulating and monitoring the payment system, preventing money laundering activities and regulating the credit management of commercial banks (Bangladesh Bank, 2016b). In order to ensure accountability and transparency in bank management in Bangladesh, it has issued several governance guidelines or provisions, such as a provision regarding independent non-executive directors on the board of banks, a provision about the audit committee and a provision regarding notes and disclosures in relation to the components of financial statements of banks.

Bangladesh Securities and Exchange Commission (BSEC): The BSEC is a government agency, acting as a regulator of the capital market of Bangladesh. It was founded in 1993 under the Securities and Commission Act, 1993. The commission is an independent legislative body, which is attached to the Ministry of Finance of Bangladesh. It develops and issues guidelines/regulations in relation to securities to ensure the

fairness, transparency and efficiency of securities markets, with the aim of protecting the interests of investors in securities (BSEC, 2017). The BSEC supervises and regulates the corporations listed on the stock exchanges and prohibits fraudulent activities, insider trading, and unfair trade practices relating to securities through a number of acts, rules, regulations and ordinances. In addition, it provides education to investors to make them competent to take decisions about their investments (ibid.).

"The most effective regulatory step to implement the Code of Corporate Governance could be its adoption by the Securities and Exchange Commission" (BEI, 2004, p. 5). However, the parties concerned are sceptical about the achievements of the BSEC as a regulatory body and its effectiveness in monitoring guidelines/regulations, as a result of the collapse of both Bangladesh stock exchanges in 1996 and, again, in 2010–2011.[13] The primary reasons for the collapses were weak regulations and monitoring, poor corporate governance and undue interference by political elites in the activities of the commission.

Stock Exchanges: The stock exchanges play a vital role in developing the Code for Corporate Governance and in the subsequent compliance with the code by listed companies (Ferdous, 2012). It also contributes to the policy development of the capital market, and takes part in monitoring and regulating listed firms. The stock exchange is empowered to delist a company for non-compliance with the code.[14] In addition, the stock exchange in Bangladesh can formulate regulations under the aegis of the Securities Exchange Rules, 1987 (Sobhan, 2014).

As has been stated before, there are two stock exchanges in Bangladesh, namely the Dhaka Stock Exchange and the Chittagong Stock Exchange. The Dhaka Stock Exchange is the biggest stock exchange in Bangladesh located at Dhaka, while the Chittagong Stock Exchange is the second stock exchange located in the port city of Chittagong. Both are public limited companies, which are established and administered under a number of acts and regulations. These are the Companies Act 1994, the Security

[13] During this period, market capitalisation rose by 265%, with the market index reaching 3648 points before the index fell to 486 points (Siddiqui, 2010).

[14] The Dhaka Stock Exchange has delisted a number of companies for non-compliance with rules and regulations; however, thus far, there is no evidence of delisting any company for non-compliance with the Code of Corporate Governance (Sobhan, 2014).

and Exchange Commission Act 1993, the Security and Exchange Commission Regulation 1994, and the Security Exchange (Inside Trading) Regulation 1994.

The Institute of Chartered Accountants of Bangladesh (ICAB): The ICAB is the national professional accounting body in Bangladesh, the sole organisation to award the Associate Chartered Accountant designation, established with the aim of regulating the accounting profession and associated matters (ICAB, 2017). It was founded in 1973 under the Bangladesh Chartered Accountants Order 1973 (President's Order No. 2 of 1973) and is administered by The Ministry of Commerce of Bangladesh (ibid.). The ICAB is responsible for developing the Generally Accepted Accounting Principles (GAAPs) for companies operating in Bangladesh. The financial reporting standards and accounting standards recommended by the ICAB are recognised as the Bangladesh Financial Reporting Standards (BFRS) and Bangladesh Accounting Standards (BAS), respectively. These are reproductions of the International Financial Reporting Standards (IFRS) and International Accounting Standards (IAS). So far, it has adopted all IFRS and IAS, except for IAS 39, IAS 29 and IFRS 9, issued by the International Accounting Standards Board (IASB).

The ICAB is one of the self-regulatory bodies of corporate governance in Bangladesh (Sobhan, 2014). It contributes to and supports matters related to corporate governance, along with providing specialised and professional knowledge and training in accounting, auditing, taxation, corporate laws and other matters related to accounting in Bangladesh (ICAB, 2017). However, as a self-regulated accounting body, the institution has experienced severe criticism over its ability to oversee the transparency of firms' accounting and auditing. The World Bank funded the ICAB in 1999 in order to strengthen its activities and develop its standards to the international level (Ferdous, 2012).

Bangladesh Enterprise Institute (BEI): The BEI was established in 2000 as an independent, non-profit and non-political think tank organisation (Ferdous, 2012). The BEI performs research and advocacy on important issues in the national interest, including corporate governance, economic development, sustainable growth in trade, foreign policy and counter-terrorism (BEI, 2004). As has been pointed out earlier, BEI has made a notable step in developing for the first time the voluntary Code of Corporate

Governance for Bangladesh-2004, which is more comprehensive than the corporate governance guidelines introduced by the Bangladesh Securities and Exchange Commission (Ferdous, 2012). In this case, three international development partners (IDPs), namely the Department for International Development (DFID), the Commonwealth Secretariat, and the Global Corporate Governance Forum (GCGF) funded the BEI (BEI, 2004).

The BEI formed a Taskforce on Corporate Governance consisting of 35 members from different sections of society (see Table 6) to develop the code. The BEI Working Group provided necessary assistance to the taskforce in preparing the code (Ferdous, 2012).

Table 6: Members of Taskforce on Corporate Governance in Bangladesh

Sections of society	No. of members	Percentage
Financial Institutions	8	23
Public, Private and Multinational Companies	7	20
Stock Exchange and Regulatory Bodies	3	9
Government Bodies and Ministries	5	14
Different Professional Bodies	2	6
Academia	4	11
Dignitaries	4	11
Legal Entities	1	3
Media/Communication	1	3
Total	**35**	**100**

Source: Extracted from the list of Taskforce members, BEI (2004, pp. 8-9)

It is evident from the list of the members that the taskforce incorporates knowledge and expertise from various sections of the country, which is ideal in theory for developing a national code (Ferdous, 2012).

2.3.3 Legal Framework for Banks in Bangladesh

A number of legal frameworks govern the banking sector in Bangladesh, including the Companies Act 1994, the Banking Companies Act 1991, and the regulations generated by the Bangladesh Bank. In order to understand the nature of governance in the banking sector in Bangladesh, this section points out the main legal structures within which the banking sector of Bangladesh operates. As this study is entirely related to listed banks, the other legal framework not related to the banking sector will not be highlighted.

Companies Act 1994: The Companies Act 1994 governs banking companies and other non-banking companies in Bangladesh (Hossain, 2014). The act provides a number of regulatory provisions for companies. The act also states provisions for the appointment and removal of directors and the external auditor, their powers, duties and remuneration, as well as the rights of shareholders and the protection of their interests (Hoque *et al.*, 2013).

Banking Companies Act 1991 and 2013: The Banking Companies Act 1991 is specialised legislation wholly relevant to banking companies in Bangladesh, providing a legal framework about the areas and scope of banking business and how to operate that business. That is, the act provides a framework under which banks in Bangladesh are regulated and supervised. Subsequently, the act was amended in 2013. The Banking Companies Act supplements the Companies Act 1994.

Regulations Generated by the Bangladesh Bank: The central bank has generated a number of regulations under which banking activities are controlled (Appendix 2). These regulations provide guidelines for scheduled and non-scheduled banks and for other non-financial institutions about managing core risks, handling foreign exchange, money laundering, payment, settlement and other activities.

2.4 DEVELOPMENT OF THE CODE OF CORPORATE GOVERNANCE FOR BANGLADESH

As has been stated before, in the wake of several corporate collapses across the globe resulting from weak corporate governance systems, countries around the world have responded rapidly by producing several mechanisms to prevent a future crisis in national corporate sectors. Specifically, the UK first produced the Cadbury Report in 1992, and the USA issued the Sarbanes-Oxley Act in 2002. The Cadbury Report (1992) is the pioneering report which led to codes of corporate governance being issued around the world (Zattoni & Cuomo, 2008). Subsequently, the UK has produced many more reports in response to a number of corporate governance failures in the country (e.g. Greenbury Report, 1995; Hampel Report, 1998; Turnbull Report, 1999; Higgs Report, 2003; Smith Report, 2003; Combined Code, 2003; and Walker Review, 2009).

As with other countries, Bangladesh has also faced several scandals in the corporate sector. Following these scandals, the country has developed a code of corporate governance that recommends a number of mechanisms for the corporate sectors in Bangladesh. The code aims to enhance the general quality of corporate governance practices in Bangladesh. According to the BEI (2004), Bangladeshi corporations, as well as the country as a whole, can enjoy several potential benefits by improving the general quality of corporate governance practices, such as:

(i) The best corporate governance practices can improve accountability and performance in the corporate sector as a whole.

(ii) Corporations are able to attract larger investment from equity investors.

(iii) Companies who demonstrate sound corporate governance practices should receive privileged bank loan facilities, among other potential benefits.

(iv) A reasonable interest rate is justified for corporations with sound corporate governance, since these companies are likely to carry lower levels of business risk.

(v) Corporations can attract the best-qualified professionals to work for them.

The above implicit benefits will yield, in turn, more explicit benefits, namely a successful corporation with higher profits (BEI, 2004). An improved quality of corporate governance practices will bring numerous potential rewards to Bangladesh (ibid.). Such as:

(i) Improving the investment climate and the prospects for economic growth, leading to a higher volume of investment and higher quality investors.

(ii) Significantly improving the reputation of the country as a place for secure investment and aid.

(iii) Ensuring economic growth by enabling the country to use resources effectively and allocate capital efficiently.

(iv) Minimising the previously pervasive corruption and ensuring transparency and accountability.

(v) Making a significant overall contribution to the country's economic growth.

The Code of Corporate Governance comprises the principles and guidelines to which companies are required to "comply or explain"[15]. The code is developed in line with many international codes of corporate governance,[16] and the taskforce has taken opinion from international experts on corporate governance (BEI, 2004). The code aims to draw on international best practice; however, it also considers the specific context of the individual countries (ibid.).

The code suggested by the BEI can be categorised into three parts (see Figure 5). As shown in Figure 5 "Part A" contains all the general principles and provisions about board issues (e.g. board size, independent directors with qualifications, separation between chairman and CEO, directors' report to shareholders), role of shareholders (e.g. educating and informing shareholders, general meeting, voting and duties), financial reporting (e.g. preparation of accounts and the appointment, rights and duties of the external auditor), auditing (e.g. formation, size, independence, role, meeting and reports of the internal audit committee) and non-financial disclosures.

"Part B" contains the basic checklist for the implementation of the Code of Corporate Governance for Bangladesh. It is a basic summary of specific recommendations to be performed, drawn from the Code of Corporate Governance (BEI, 2004).

Finally, "Part C" contains sector-specific provisions or principles, covering financial institutions, state-owned enterprises, non-government organisations and exhortations to other entities. This part addresses issues that are unique to each sector; however, this part is to be considered over and above the guidelines provided in the "Part A", containing the Code of Corporate Governance. The current study is concerned with a sector-specific code, namely that for financial institutions, in particular, the banking

[15] The terms 'comply or explain' suggest companies are required to comply with the code. However, if there are aspects in which companies do not comply, the reason for such non-compliance must be explained (BEI, 2004).

[16] "Other international and national Codes and Principles of Corporate Governance which have been consulted include: the Combined Code (UK), the OECD Corporate Governance Principles, the Commonwealth Association for Corporate Governance Guidelines, the King Report (South Africa), the Sri Lanka Central Bank Code, the CII Code of Desirable Corporate Governance (India), the Pakistan Code of Corporate Governance, the Myners Report (UK), the Malaysian Code of Corporate Governance, and a variety of institutional investor codes from the United States" (BEI, 2004, p. 7).

sector. The code of bank governance provides guidelines about duties to depositors and customers, credit assessment, asset monitoring, debt recovery and risk management.

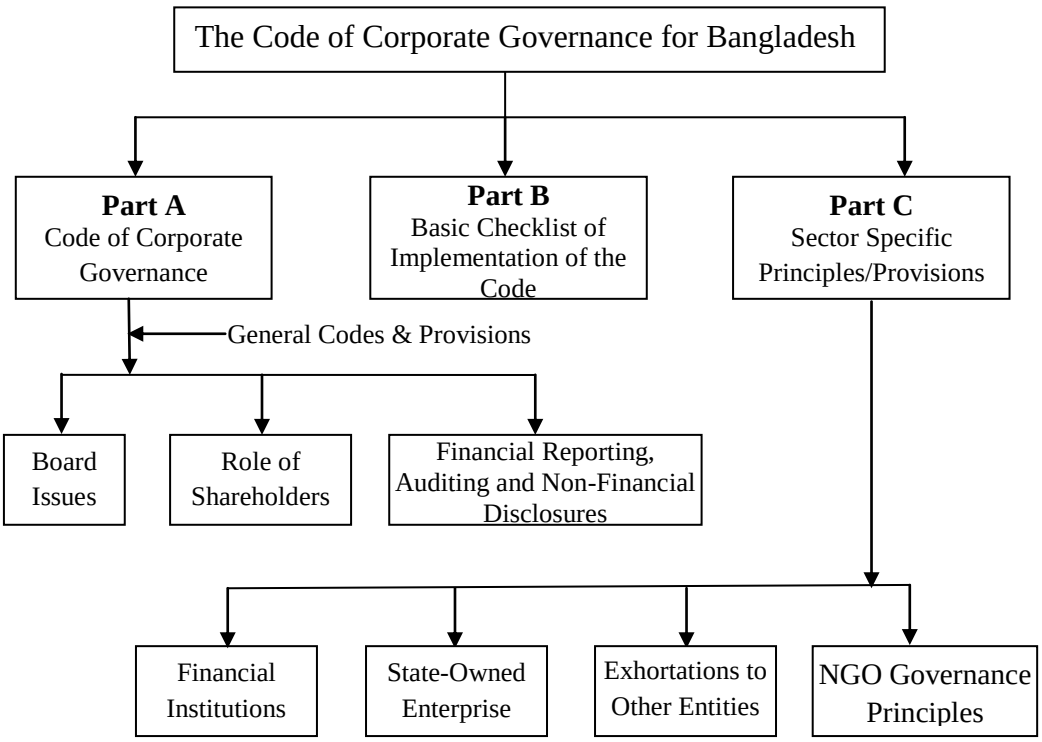

Figure 5: Organisation of the Code of Corporate Governance for Bangladesh, Source: Constructed from the Code of Corporate Governance for Bangladesh, (BEI, 2004, p. 2)

2.5 SUMMARY OF THE CHAPTER

This chapter briefly discusses the economy and the corporate legal and governance frameworks of Bangladesh. The statistics related to the economy indicate that Bangladesh is one of the most promising countries in terms of economic growth, as GDP has been increasing consistently in the last few years. This made the country a lower-middle-income country in 2015. However, there are numerous problems at a macroeconomic level that must be addressed to sustain the current economic development and further strengthen it.

The corporate sector has been flourishing gradually after adopting a market-based economy in 1976. The financial sector and, in particular, the banking sector has played a significant role in the development of the country's market-based economy. The sector

has also been thriving and contributing to the economy in recent decades. However, the corporate sector in Bangladesh, including the banking sector, has experienced several acute problems, such as pervasive corruption, nepotism, politicisation and undue interference by the political elites. These anomalies and irregularities result from weak legal frameworks, a lack of accountability, the poor role of regulatory institutions and, ultimately, poor corporate governance.

Given the situation, the Code of Corporate Governance and other legal frameworks have been developed and enforced to ensure fairness, accountability and transparency in corporate management in Bangladesh. The code is generally consistent with Anglo-American standards and in particular the OECD Principles. The Code of Corporate Governance for the banking sector in Bangladesh is comprehensive and addresses a wide range of issues. The code is expected to generate a range of potential benefits deriving from improved corporate governance practices. However, a number of recent incidents related to the banking sector indicate that the code fails to establish fairness, accountability and transparency in corporate and, in particular, bank management. The code has also failed to yield the expected benefits in the banking sector in Bangladesh. In this situation, it is essential to examine the efficacy of the guidelines and principles developed for the banking sector. The results will be helpful for regularity bodies and bank management.

The next chapter reviews the theoretical and empirical literature that attempts to link several internal corporate governance mechanisms with shareholder value and with non-equity stakeholder value. This will make it possible to identify the gaps in the research.

CHAPTER THREE

THEORETICAL AND EMPIRICAL LITERATURE REVIEW

3.0 OVERVIEW OF THE CHAPTER

This chapter focuses on the review of existing theoretical frameworks of corporate governance, review of the code of corporate governance for Bangladesh and empirical literature on various internal corporate governance mechanisms, shareholder value and stakeholder value. Specifically, the chapter seeks to achieve five main objectives. Firstly, it endeavours to review the existing theoretical frameworks of corporate governance that attempt to link different internal corporate governance mechanisms with shareholder value and stakeholder value. Secondly, it aims to review the code of corporate governance for Bangladesh. Thirdly, it attempts to perform a comprehensive review of the existing empirical literature about the relationship between internal corporate governance mechanisms and shareholder value. Fourthly, it aims to review the existing empirical literature on the relationship between internal corporate governance mechanisms and non-equity stakeholders. Finally, this chapter focuses on identifying the research gaps, which lead to the development of the conceptual framework and hypotheses of the present study.

The remainder of the chapter is divided into five sections. Section 3.1 reviews the theoretical frameworks related to corporate governance structures, while section 3.2 reviews the code that recommends a number of mechanisms aiming to ensure good corporate governance in the corporate sectors in Bangladesh. Section 3.3 looks at the empirical literature on the relationship between internal corporate governance mechanisms and shareholder value, while section 3.4 reviews the empirical literature on the relationship between internal corporate governance mechanisms and non-equity stakeholders. Section 3.5 summarises the chapter.

3.1 REVIEW OF THE THEORETICAL FRAMEWORKS RELATED TO CORPORATE GOVERNANCE

A corporate governance structure is typically an arrangement of internal and external mechanisms (Weir *et al*., 2002; Cremers & Nair, 2005; Brown & Caylor, 2006; Gillan, 2006; Babatunde & Olaniran, 2009; Amran, 2010). The internal corporate governance mechanisms are the leading sets of control approaches, which monitor the progress and performance of the corporation and subsequently take remedial measures if the corporation's actual functional objectives deviate from the projected functional objectives. Specifically, internal control mechanisms comprise oversight of corporate management, an independent audit committee, determining levels of responsibility on the board of directors and the separation of control from policy development (Fama, 1980; Fama & Jensen, 1983; Baysinger & Hoskisson, 1990; Hart, 1995; Baber & Liang, 2008). These mechanisms develop a sustainable relationship between management and shareholders and between management and non-equity stakeholders, which typically ensures appropriate checks and balances on the power of managers, shareholders, directors and other stakeholders (Babatunde & Olaniran, 2009).

External corporate governance mechanisms, on the other hand, are mechanisms imposed by those outside the corporation, such as regulators, governments, trade unions and financial institutions (Gompers *et al*., 2003; Bebchuk, 2003). That is to say, other external mechanisms are developed by the "national and international bodies on best practices (e.g. quality of disclosure, accounting and auditing standards, labour rules, environmental standards, industry product standards, listing requirements) and other areas of practices that are qualitative them in law can lead to overregulation and can curb entrepreneurial spirit" (Babatunde & Olaniran, 2009, p. 334). These external mechanisms ensure that corporations conform to common standards of fairness, transparency, accountability and responsibility, in order "to protect shareholders, consumers, workers, the environment, and even competitors from abusive practices" (ibid., p. 331). These mechanisms might have an impact on corporate risk, efficiency and, ultimately, the corporate performance by forcing management to obey rational management rules (Naciri, 2009).

The relationship between external and internal governance mechanisms is not obvious *ex-ante* (Baber & Liang, 2008). In a particular situation, both categories of mechanism complement each other (Fama, 1980; Fama & Jensen, 1983; Jensen, 1984, 1986; Healy, 1993; Baber & Liang, 2008). According to Baber & Liang (2008), the adoption of internal measures by the management, in response to outsider demands to implement an effective internal governance system, may indicate that internal and external corporate governance mechanisms are complementary, in the sense that insiders have an incentive to respond to credible demands by outsiders to employ successful governance systems, where the strength of the internal and external governance systems are expected to vary in direct relation to one another. Where external mechanisms behave as a substitute for internal mechanisms, they are also an alternative way of achieving governance objectives. However, where the strength of the internal and external governance systems vary in an inverse relationship with one another (Baber & Liang, 2008; Weir *et al*., 2002), a good balance of the two mechanisms can maximise shareholder value (Dharmastuti & Wahyudi, 2013).

Several theoretical frameworks have emerged, suggesting various corporate governance mechanisms and analysing their effects on firms' financial performance from different viewpoints. However, there are considerable common attributes among them (Solomon, 2007). These theories suggest a range of control mechanisms, policies and guidelines that steer corporations towards their objectives to satisfy the needs or interests of stakeholders (i.e. shareholders and non-equity stakeholders) (Haniffa & Hudaib, 2006). The present study attempts to shed light on several internal corporate governance mechanisms under the requirement to "comply or explain" which is imposed on the banks listed on the DSE in Bangladesh.

The following section reviews a variety of theoretical frameworks, including agency theory, stakeholder theory, stewardship theory, resource dependence theory, information asymmetry and managerial signalling theory. Subsequently, the previous empirical literature on internal corporate governance mechanisms and their impact will be reviewed.

3.1.1 Agency Theory and the Shareholder Perspective of Corporate Governance

Agency theory is the leading theory in the area of corporate governance (Roberts, 2004; Hendry, 2005; Ermongkonchai, 2010). The theory derives from the prevailing agency relationship in modern firms between fund providers and corporate management (Berle & Means, 1932). According to Jensen & Meckling (1976), an agency relationship is "one in which one or more persons (the Principal(s)) engages another person (the agent) to perform some services on their behalf which involve delegating some decision-making authority to the agent"[17] (p. 308). The agency relationship may pose agency problems when agents or any individual(s) responsible to the agents behave opportunistically by privileging their own personal goals and interests over those of the principals. That is, the finance providers (owners/principals) delegate responsibilities to corporate managers/agents (Okpara, 2011), and they are less likely to prefer their own interests over those of principals, thereby causing an agency problem (Mintz, 2003). For instance, the company management may focus on investment in projects that yield a high short-term profit (if executive compensation relates to a firm's profit) instead of emphasising long-term shareholder value through investment in projects that are long-term in nature (Solomon, 2007). Murphy (1985) contends that managers may be inclined to increase business size at the cost of shareholder value if the size of the company is positively related to their compensation and reputation. These tendencies result in a lack of goal congruence, as managers tend to develop their own values, while shareholders tend to maximise the value of shares. Hence, it is highly implausible that agents will always move towards the best interests of the principals (Jensen & Meckling, 1976). This opportunistic stance on the part of the agents could lead to the state of incongruent of goals; consequently, shareholder value may decline (Hendry, 2005), referred to as "residual loss" in agency theory terminology (Solomon, 2007).

Masulis (1988) has set out four specific scenarios which represent a divergence of interest between corporate owners and agents, resulting in agency problems.

[17]In the context of ownership and management relations of a corporation, agency theory terms the owners or shareholders as "principals" and the corporate management as their "agent" (Singh & Ahuja, 1983).

1. Managers favour those activities and policies, such as a larger consumption volume and less rigorous work, which do not reduce their remuneration and the value of the shares they own.
2. Managers prefer to lessen the risk of economic failure resulting in liquidation and to avoid losses on their managerial capital and portfolios by choosing lower-risk projects and lower financial leverage.
3. Managers concentrate on the short-term investment horizon to gain approval, so that they secure their own employment.
4. Managers circumvent crises originating from reductions in employment levels, which increase with the variability in controls on the company.

Given these agency problems, the theory suggests that agents need to be monitored by putting in place mechanisms that ensure checks and balances on the power of individual agents (Shleifer & Vishny, 1997). There are several internal and external mechanisms by means of which the interests of both agents and principals can be aligned (e.g. Jensen & Meckling, 1976; Fama, 1980; Haniffa & Hudaib, 2006; Solomon, 2007). For instance, a "nexus" of optimal contracts (both explicit and implicit) may be established between the agents and the principals (Solomon, 2007). These may include having financial statements audited by independent external auditors and restricting minimum managerial ownership to align their interests with those of principals (Jensen & Meckling, 1976). In addition, a face-to-face meeting between representatives of institutional investors and corporate managers may be arranged (Solomon, 2007), although institutional investors may not be interested in being involved with the company's decision-making process (Hampel, 1998). A number of reports related to corporate governance produced in the UK (e.g. Cadbury Report, 1992; Greenbury Report, 1995; Hampel Report, 1998; Turnbull Report, 1999; Higgs Report, 2003) have also suggested a number of voluntary codes of practice to minimise agency problems (Hossain, 2014). These include: (a) the inclusion of a higher percentage of independent non-executive directors on the board to ensure its independence in monitoring and passing fair and unbiased judgments; and (b) appointing separate individuals to the position of CEO and board chairperson to reduce the concentration of power (ibid.). Moreover, principals can put in place a set of hierarchical variables for the composition of the board to supervise the activities of agents (Fama, 1980). They can institute formal

internal control systems, such as a budget ceiling and auditing controls to reduce and prevent manipulation by managers (Jensen & Meckling, 1976) and can devise incentive schemes, including rewarding agents based on their performance, which allows a closer alignment of the agents' interests with those of the principals (Ntim, 2013). Establishing these control mechanisms, however, is time-consuming and inevitably increases costs (ibid.). To ensure the effectiveness of these mechanisms, principals must accept a trade-off between the outcomes and the costs involved in instituting such mechanisms (Eisenhardt, 1989).

3.1.2 Supporting Theories

Several theories are supporting the agency theory. These theories may help to analyse the agency relationship between the principals and agents.

3.1.2.1 Information asymmetry and managerial signalling theory

Information asymmetry and managerial signalling is one of the supporting theories describing the relationship between shareholders and managers in a firm (Black *et al*., 2006). The theory advocates that principals and agents do not hold an equal amount of information, causing an economic imbalance or imbalance of power in transactions which could result in market failure (Kapopoulos & Lazaretou, 2007). Specifically, agents, as insiders, are by and large equipped with much more information about their firms' activities and financial situation than existing or prospective principals (e.g. Kapopoulos & Lazaretou, 2007; Solomon, 2007). In this milieu, potential shareholders face two specific types of problems – adverse selection and moral hazard[18] – in portfolio decision-making because of such information asymmetry. In adverse selection, potential investors or principals do not hold adequate relevant information while engaging in negotiations or contracting for a transaction with the most capable agents, who possess all the relevant information (Rhee & Lee, 2008). In moral hazard, the principals have a lack of information regarding the transaction previously agreed, and

[18] "Adverse selection has been defined as an aspect of information asymmetry whereby those offering securities for sale practise self-selection, implying that securities of different 'quality' sell for the same price. Moral hazard, another product of information asymmetry, implies that the agent will attempt to benefit from the principal's inferior information set" (Solomon, 2007, p. 145, in Beaver, 1989).

they cannot retaliate against agents for a breach of the agreement (Kapopoulos & Lazaretou, 2007).

In order to minimise the selection dilemma in relation to investments, a firm adopting the code of good corporate governance can credibly *signal* its trustworthiness to potential investors as a firm which is better governed (Ntim, 2009). Consequently, the information asymmetry problem may be minimised, and potential shareholders may pay share prices at a premium rate. This is because they expect to receive a higher percentage of profit from their firms compared with their counterparts which are not subject to good corporate governance (Beiner *et al*., 2006).

3.1.2.2 Stewardship theory

The stance of stewardship theory is opposed to that of agency theory which posits managerial opportunism. The theory argues that managers are good custodians/stewards of firms' resources and that they should be delegated enough authority to operate the firms (Letza *et al.,* 2004). This is because "managers are motivated by a desire to achieve and gain intrinsic satisfaction by performing challenging tasks" (Okpara, 2011, p. 3).

The theory proposes a number of guidelines for corporate governance. First, it argues against the employment of non-executive directors on the board. This is because executive managers have a better understanding and more accurate information and knowledge about their firms compared to outside non-executive directors, and consequently, they can make better decisions (Donaldson & Davis, 1994). Second, the theory argues against the separation of the role of CEO from that of the chair of a firm: merging these positions allows managers to be superior power holders, and this may enhance the financial performance of a firm (ibid.). Finally, the theory advocates a smaller board, as this facilitates effective communication among board members and rapid decision-making. However, the theory does not specify a guideline "for determining the optimal board size and for that matter what constitutes small" (Effiok *et al.,* 2012, p. 87).

3.1.2.3 Resource dependency theory

Resource dependency theory focuses on the relationship between external resources of a firm and its desired outcomes. According to Pfeffer & Salancik (1978, p. 39), "organisational activities and outcomes are accounted for by the context in which the organisation is embedded". This means that the external resources of a firm may have a positive effect on its performance.

The theory can be pertinent to corporate governance studies. It argues that some corporate governance mechanisms can facilitate a firm's access to the external resources necessary to ensure its success (Pfeffer, 1973). This is because a strong and highly connected relationship with the external environment may allow greater access to critical resources. These resources can be exploited as a safeguard against undesirable external threats (Kiel & Nicholson, 2003), which leads to better financial performance. For example, a larger board and more independent non-executive directors may be the source of potentially critical resources, such as specialist opinions, know-how, independence and information (Haniffa & Cooke, 2002). Boards with these critical resources can enhance firms' relationships with the external environment and their important non-equity stakeholders by providing easy access to the business/political elite, information and capital (Nicholson & Geoffrey, 2003). These resources would enhance a firm's reputation and facilitate management in securing vital business contacts (Haniffa & Hudaib, 2006). In essence, these critical resources enable firms to achieve a competitive advantage over their rivals, thereby enhancing firms' financial performance.

3.1.3 Stakeholder Theory and the Stakeholder Perspective of Corporate Governance

There has been a considerable and long-standing debate about the role of a company in society, and this is the basis on which stakeholder theory has developed. "One of the first expositions of stakeholder theory, couched in the management discipline, was presented by Freeman (1984), who proposed a general theory of the firm, incorporating corporate accountability to a broad range of stakeholders" (Solomon, 2007, p. 23).

Stakeholder theory defies the basic argument of shareholder value theory which is built into the corporate finance paradigm. The modern corporation is envisaged as a "social institution" or "social union" (Rawls, 1999) or the "common property of mankind", rather than the private property of a group of individuals (Locke, 2005). Accordingly, "the stakeholder model proposes extending the focus of managers beyond the traditional interest group of shareholders to understand the needs, expectations, and values of groups previously perceived to be external to the company" (Ayuso *et al*., 2014, p. 417). The theory posits that emphasis on shareholder value or interest alone is ill-judged in the current era of global business; rather, the agent should be responsible to all the stakeholders associated with firms (Krishnan, 2009). Specifically, the theory suggests that the purpose of a corporation is to serve broader societal interests, such as those of employees, creditors, suppliers, customers, the local community and the environment, beyond the creation of economic value for shareholders alone (Tirole, 2001; Benson & Davidson, 2010). The underlying argument is that stakeholders are eventually corporate value makers, as the success of a corporation is dependent on the stakeholders' attitude to firms (Carroll & Buchholtz, 2008). They have some "stake"[19] rather than merely a "share" in it and are affected by the corporation's success or failure (Heath & Norman, 2004; Solomon, 2007; Carroll & Buchholtz, 2008). This premise implies that business events are unable to ensure the ultimate maximisation of shareholder value, if firms' policies do not act in favour of the stakeholders associated with the business. For instance, if a company manufactures products which are not fit for purpose (i.e. products are unfit for human consumption), consumers will not buy these products, as these ignore the interests of stakeholders. Consequently, a company built up purely for the creation of shareholder value will not be successful, instead giving rise to corporate failure (Solomon, 2007). Thus, the stakeholder model of corporate governance underpins a governance system that protects a broader range of stakeholders' rights and values.

Donaldson & Preston (1995) argue that stakeholder theory explicitly or implicitly generates three different independent theories: descriptive/empirical stakeholder theory,

[19] The word "stake" indicates the interests of stakeholders in terms of preference, taste, priority and claim in the corporation (Carroll & Buchholtz, 2008).

instrumental stakeholder theory, and normative stakeholder theory. These theories suggest that firms should treat their stakeholder in three different ways, based on the way firms can develop and undertake strategies to work in favour of stakeholders.

Firstly, descriptive stakeholder theory describes and explains how corporations and their agents (managers) behave with stakeholders (Jones, 1995). Donaldson & Preston (1995, p. 66) explain the theory as follows: "It [stakeholder theory] presents a model describing what the corporation is. It describes the corporation as a constellation of co-operative and competitive interests possessing intrinsic value." According to Jawahar & McLaughlin (2001), a firm has different life cycle stages: start-up, growth, maturity and decline. At any given stage, the importance of different stakeholders is not the same, i.e. some stakeholders are more important than others. This is because the needs of a firm change over its life cycle; thus, the relative importance of stakeholders also changes. Consequently, firms do not respond equally to all stakeholders; rather, their response depends on the relative importance of stakeholders, and they employ different strategies to manage different stakeholders at different stages in their life cycle. Therefore, recognising the relative importance of stakeholders at different stages in the life cycle and developing appropriate strategies to deal with those stakeholders is the essence of descriptive stakeholder theory.

Secondly, instrumental stakeholder theory aims to enhance shareholder value by concentrating on stakeholder relationships. The key assumption of this theory is that stakeholders control resources which can enable or impede the execution of corporate strategies or decisions, and thus they must be addressed to achieve a competitive advantage and to maximise firms' profitability and, ultimately, shareholder value (Pfeffer & Salancik, 1978). According to Jones (1995, p. 406), this theory "purports to describe what will happen if managers or firms behave in certain ways". The instrumental theory argues that stakeholder management is a means by which firms can achieve their end goal, i.e. maximising financial performance (Egels-Zandén & Sandberg, 2010). Donaldson & Preston (1995, p. 67) claim that instrumental stakeholder theory "is used to identify the connections, or lack of connections, between stakeholder management and the achievement of traditional corporate objectives". Therefore, the instrumental

approach, in fact, provides a hypothesis that shows the causal relationship between stakeholder management and firms' financial performance.

Finally, normative stakeholder theory focuses on the moral behaviour of firms and their managers towards stakeholders (Jones, 1995). According to Berman *et al.* (1999, p. 492), "managerial relationships with stakeholders are based on normative, moral commitments rather than on a desire to use those stakeholders solely to maximise profits". This means that firms should establish some basic moral principles that guide how they treat stakeholders and do business with them, and managers should develop business strategies based on those principles.

In sum, the three stakeholder theories focus on three different aspects of stakeholders. For example, according to Jones (1995), descriptive stakeholder theory deals with managerial activities undertaken to enhance the relationship with stakeholders. Instrumental stakeholder theory attempts to describe the consequences if firms follow stakeholders' preferred philosophies, while normative stakeholder theory focuses on the activities that should be performed by managers when managing stakeholders.

The philosophy of stakeholder theory is allied with corporate social responsibility (CSR) and corporate sustainability (Ayuso *et al.*, 2014), as it offers an appropriate theoretical outline for elucidating the relationship between a firm and society (Waddock & Graves, 1997).[20] It is entirely in line with the aims of firms that endeavour to develop a long-term relationship with different stakeholders (Wheeler & Davies, 2004). Therefore, firms need to align their business objectives with the interest of stakeholders – the best way to do so is by incorporating CSR into the business objectives.

The primary concern of stakeholder theory is how all the constituent stakes in the firm can be integrated into a value creation network (Wall & Greiling, 2011). In this context, the model provides a range of propositions. Firstly, it proposes a mechanism of corporate governance consisting of a dual or two-tier corporate board structure, made up of a supervisory board and a management board, to guarantee the interests of

[20] Sometimes stakeholders' interests come into view through corporate social responsibility (CSR), corporate citizenship, corporate accountability, the corporation's charities and donations or its triple bottom line (environmental, social and financial reporting) (Carrillo, 2007).

stakeholders associated with firms (Ntim, 2009). The supervisory board is typically composed of several stakeholders, including shareholders, creditors, employees, suppliers, customers and government appointees representing broader segments of society (Schilling, 2001; West, 2006, 2009). In this case, firms are required to pay attention that the interests of one set of stakeholders are not detrimental to the pursuit of the interests of another group of stakeholders (Schilling, 2001; Mallin, 2007). Secondly, it proposes that firms should build trust and confidence by making a long-term contractual arrangement with their stakeholders (Letza *et al*., 2004), which "extends beyond formal legal agreements, including implicit agreements and allowing for the element of incompleteness" (Ali, 2015, p. 138). This idea is compatible with the team production approach described by Blair & Stout (1999) that addresses problems of cooperation within numerous groups and is more appropriate to the idea of a firm made of numerous constituents, rather than the principal/agent model. Finally, this model proposes the concentration of ownership through block shareholding by the various stakeholders, such as employee unions, government and banks (Rwegasira, 2000), to reduce agency costs (Ntim, 2009). Concentrated ownership may also be related to minority investor protection, which may be influenced by countries' legal systems and is habitually linked with the stakeholder governance framework (La Porta *et al*., 1998).

The next part of this chapter reviews the code of corporate governance for Bangladesh.

3.2 REVIEW OF THE CODE OF CORPORATE GOVERNANCE FOR BANGLADESH

This section reviews the code that recommends a number of mechanisms aiming to ensure good corporate governance in the corporate sectors in Bangladesh. For comparison purposes, the UK Code of Corporate Governance is also presented, because, as has been mentioned earlier, Bangladesh has mostly adopted corporate governance principles and guidelines similar to those of the UK.

3.2.1 Code related to Board Size

The board of directors is the sovereign entity which takes the lead in developing the strategies and policies of firms and the overseas activities of the management in the best interests of its shareholders (Chiang, 2005; Ahmed, 2010). The Code of Corporate Governance for Bangladesh has provided details about the mission and duties of the board of corporations in Bangladesh. Guidelines about the nomination criteria and training for board members are also given. However, there is no distinct guideline in the code about the board size of a Bangladeshi company. The code states that board size should be large enough, so that diverse expertise and experience can be included among the directors. However, the Bangladesh Bank has only provided a maximum limit for board size at 20 directors on the board of a company. The Bangladesh Securities and Exchange Commission has provided an explicit guideline in this regard that the total number of board members in the corporate sector of Bangladesh shall be limited between 5 and 20. The board size prescribed in the Bangladeshi corporate sector is large compared to many developed countries. For example, the common size of boards in the UK corporate sector is between 9 and 11 directors, and the average board size of the top 150 companies in the FTSE is 10.1 (UK Board Index, 2017). Similarly, the average board size in the corporate sector of many developed economies lies within the range 8–11. For example, the board size of Poland is 8, the Netherlands is 8.3, the USA is 10.8, Switzerland is 10.6, Sweden is 10.9, Denmark is 9.8 and Canada is 11. However, Germany and France are exceptional, where the average board size is 16.3 and 13.9, respectively (ibid).

3.2.2 Code related to Board Composition

A healthy, well-governed and well-functioning board is essential for a firm to be successful (Solomon, 2007). According to the Banking Regulation and Policy Department of the Bangladesh Bank (2013), the board of a Bangladeshi bank should be composed of persons who are competent and professionally skilled enough to formulate strategy and monitor banking activities effectively, as well as ensuring good governance in bank management. Similarly, the code suggested by the BEI (2004) states that diverse expertise and experience should be included on the board to make sure the board is effective and functions well. It also suggested that a board should be formed with a "diverse group of directors, including executive directors, non-executive directors, and outside/independent directors" (BEI, 2004, p. 13).

As for the inclusion of independent non-executive directors on the board, there is no obvious guideline suggested by the BEI in the Code of Corporate Governance for Bangladesh. The code only states that committees of companies should be formed by including non-executive directors, and they should be involved with any decision if there is a likelihood of a conflict of interest. However, the Bangladesh Bank (2013) and BSEC (2006) have provided an explicit guideline on the proportion of the independent non-executive directors on the board. According to the Bangladesh Bank (2013) guidelines, there should be maximum of 3 (15%) independent directors when the board consists of 20 directors. The corporate governance notification of the BSEC (2006) states that there should be an effective representation of independent non-executive directors on the corporate board. The Code states that the company should form its board with a minimum 1/5 (20%) of independent non-executive directors.

The Bangladeshi code relating to the proportion of independent non-executive directors on the board differs from that of the UK. The Cadbury Report (1992) recommended that firms should appoint non-executive directors who should be independent and free from any business and other relationship with the client firms. This recommendation is not explicit about the proportion of independent non-executive directors on the board. However, the Higgs Report (2003) on corporate governance in the UK recommended that the board should be formed with at least 50% independent non-executive directors, excluding the chairman, along with a strong representation of

executive directors. The Walker Review (2009) produced an independent review of corporate governance in UK banks and other financial institutions (BOFIs). The report focuses on the need for relevant experience (e.g. financial industry experience and increased education and support) among independent non-executive directors so that they can raise questions and challenge the strategies taken by the executive directors.

3.2.3 Code related to Compensation

Over the last two decades or so, the compensation of chief executive officers (CEOs) has come under significant scrutiny by academics, general public, policy-makers and shareholders (Boyd *et al.*, 2012; Graham *et al.*, 2012; Reddy *et al.*, 2015). Compensation for CEOs is one of the internal corporate governance mechanisms that plays a vital role, as this mechanism contributes to minimising moral dangers and inappropriate choices. Compensation schemes that are common in practice include salaries, bonuses, vested and unvested stock, as well as option incentives. One of the objectives of offering an appropriate package of compensation is to persuade managers to use their best level of effort, aptitude and prudence to maximise the value of firms.

The BEI (2004) provides a principle related to compensation/remuneration of directors in the Bangladeshi corporate sector that "board compensation should be sufficient to compensate directors for the time and effort required to complete their duties well" (BEI, 2004, p.14). The Bangladesh Securities and Exchange Commission (2006) also provides a similar principle. It states that the compensation should be rational and adequate to attract, retain and motivate qualified directors to govern the firm effectively. The code also focuses on the link between performance and compensation; thus, it suggests a balance between fixed compensation and performance-based payments.

The Greenbury Report (1995) in the UK recommended a similar principle in this regard. The report recommended that remuneration should be fixed in a way so that it enables firms to attract, retain and motivate directors, but they should avoid paying more than is necessary for their quality and performance. The Higgs Report (2003) also recommended that sufficient and attractive compensation packages should be offered to non-executive directors. The UK Combined Code (2003), however, readdressed executive remuneration; specifically, it emphasised avoiding excessive executive

remuneration, as it demonstrated little relationship with corporate performance (Solomon, 2007).

3.2.4 Code related to the Audit Committee

The audit committee acts as a monitoring board to protect shareholders' interests by providing an objective, independent review of the actions of corporate executives (Ntim, 2009). The committee also helps to keep the executive directors and employees within the scope of the owners' and other stakeholders' interests (Eighme & Cashell, 2002). It acts as a point of liaison between the external auditors, internal auditors and the board of directors; thus enhancing a firm's performance (Al-Matari *et al*., 2014). The Bangladesh Securities and Exchange Commission categorically states that "the Audit Committee shall assist the Board in ensuring that the financial statements reflect the true and fair view of the state of affairs of the company and in ensuring a good monitoring system within the business" (BSEC, 2006, p.17). Different attributes of the audit committee – for example, the size of the audit committee, its independence, and the number of meetings – are key parts of the internal control mechanisms (Alzeban, 2015).

The Cadbury Report (1992) in the UK recommended that listed companies should have an audit committee made up of at least three non-executive directors. Later, in the wake of the Enron scandal, the Smith Report (2003) was also commissioned as a supplement to the Higgs Report, aiming to evaluate the role of the audit committee in UK corporate governance. The report recommended that the audit committee should be formed of at least three independent non-executive members. However, the chairman of the company must not be a member of the audit committee. At least one member should have enough recent and relevant financial knowledge and experience.

The Code of Corporate Governance for Bangladesh suggested by the BEI (2004) states that firms should have an audit committee if their annual turnover is higher than BDT 300 million. The code also recommended similar guidelines to those of the Cadbury and Smith Reports, that the audit committee should be constituted of at least three members and that the chairman of the committee and its majority members should be non-executive directors. The BSEC also set similar principles as to those of BEI. It states that the committee shall consist of at least three non-executive directors, excepting the

chairperson of the board. One of the non-executive directors shall be an independent director, and the chairperson of the audit committee shall be an independent director. However, the Banking Regulation and Policy Department of the Bangladesh Bank (2013) has set a guideline that the audit committee shall be composed of a maximum five non-executive members of whom two shall be independent directors.

Regarding the frequency of the audit committee's meetings, all regularity bodies in the Bangladeshi corporate sector focus on a higher number of the audit committee meetings: for example, the Banking Regulation and Policy Department of the Bangladesh Bank (2013) recommends that the audit committee should hold at least four meetings in a year. The BSEC (2006) recommends holding at least four meetings in a financial year, and the BEI (2004) states that a meeting of the audit committee must be held quarterly. However, the Cadbury Report (1992) in the UK recommended only at least two meetings in a year.

3.2.5 Code related to Ownership Structure of Banks

There is no guideline in the Code of Corporate Governance for Bangladesh suggested by the BEI or BSEC about the ownership structure of a bank. However, several provisions related to restrictions on the acquisition and holding of shares in a bank are enacted in the Bank Company Act (1991) and Bank Company (Amendment) Act (2013). The Bank Company Act (1991) restricts the acquisition of shares in a bank, so that any individual, company or members of a family are not allowed to acquire more than 10% of a bank company individually, jointly or in both ways. In relation to holding shares, the Bank Company (Amendment) Act (2013) states that an individual, institution or company, individually or jointly with others, is not allowed, directly or indirectly, to hold more than 5% of a bank company without prior approval of the Bangladesh Bank.

3.2.6 Code related to Nomination and Remuneration Committee (NRC)

The BEI (2004) states that, companies may consider forming an NRC to deal with the compensation of the board of directors and to supervise the nomination process of the members of the board and other committees. However, the BEI has not provided further details about the NRC. The BSEC (2006) provides a detailed guideline relating to the

NRC. It states that the NRC shall consist of at least three non-executive directors, including an independent director and that the board shall appoint members of the NRC. The Greenbury Report (1995) in the UK recommended a similar guideline, that remuneration committees should consist solely of non-executive directors. The board also selects a chairperson of the NRC from the members, who will be an independent non-executive director. The committee shall arrange at least one meeting in a financial year (BSEC, 2006).

The next part of this chapter reviews the empirical literature on the relationship between internal corporate governance mechanisms and shareholder value.

3.3 REVIEW OF THE EMPIRICAL LITERATURE ON THE RELATIONSHIP BETWEEN INTERNAL CORPORATE GOVERNANCE MECHANISMS AND SHAREHOLDER VALUE

Following the review of the theoretical frameworks of corporate governance, this section attempts to explore the relationship that exists between selected internal corporate governance mechanisms and firms' financial performance, the proxy for shareholder value. This study examines nine internal governance mechanisms which are required of the banks listed on the Dhaka Stock Exchange in Bangladesh under the need to "comply or explain". These include board size, sponsor-directors' shareholding, institutional shareholding, general public shareholding, independent non-executive directors, CEOs' compensation, independent audit committee, size of the audit committee and frequency of the audit committee meetings. Previous studies have failed to reach a conclusive result on whether the effect of each corporate governance mechanism is shown independently on firms' financial performance or as a combined effect (Ntim, 2009). The following review has been carried out based on the assumption that each internal corporate governance mechanism has a separate effect on shareholder value.

3.3.1 Board Size and Shareholder Value

The size of the board is believed to be one of the most important internal corporate governance mechanisms (Ntim, 2009; Amran, 2010), as board size influences the quality of monitoring, control and decision-making (Monks & Minow, 1995; Yermack, 1996; Chiang, 2005; Ahmed, 2010) and thereby enhances firms' performance. However, there has been a debate about the optimal board size which has proved to be inconclusive, i.e. whether a small or large board is most effective for firms' success. Many prior studies suggest that the corporate board should preferably be comprised of 7–8 directors to ensure the effectiveness of the board (Lipton & Lorsch, 1992; Jensen, 1993; Yermack, 1996; Abdullah, 2004; Zainal *et al*., 2009).

Empirical studies have yielded mixed evidence, presenting positive, negative and insignificant relationships between board size and firms' financial performance. For example, using a sample of 452 large US industrial corporations in the period 1984 to 1991, Yermack (1996) finds a U-shaped relationship, suggesting that a large percentage

of a company's value declines as the board size increases from small to medium, particularly in a range of board sizes from 4 to 10. However, Yermack (1996) finds no relationship between board size and companies' market valuation over a board size of 10. The result is said to be robust, as the study suggests similar results after incorporating several control variables. Since the study focuses solely on large firms, the results might not be relevant for testing hypotheses about small-sized firms or firms functioning in diverse legal or cultural backgrounds (Eisenberg *et al*., 1998). With the same objectives, Eisenberg *et al*. (1998) document evidence that board size harms firms' profitability, as measured by industry-adjusted return on assets (ROA), taking a sample of 879 firms in Finland from 1992–1994.

Using a sample of 9 listed Kuwaiti banks over the period 2006–2010, Al-Saidi & Al-Shammari (2013) find that a large board size negatively affects a bank's performance. The result is robust as it suggests the same tendency after applying the two-stage least squares (2-SLS) model. The study, however, contains some limitations. Firstly, although the models explain a similar kind of the relationship, the nature of the relationship may still be changed by incorporating other important variables in the models, such as the characteristics of the remuneration and nominating committees, equity ownership by managers, and the wealth and financial position of managers. These variables are important theoretically and empirically in other corporate governance studies. Secondly, the sample size is small; thus, the result may not be generalised for all banks listed. Finally, the 2-SLS model is used that yields consistent estimators to remove the impact of OLS bias and inconsistent estimators. However, the 2-SLS model still has limitations in terms of identifying the instruments. Recently, Nath *et al*. (2015) have demonstrated a similar result for 9 Bangladeshi pharmaceutical companies for the period 2005–2014, measuring financial performance by ROA and Tobin's Q. The study suggests that a small-sized board for pharmaceutical companies in Bangladesh is more effective in economic terms than a large-sized board. The study, however, contains several limitations. Firstly, the sample size includes only the nine smallest pharmaceutical companies; thus, the results may not be generalised for other sectors, and not even for the entire pharmaceutical industry. Secondly, the results are not robust as the results have not been passed through a robustness test. Thirdly, the study fails to address the problem of endogeneity, which originates from the omitted variable. Farhat (2014) finds similar

results to Nath *et al*. (2015), namely that board size negatively affects firm performance, as measured by ROA, this time using all non-financial FTSE firms listed on the London Stock Exchange for the period 2005–2010.

There are an overwhelming number of empirical studies (e.g. Huther, 1997; Vafeas, 1999; Dahya *et al*., 2002; Cheng, 2008; Cheng *et al*., 2008; Coles *et al*., 2008; Eisenberg *et al*., 1998; Loderer & Peyer, 2002; Hermalin & Weisbach, 2003; Bozec, 2005; Mak & Kusnadi, 2005; Haniffa & Hudaib, 2006; Staikouras *et al*., 2007; Guest, 2009; Ntim, 2009; Ahmed, 2010; Elsayed, 2011; Kumar & Singh, 2013; Pathan & Faff, 2013) which corroborate the claim that a smaller board is more effective in monitoring, controlling and administering a company, so that these firms demonstrate higher operating performance. Similarly, using cross-sectional data from 24 banks in Gulf Council Countries (GCC) for the financial year 2012–2013, Naushad & Malik (2015) find that a smaller board positively influences banks' performance, as measured by Tobin's Q and ROA. However, their findings contain certain limitations. Firstly, the study covers only one financial year; thus incorporating panel data may produce a different result. Secondly, the study fails to address the problem of endogeneity that may arise due to the presence of an endogenous relationship between corporate governance variables.

By contrast, a significant number of previous empirical studies demonstrate a positive relationship between board size and firms' financial performance, the proxy for shareholder value. For example, using a sample of 35 listed banking firms in the USA from 1959–1995, Adams & Mehran (2005) find that banking firms with a larger board do not underperform their peers in terms of financial performance, as measured by Tobin's Q, which is contrary to the evidence for non-banking firms. They suggest that restrictions on board size in the banking industry may be damaging. The result can be said to be robust, as they do not find a divergent relationship between board size and Tobin's Q after addressing the potential sources of the endogeneity problem in the models. Later, in 2011, they conducted another study using a random sample of the 35 publicly traded BHCs, which were among the 200 largest top-tier BHCs for each of the years 1986–1996. They found uniformity with the idea that a larger board size generates bank value, as measured by Tobin's Q. The results are also robust, as they find little evidence of the

impact of the endogeneity on the results, due to omitted variables relating to merger and acquisition activity.

Recently, Al-Amarneh (2014) has also found board size to have a positive effect on firms' performance, as measured by ROA, using a sample of the 13 listed banks in Jordan for the period 2000–2012. Similarly, using all FTSE non-financial firms listed on the London Stock Exchange for the period 2005–2010, Farhat (2014) reports that board size positively affects company performance, as measured by Tobin's Q. Employing a sample of 72 Italian water utility companies for the year 2011, Romano & Guerrini (2014) find that larger boards positively affect performance, as measured by ROA, ROE and ROI, although the effect is not linear. However, the result is not robust, as the study suggests consistent results only with reference to ROE after incorporating several control variables into their model. Indeed, the study has many limitations. Firstly, the study examines only one kind of public sector company; thus, the findings may not be generalised for all similar companies and other sectors. Secondly, the study includes only one-year data; thus, the results could be different in the case of panel data. Thirdly, the study fails to address the endogeneity problem that may be caused by the presence of an endogenous relationship between variables in board composition.

Employing a sample of all the firms listed on the New Zealand Stock Exchange for the period 2004–2007, Gaur *et al*. (2015) find that board size leads to superior company performance. The results can be viewed as robust, as the study documents consistent evidence after incorporating important controlling variables into the model. Moreover, the results may be considered as representative, as the study includes all the firms listed on the New Zealand Stock Exchange. Similarly, Muttakin (2012) find board size to have a significant positive effect on ROA and Tobin's Q, taking a sample of all 155 non-financial companies listed on the Dhaka Stock Exchange in Bangladesh for the period 2005–2009. Rouf (2012) also reports a positive influence of board size on ROE, taking a sample of 93 non-financial companies listed on the Dhaka Stock Exchanges for the year 2006.

However, the third strand of research argues that board size refers only to the number of directors on the board, and this might not be related to the directors' ability, knowledge, and skills; thus firms' value may not be enhanced. For example, Yammeesri

& Herath (2010), Al-Saidi (2010) and Ştefănescu (2011) find that board size has no significant relationship with a firm's performance. Using the Romanian banking institutions listed on the Bucharest Stock Exchange for the period 2004–2011, Dedu & Chitan (2013) confirm similar results, that board size does not significantly influence a bank's performance. Recently, Sobhan (2014) has also found supporting evidence that there is no significant relationship between board size and the performance of non-financial firms in Bangladesh, as measured by ROA, ROE and Tobin's Q. Similarly, Orazalin *et al.* (2015) find no relationship between board size and a firm's performance, as measured by ROE.

3.3.2 Sponsor-Directors' Shareholding and Shareholder Value

The equity ownership of sponsor-directors is another key internal corporate governance mechanism that may be a possible solution to the agency problem (Ntim, 2009). Sponsor-directors' equity ownership is also referred to as managerial ownership or ownership of insider directors. This category of ownership is important, as the sponsor-directors hold a significant proportion of equity shares. In the context of Bangladesh, they are mostly the family members of the entrepreneurial bodies.

The previous empirical literature suggests contradictory results for the relationship between sponsor-directors' shareholding and firms' financial performance, the proxy for shareholder value. One group of researchers (e.g. Kaplan & Minton, 1994; Mehran, 1995; Wruck, 1988; Gorton & Schmid, 1996; Welch, 2003; Hiraki *et al*., 2003; Krivogorsky, 2006; Kapopoulos & Lazaretou, 2007; Mangena & Tauringana, 2008; Chu, 2011) suggests a positive relationship between sponsor-directors' equity ownership and firms' financial performance. For example, using 153 randomly selected manufacturing firms for the period 1979–1980, Mehran (1995) documents evidence that both Tobin's Q and return on assets (ROA) are positively related to sponsor-directors' (managerial) equity ownership. The result is borne out by Krivogorsky (2006) and Kapopoulos & Lazaretou (2007), who also find a positive association between sponsor-directors' ownership and firms' performance for their samples of 87 European and 175 Greek listed firms, respectively.

Similarly, using a sample of 72 listed firms in Zimbabwe for the period 2002–2004, Mangena & Tauringana (2008) illustrate a positive relationship between sponsor-directors' ownership and firms' financial performance, as measured by Tobin's Q and ROA. The underlying argument for the positive relationship is that the market perceives sponsor-directors' ownership as an added inducement to boost shareholder value (Carrillo, 2007). Along similar lines, using proxy data of 786 public family firms in Taiwan for the period 2002–2007, Chu (2011) finds that sponsor-directors' ownership (i.e. being family owned) is positively linked to firms' financial performance. Specifically, a significant positive relationship exists when family members act as the CEOs, top managers, chairpersons or directors of firms. The relationship, however, becomes insignificant when family members are not involved with the firm's management or control. The findings suggest that the effect of potential family ownership is more likely to be realised when family ownership is combined with active family management and control. In addition, the relationship between sponsor-directors' ownership and firms' economic performance is more significant in small and medium-sized enterprises (SMEs) than in large firms. Recently, taking data from 58 banks in the GCC countries in 2010, Arouri *et al*. (2014) have found that sponsor-directors' (family) ownership has a positive effect on banks' financial performance, as measured by both Tobin's Q and market-to-book (MTB) ratio. The study states that family wealth is strongly associated with the well-being of the family business: family members are motivated to enhance their wealth by improving the firm's performance.

Another group of researchers (e.g. Demsetz & Lehn, 1985; Agrawal & Mandelker, 1990; Loderer & Martin, 1997; Himmelberg *et al*., 1999; Lehmann & Weigand, 2000; Weir *et al*., 2002; Cronqvist & Nilsson, 2003; Tam & Tan, 2007; Oreland, 2007; Ahmed, 2010; Mollah *et al*., 2012) find a negative relationship between sponsors' and directors' ownership and firms' financial performance. For example, in a sample of 260 banks and savings-and-loan holding companies (SLHCs) available on Standard & Poor's Research Insight Database, Belkhir (2009) finds statistically significant negative relationships between banks' performance and sponsor-directors' (insiders) ownership for the year 2002, using the Ordinary Least Squares (OLS) regression. However, the findings are not robust, and the cross-sectional OLS regression of the banks' performance on a single governance mechanism may not provide evidence

of a genuine relationship. This is because the statistically significant relationship disappears when a framework of simultaneous equations is used. Similarly, Chen *et al*. (2002) do not find a positive relationship between sponsor-directors' (family) ownership and firms' financial performance, as measured by ROA, ROE, and MTB ratio, using a sample of 412 publicly listed Hong Kong firms for the period 1995–1998. Along similar lines, using a sample of firms listed on the Botswana Stock Exchange over the period 2000–2007, Mollah *et al*. (2012) suggest that sponsor-directors' ownership is damaging to firms' financial performance and value, as measured by ROA, ROE and Tobin's Q. The findings indicate that there is a conflict between majority and minority shareholders, consistent with agency theory. The study also suggests that it is diffused ownership that enhances firms' financial performance and that mitigates the agency problems in the corporate sector of the Botswana Stock Market. The result can be seen as robust, as sponsor-directors' ownership confirms a negative effect on performance, when the firms' financial performance and value are measured by LnMktCap, a market-based performance method.

Of direct relevance to this study, Muttakin & Ullah (2012) present evidence that managerial ownership seems to be detrimental to banks' ROA, based on data taken from 30 listed banks on the Dhaka Stock Exchange. They explain that it provides managerial entrenchment and managerial opportunities to misallocate banks' resources at the expense of other shareholders. This result confirms the results of Imam & Malik (2007) and Farooque *et al*. (2010), who suggest that the relationship between firms' financial performance and sponsor-directors' ownership is negative for Bangladeshi non-financial firms. There is an overwhelming number of previous empirical studies which also present evidence of the negative relationship between these two variables. For example, Demsetz & Lehn (1985), Himmelberg *et al*. (1999), Ho & Williams (2003), Sanda *et al*. (2005) and Haniffa & Hudaib (2006), amongst others, corroborate the negative correlation between sponsor-directors' equity ownership and firms' financial performance.

Finally, the third group of empirical studies documents no significant relationship between sponsor-directors' equity ownership and firms' financial performance. For example, Demsetz (1983) argues that a firm's ownership structure should not have an

effect on its financial performance. Based on this argument, Demsetz & Lehn (1985) report no cross-sectional relationship between accounting profit rate and sponsor-directors' equity ownership (ownership concentration) for the 511 listed US firms for the period 1984–1989. The results are generalised in US-listed firms for all regulated utilities, financial institutions, mass media and sports industries. Later, Vafeas & Theodorou (1998) investigated the relationship between the insider directors' (sponsor-directors') affiliation and firms' performance employing data collected from the 250 publicly traded UK firms. These results are consistent with the general findings in the USA: the tests as a whole do not recognise a significant association between the sponsor-directors' affiliation and ownership with the firms' performance. Along similar lines, Tsetsekos & DeFusco (1990), and El Mehdi (2007) support the arguments of Demsetz (1983) empirically by revealing the insignificant effect of managerial equity ownership on returns.

3.3.3 Institutional Shareholding and Shareholder Value

Traditionally, institutional ownership is often concentrated in a block of securities managed by recognisable parties (Bhattacharya & Graham, 2009). They do not take part in corporate management decisions, but they do pursue the philosophy of the "Wall Street Rule" or "exit policy" by disposing of their equity ownership when they become dissatisfied with management decisions or share performance (Graves & Waddock, 1990; Bathala *et al*., 1994). They act as passive investors, as they exercise their influence on corporate management in terms of buying and selling equity ownership. Scholtens & Van Wensveen (2000) and Tan & Keeper (2008) clarify that the reason for their passive role is that they do not invest their funds for their benefit; rather they are investing on behalf of shareholders/investors of their institutions. However, Aghion *et al*. (2009) argue that institutional investors can encourage corporate management to pursue risky innovative projects, as they do not need to fear losing their job or being punished should the project fail.

There has been an inconclusive debate about whether or not institutional ownership has a significant relationship with firms' financial performance. Previous empirical studies have documented a variety of evidence: positive, negative and no relation. For example, using a cross-sectional sample of 1,173 firms listed on the

NYSE/AMEX in 1976, McConnell & Servaes (1990) show a statistically significant positive effect of institutional ownership on firms' performance, as measured by Tobin's Q. Along similar lines, they subsequently carried out another study, taking a sample of 1,093 firms listed on the NYSE/AMEX in 1986. They found the same relationship between institutional ownership and firms' financial performance. Similarly, Han & Suk (1998) find a positive relationship between institutional shareholding and average long-term stock returns of 301 NYSE/AMEX firms for the period 1988–1992. They attribute this significant pragmatic relationship to the effective monitoring of management by institutional investors. Similarly, using the ordinary least squares (OLS) model, Clay (2001) finds institutional ownership to have a positive impact on firms' performance, as measured by Tobin's Q, taking a sample of 8,951 firms. Specifically, the study suggests that a 1% increase in institutional shareholding translates into a 0.75% enhancement in firms' financial performance. The result is said to be robust, as the study finds the same kind of relationship and extent of impact after using the two-stage least squares (2-SLS) model. An overwhelming number of previous empirical studies also provide evidence of a positive relationship between the two variables. For example, Nesbitt (1994), Smith (1996), Steiner (1996), Black (1998), Xu & Wang (1999), Tsai & Gu (2007), and Cornett *et al*. (2007) corroborate the positive correlation between institutional ownership and firms' financial performance.

Using a sample includes all the firms with complete data from the Centre for Research in Equity Prices (CREP) at the University of Chicago and the Thomson Financial, Compustat and ExecuComp databases for the period 1992–2004, Elyasiani & Jia (2010) find that long-term institutional ownership is associated with improved firm performance by reducing information asymmetry and advancing the incentive-based component of executive compensation. The findings suggest that managers need to build and maintain long-term relationships with institutional investors to enhance company performance and that understanding this relationship can help investors to choose suitable stocks according to their investment horizons. In the same way, long-term institutional investors enjoy greater incentives and efficiencies, such as economies of scale in the collection and processing of corporate information that can be used in effective monitoring, which, in turn, mitigates the problem of asymmetric information and associated agency problems (Attig *et al*., 2012). Recently, employing panel and

pooled models for 120 firm-year observations representing 15 listed Jordanian tourism firms, Al-Najjar (2015) has found that the mutual funds have a positive effect on firms' financial performance; however, on the whole, institutional investors have a negative impact on firms' financial performance.

In contrast, another body of research finds that institutional ownership is negatively related to firms' financial performance. For example, using all the firms listed on the Botswana Stock Market for the period 2000–2007, Mollah *et al*. (2012) suggest that institutional ownership is a damaging variable for firms' financial performance and value. Navissi & Naiker (2006), however, find a monotonic relationship between institutional ownership and firms' value. They find that ownership held by active institutional shareholders up to 30% enhances company value, while ownership above 30% reduces a firm's value.

The third group of researchers (e.g. Agrawal & Knoeber, 1996; Karpoff *et al*., 1996; Faccio & Lasfer, 2000; Sarkar & Sarkar, 1999, 2000) find no evidence of a relationship between institutional ownership and firms' financial performance. These studies contend that institutional investors do not contribute to firms' financial performance at any time.

3.3.4 General Public Shareholding and Shareholder Value

General public ownership, theoretically known as dispersed ownership, is important in theory, as this category of ownership is fragmented, consisting of small individual shareholders; consequently, they are unable to expropriate corporate wealth for their benefit. However, previous empirical studies have presented mixed evidence, i.e. positive, negative, and no relationship, between general public ownership and company performance. For example, using the sample of 470 UK-listed companies from a wide range of industries for the period 1983–1985, Leech & Leahy (1991) find that dispersed ownership has a positive effect on firms' financial performance. Specifically, they find that greater dispersion of ownership leads to a higher valuation ratio, profit margin and growth rate of net assets. This result is borne out by Mollah *et al.* (2012), using all the 19 companies listed on the Botswana Stock Market for the period 2000–2007as the primary sample. The study finds that general public ownership is a dispersed

ownership pattern, which is a value-adding variable, i.e. it improves corporate performance, as measured by a market-based performance measure (i.e. LnMktCap) and mitigates agency problems. However, the study finds no effect from public shareholding on performance, as measured by ROA, ROE and Tobin's Q.

In contrast, another group of researchers finds a negative association between general public shareholding and firms' performance. For example, using the PROWESS database of the Centre for Monitoring the Indian Economy and 365 listed companies having sales over Rs. 2.5 billion during the financial year 2000–2001, Dwivedi & Jain (2002) find that general public shareholding has a negative effect on firm performance. The findings can be criticised as the sample size is relatively small, accounting for only 8% of the total number of listed companies; thus, the result may not be representative. Similarly, using ownership data obtained from 511 firms in major sectors of the U.S. economy, including regulated utilities and financial institutions, Demsetz & Lehn (1985) find dispersed ownership having a negative effect on corporate performance. The underlying reason for the negative relationship between dispersed ownership and firms' financial performance is that this type of ownership creates a hold-up problem, in which dispersed shareholders are unable to stop manager's opportunistic behaviour, even though they know about it (Fama & Jensen, 1983).

On the other hand, and of direct relevance to this study, Ahmed (2010) finds that there is no significant relationship between general public shareholding and listed banks' financial performance, as measured by ROE, ROA and Tobin's Q, for the study period 2003–2008. The findings related to ROE and ROA are not robust, because the study finds a positive effect of general public shareholding on banks' ROE and ROA when a supplementary test is conducted using an alternative estimation. However, the result related to Tobin's Q remains the same.

3.3.5 Independent Non-Executive Directors and Shareholder Value

The inclusion of independent non-executive directors (INEDs) on the board is thought to be one of the key internal corporate governance mechanisms, as they can monitor the activities of the board of executive directors and ensure transparency in the decisions taken by the board. Previous empirical evidence with regard to the relationship

between INEDs and firms' financial performance is also inconclusive: it yields positive, negative or insignificant relationships between the two variables.

A strand of the empirical studies (e.g. Weir *et al*., 2002; Luan & Tang, 2007; Ravina & Sapienza, 2010; Pombo & Gutiérrez, 2011; Muttakin, 2012; Rouf, 2012; Wang & Lee, 2014; Liu *et al*., 2014; Giráldez & Hurtado, 2014; Chen, 2014; Obradovich *et al*., 2014; Sobhan, 2014; Farhat, 2014) reveals that boards dominated by INEDs bring about higher performance. For example, taking a sample of 311 UK-listed firms for the period 1994–1996, Weir *et al*. (2002) find that INEDs have a positive effect on firms' financial performance, as measured by Tobin's Q. Similarly, using a dataset of listed electronics firms in Taiwan for the period 1997–2002, Luan & Tang (2007) suggest that the appointment of independent outside directors does have a statistically significant positive effect on firms' financial performance. The findings are supported by a study undertaken by Gupta & Fields (2009), who examined the impact on the firm's performance of an independent non-executive director's resignation from the board, using a sample of 744 US firms for the period 1990–2003. They indicate that the average market value of firms decreases by 1.22% due to the announcement of the resignation of independent non-executive directors. Along similar lines, using data collected from 114 Spanish listed companies in the context of the economic crisis of 2007–2010, Giráldez & Hurtado (2014) suggest that having boards with a higher number of independent non-executive directors reduces the negative effect on a firm's value. The study indicates that firms having a positive attitude towards the inclusion of independent non-executive directors on the board generate greater benefits. However, Arosa *et al*. (2010) find a different kind of positive result from their study of Spanish firms included in the SABI (Iberian Balance Sheet Analysis System) database for the year 2006, in which they attempted to reveal the impact of independent non-executive directors in family firms run by the first generation and those run by subsequent generations. They point out that the presence of INEDs on the board has a positive impact on a firm's financial performance when the firm is run by the first generation. However, when the firm is led by the second and subsequent generations, the presence of INEDs has no effect on firms' financial performance. Recently, Liu *et al*. (2014) have analysed comprehensive and robust data of all the firms listed on the Shanghai and Shenzhen Stock Exchanges in China for the period 1999–2012. They find a strong positive relationship between INEDs and financial performance

for government-controlled firms and firms with lower information acquisition costs. They also provide evidence that INEDs play a crucial role in reducing insider trading and enhancing investment efficiency.

Meanwhile, taking into consideration a sample of an average of 335 firms per year for the period 1996–2006, Pombo & Gutiérrez (2011) examine the relationship between board structures through the appointment of outside directors and firms' ROA. The study reveals that the ratio of outside directors has a positive effect on the firms' ROA, since the inclusion of INEDs increases the monitoring of directors and the firms' *ex-post* valuation. In the same way, taking a sample of S&P 500 companies (excluding the financial industry) for the period 2002–2006 and by using, first, a two-way fixed effects (FE) regression model and, subsequently, the two-stage least squares (2-SLS) regression, Shiah-Hou & Cheng (2012) find that outside directors' experience has a positive economic effect on both accounting and market-based performance. The result is robust, as the results remain unchanged after addressing endogeneity. Similarly, Obradovich *et al*. (2014) examine the impact of INEDs on company performance from the cash conversion cycle point of view, by using a sample of 189 American manufacturing firms listed on the New York Stock Exchange (NYSE) for the period 2009–2013. They find that the presence of independent non-executive directors on the board increases manufacturing firms' working capital efficiency (e.g. reducing the inventory period and the cash conversion cycle), which, subsequently, enhances firms' performance.

A number of Bangladeshi studies also document a positive relationship between INEDs and firm performance. For example, using a sample of 93 non-financial companies listed on the Dhaka Stock Exchange in the year 2006, Rouf (2012) finds a positive relationship between INEDs and firms' ROE. Similarly, using a sample consisting of all 155 non-financial companies listed on the same stock exchange for the period 2005–2009, Muttakin (2012) reveal that a higher proportion of INEDs leads to better firm performance, as measured by ROA and Tobin's Q. Recently, taking a sample of 91 non-financial companies listed on the DSE, Sobhan (2014) reports that firms' stock return and Tobin's Q increase when they appoint independent non-executive directors, compared to their counterparts who do not appoint INEDs.

In contrast to this positive relationship, many studies argue against the inclusion of INEDs on the board and refute their significant engagement with outside activities. For example, using a sample of all the firms on the Swiss Performance Index (SPI) from 2005 to 2012, except "investment firms" and "financial services", Volonté (2015) finds that independence is neither positively related to firm performance, nor are outside activities negatively related to it. On the contrary, INEDs are negatively associated with a firm's valuation, as measured by Tobin's Q. Similarly, Terjesen *et al*. (2015) suggest that INEDs do not add value to company performance, unless the board is gender diversified. These results are robust with different estimation models.

The third strand of empirical studies (e.g. Hermalin & Weisbach, 1991; Vafeas & Theodorou, 1998; Weir & Laing, 2000; Haniffa & Hudaib, 2006; Rashid *et al*., 2010; Ahmed, 2010; Prabowo & Simpson, 2011; Orazalin *et al.*, 2015) provides evidence that the presence of INEDs on the board has no significant effect on company performance. For example, taking into consideration observations of 274 Bangladeshi firm-years, Rashid *et al*. (2010) reveal that independent non-executive directors are unable to add value to firms' financial performance in Bangladesh. Similarly, Hermalin & Weisbach (1991) find no relationship between the inclusion of INEDs on the board and firms' performance for their sample of 142 listed US firms. Similarly, based on a sample of Hong Kong firms, Leung *et al*. (2014) find no significant relationship between the independence of corporate boards and family firms' financial performance; however, board independence is positively related to the financial performance of non-family firms. Recently, Orazalin *et al.* (2015) also show no significant relationship between INEDs and company performance, as measured by ROE, using a sample of 20 the largest Russian companies in the oil and gas industry for the period 2009–2012. Similarly, other previous studies of UK-listed firms conducted by Vafeas & Theodorou (1998) and Weir & Laing (2000), a study on listed Malaysian firms conducted by Haniffa & Hudaib (2006) and a study on Indonesian listed firms conducted by Prabowo & Simpson (2011) find that the proportion of INEDs on the board has a statistically insignificant effect on firms' financial performance.

3.3.6 CEOs' Compensation and Shareholder Value

Prior empirical studies provide inconclusive evidence on the relationship between CEOs' compensation and firms' financial performance, the proxy for shareholder value. Predictably, there are three contradictory empirical results – positive, negative, and no/ insignificant relationship – between CEOs' compensation and shareholder value.

A number of studies reveal a positive relationship between CEOs' compensation and the financial performance of firms. For example, using ten-year panel data on the cash compensation (salary and bonus) of the CEOs of 51 Japanese firms (18 listed and 33 unlisted) for the period 1986–1995, Kato & Kubo (2006) provide evidence of a significant positive relationship between CEOs' compensation and firms' financial performance, as measured by ROA. However, Ke *et al*. (1999) uncover a different aspect of the positive relationship between different categories of US firms and financial performance. They find a significant positive relationship between the degree of compensation and firms' performance, as measured by ROA, for publicly-held insurers, but no such relationship is found for privately-held insurers. Further evidence supporting these results may lie in the findings of studies conducted by Farmer *et al*. (2013) and Ramadan (2013), who also find a positive relationship between firms' financial performance and CEOs' compensation.

The above studies mainly focus on the relationship between CEOs' compensation and non-banking firms' financial performance. The conflicts of interest among stakeholders in the banking sector are greater than in non-banking firms because of higher debt ratios and asset-liability issues (Becher *et al*., 2005). These factors make it more important to offer a high level of rewards to executives in the banking sector compared to the non-bank sector. A number of prior studies (e.g. Barro & Barro, 1990; Houston & James, 1995; Akhigbe *et al*., 1997; Ang *et al*., 2002; John & Qian, 2003; Becher *et al*., 2005; Doucouliagos *et al*., 2007) document a positive relationship between CEOs' pay and banks' financial performance. For example, Barro & Barro (1990) examine the correlation between changes in executive compensation and performance in the banking sector for the period 1982–1987. They find that variations in compensation are positively linked to the better performance of banks. Aigbe *et al*. (1997) also aim to reduce agency costs by linking pay to performance. They find a significant positive

correlation between CEOs' pay and banks' performance, as measured by return-based and market-based performance. Similarly, Becher *et al*. (2005) conclude that the increasing use of equity incentives for executives, including CEOs, by US banks is related to higher bank performance and growth without a similar increase in risk. Along similar lines, using panel data for the period 1992–2005, Doucouliagos *et al*. (2007) examine the relationship between executives' pay and performance within the Australian banking sector, including CEOs', by applying different estimation techniques, taking several dependent variables, and alternative measures of performance. The results suggest that, although there is a lack of contemporaneous relationship between executive directors' pay and bank performance, there is evidence of a strong positive and direct relationship between CEOs' compensation and banks' financial performance. The study also indicates that the sensitivity of bank performance to CEOs' compensation seems to have increased over time. Recently, Lee & Isa (2015) have also found clear evidence of a positive association between directors' compensation and performance in the Malaysian banking sector, including CEOs, using panel data from 21 banks for the period 2003–2011.

In contrast to the positive evidence, Brick *et al*. (2006), Abdullah (2006), and Basu *et al*. (2007), amongst others, provide evidence of a negative relationship between CEOs' compensation and firms' financial performance. For instance, Brick *et al*. (2006) present evidence that excess compensation of both directors and CEOs is related to the under-performance of firms. They contend that the evidence is consistent with excessive compensation due to mutual back-scratching or cronyism. Basu *et al*. (2007) support the finding that the excess compensation related to equity ownership is negatively associated with firms' subsequent financial performance. They do not, however, find a link between this excess compensation and subsequent stock returns. In the same way, Abdullah (2006) also notices a significant negative relationship between executive directors' compensation, including that of CEOs, and lagged ROA, using publicly available data from a sample of 86 distressed firms and 86 matched non-distressed firms for the year 2001.

The third group of empirical studies (e.g. Mester, 1989; Jensen & Murphy, 1990; Smith & Watts, 1992; Defina *et al*., 1994; Conyon & Murphy, 2000; Zhou, 2000;

Duffhues & Kabir, 2008; Fernandes, 2008) suggests either an insignificant relationship, or no relationship at all, between CEOs' compensation and firms' performance. For example, Mester (1989) suggests that the regulatory bodies of banking firms may persuade bank executives to take on less risky investment projects than those desired by shareholders, because they favour those executives ensuring the security and reliability of the banking industry. In these circumstances, CEOs are influenced by regulations rather than by contract incentives. Along similar lines, Smith & Watts (1993) also contend that regulation puts a limit on the range of investment opportunities and consequently eases the monitoring of executives. As a corollary, commercial banks might be less likely to use formal incentive plans to mitigate agency problems, suggesting an insignificant relationship between CEOs' compensation and banks' financial performance. Houston & James (1995) contrast these results of banking firms with those of non-banking firms. They find that bank performance is not as dependent on executive stock options and ownership as non-banking firms. Accordingly, they suggest that their compensation deal does not encourage bank CEOs to exploit risk-taking opportunities due to the fixed-rate deposit insurance contract. Also, Jensen & Murphy (1990) measure the executive compensation data for manufacturing firms for the period 1974–1986 and find an insignificant positive relationship between compensation and firms' financial performance. Moreover, they find that performance is not sensitive to bonuses, which constitute 50% of a CEO's salary. However, the relationship between CEOs' compensation and firms' financial performance may hinge on corporate profit objectives, i.e. on the nature of the corporation, whether a profit-making organisation or a not-for-profit organisation. For example, using a sample consisting of 132 CEOs from 92 hospitals in Ontario (Canada) for the period 1999–2006, Reiter *et al*. (2009) reveal that CEOs' compensation is mostly unrelated to hospitals' financial performance.

3.3.7 Attributes of the Audit Committee and Shareholder Value

The present study focuses on the relationship between shareholder value and three specific attributes of the audit committee, i.e. the presence of an independent audit committee, the size of the audit committee and the frequency of the audit committee meetings.

3.3.7.1 Presence of the independent audit committee and shareholder value

Prior empirical studies fail to yield definitive evidence on the relationship between the presence of the independent audit committee and firms' financial performance. The independent audit committee refers to the inclusion of independent non-executive directors on that committee. Audit committees characterised by a higher proportion of non-executive directors are thought to have a high degree of independence compared to those characterised by a higher proportion of executive directors (Abdullah *et al*., 2008; Mohd *et al*., 2009). The underlying argument is that independent non-executive directors serving on the audit committee are more likely to be free from management control and persuasion, and they can communicate financial information to shareholders without fear (Karamanou & Vafeas, 2005).

One group of studies (e.g. Khanchel, 2007; Abdullah *et al*., 2008; Dey, 2008; Yasser *et al*., 2011; Nuryanah & Islam, 2011) suggests a positive association between the presence of an independent audit committee and firms' financial performance. For example, using a sample of 624 non-financial US firms for the period 1994–2003, Khanchel (2007) suggests a significant positive association between the independent audit committee and firms' financial performance, as measured by Tobin's Q. In the same way, taking a sample of 371 firms from Compustat, Spectrum, and ExecuComp for the period 2000–2001, Dey (2008) finds that an independent audit committee has a significant positive effect on firms' financial performance, as measured by ROA and Tobin's Q. Nuryanah & Islam (2011) and Yasser *et al.* (2011) also find evidence consistent with that of Khanchel (2007) and Dey (2008), that the inclusion of non-executive independent directors on the audit committee affects firms' performance positively.

Many prior studies (e.g. Dar *et al*., 2011; Al-Matari *et al*., 2012b; Ghabayen, 2012), however, suggests a negative relationship or no correlation between the independent audit committee and firms' financial performance. For instance, using a sample of 11 selected oil and gas firms listed on the Karachi Stock Exchange for the period 2004–2011, Dar *et al.* (2011) find a negative relationship between the independent audit committee and firms' financial performance, as measured by ROE. Meanwhile, the other group of studies finds no relationship between the independence of the audit

committee and the firms' financial performance. For example, using a sample of 62 firms listed on the Saudi Stock Market, excluding financial companies, Al-Matari *et al*. (2012b) suggest that there is no relationship between the independent audit committee and firms' financial performance. Similarly, using a sample of 169 non-financial companies listed on the Muscat Security Market (MSM) for the period 2011–2012, Al-Matari *et al*. (2014) find an insignificant positive relationship between the independent audit committee and firms' financial performance, as measured by ROA. More recently, Kallamu & Saat (2015) have substantiated this kind of relationship, using a sample of 37 financial firms in commercial banking, investment banking, Islamic banking, insurance, *Takaful* and other finance-related services listed on the Bursa Stock Exchange, Malaysia, for the period of 2007–2011.

3.3.7.2 Size of the audit committee and shareholder value

The size of the audit committee refers to the number of members working on that committee (Nuryanah & Islam, 2011). Previous empirical studies have documented inconclusive results; a positive, a negative, and no relationship between audit committee size and firms' financial performance. For example, using panel data for the top 50 New Zealand companies for the period 1999–2007, Reddy *et al.* (2010) find a positive association between audit committee size and firms' financial performance, as measured by Tobin's Q, market-to-book (MTB) and return on assets (ROA). Similarly, Premuroso & Bhattacharya (2007) and Bauer *et al.* (2009) conducted studies on US firms consisting of, respectively, 113 observations (firm-years) of real estate investment trust companies for the period 2004–2006 and 500 firms for the single period 2006. Both studies find positive effects on firms' financial performance (measured by Tobin-Q, ROA, ROE, NPM and ROA, ROE and NPM, respectively) from audit committee size. Other researchers have presented the same results in developing economies. For instance, Al-Matari *et al.* (2012a) carried out a study comprising 136 non-financial firms in Kuwait, Obiyo & Lenee (2011) used a sample of 51 banks, food, construction, and oil firms in Nigeria for the period 2004–2008, and Swamy (2011) examined 83 Indian non-listed family-owned firms for the period 2008–2010. These studies all find a positive relationship between audit committee size and firms' financial performance, as measured

by Tobin's Q (although they used different statistical methods and different alternative performance variables along with Tobin's Q).

The second strand of research finds a negative association between audit committee size and shareholder value. For example, using 500 large firms listed on the Canadian Stock Exchange for the period 1976–2000, Bozec (2005) finds audit committee size having a negative effect on firms' financial performance, as measured by ROS, ROA, sales efficiency, net income, efficiency and asset turnover. A number of studies on developing countries have confirmed the results presented by Bozec (2005): for instance, Al-Matari *et al. (*2012b) in a study on Saudi Arabia using a sample of 135 listed firms for a single period (2011) and Hsu & Petchsakulwong (2010) using Thai public non-life insurance companies in the period 2000–2007. Of direct relevance to this study, Mollah & Talukdar (2007) find a negative relationship, using 55 Bangladeshi firms listed on the DSE for the sample period 2002–2004. These studies applied different statistical methods to analyse data and different alternative variables to define the performance variable. For example, Al-Matari *et al. (*2012b) used a multiple regression method for data analysis and Tobin's Q to define the performance variable, while Hsu & Petchsakulwong (2010) used truncated a bootstrapped regression method for data analysis and DEA as the performance variable. In contrast, Mollah & Talukdar (2007) used the OLS regression model for data analysis and ROA, ROE and log of market capitalization (LnMktCap) as the performance variable.

The third group of studies finds no relationship between audit committee size and shareholder value. For example, using 276 non-financial firms listed on the Shanghai Stock Exchange and Shenzhen Stock Exchange, Wei (2007) finds an insignificant relationship between audit committee size and firms' financial performance, as measured by market-to-book, market-to-sales, ROA and gross profit margin (GPM) for the period 1999–2002. Similarly, Nuryanah & Islam (2011) and Mohd (2011) find the same result using, respectively, 315 listed Indonesian companies for the period 2002–2004 and 162 non-financial firms in Malaysia for the period 2006–2008. Both studies used the same proxy variable (ROA) for firms' financial performance. More recently, using a sample of 102 non-financial firms in Saudi Arabia in 2011, Ghabayen (2012) also finds no relationship between the size of the audit committee and firms' financial performance, as

measured by Tobin's Q. Finally, using 81 non-financial companies listed on the Muscat Security Market (MSM) in Oman for the period 2011–2012, Al-Matari *et al.* (2014) also failed to find a relationship between audit committee size and firms' financial performance, as measured by ROA.

3.3.7.3 Frequency of the audit committee meetings and shareholder value

Another attribute of the audit committee is its intensity of activity or the frequency of the audit committee meetings (Al-Marati *et al.*, 2014), which plays a vital role as an internal corporate governance mechanism. As with the other two attributes of the audit committee stated earlier, the frequency of the audit committee meetings also produces an inconclusive result regarding its effect on firms' financial performance.

The first strand of empirical studies (e.g. Kyereboah-Coleman, 2007; Khanchel, 2007; Kang & Kim, 2011) suggests a positive relationship between the number of the audit committee meetings and firms' financial performance. For example, employing a sample of 103 listed firms drawn from Ghana, South Africa, Nigeria and Kenya for the period 1997–2001, Kyereboah-Coleman (2007) suggests the frequency of the audit committee meetings positively affects Tobin's Q. The evidence, however, is not robust, as the study finds no relationship with accounting profitability. Along similar lines, several other empirical studies document confirmatory evidence that the frequency of the audit committee meetings positively affects firms' financial performance. For instance, Khanchel (2007), Kang & Kim (2011) and Alzeban (2015) reveal a positive link with the number of the audit committee meetings in the case of the 624 listed US non-financial firms for the period 1994–2003, 1,104 Korean non-financial firms listed on the Korean Stock Exchange for the period 2005–2007 and 159 Saudi companies listed on the Saudi Stock Exchange for the year 2013, respectively.

In contrast, the second group of studies finds a negative link between the audit committee meetings and firms' financial performance. For example, by using truncated bootstrapped regression, Hsu & Petchsakulwong (2010) examine the correlation between the frequency of the audit committee meetings and the performance of Thai public non-life insurance companies for the period 2000–2007. They find the frequency of the audit committee meetings negatively affects performance.

The third group of studies (e.g. Mohd *et al*., 2009; Mohd, 2011; Al-Matari *et al*., 2012b) finds no relationship between the number of the audit committee meetings and firms' financial performance. For example, using a sample of 162 Malaysian non-financial firms for the period 2006–2008, Mohd (2011) finds no association between the audit committee meetings and firms' performance, as measured by ROA. Al-Matari *et al.* (2012b) also find results consistent with Mohd (2011) in the case of 135 firms listed on the Saudi Stock Market for the year 2011.

The next section reviews the empirical literature on the relationship between internal corporate governance mechanisms and non-equity stakeholders.

3.4 REVIEW OF THE EMPIRICAL LITERATURE ON THE RELATIONSHIP BETWEEN INTERNAL CORPORATE GOVERNANCE MECHANISMS AND NON-EQUITY STAKEHOLDERS

In the earlier stages of the corporate governance concept, scholars and practitioners argued in favour of maximising shareholder value and preventing any philanthropic behaviour at the cost of corporate resources (Atanassov, 2013). More recently, however, a very considerable increase can be observed in firms becoming involved with socially responsible activities that concentrate unequivocally on caring for and protecting the interests of non-equity stakeholders (such as consumers, investors, suppliers, employees, communities, environment and so on) and those of shareholders beyond their opportunity cost to firms (Ricart *et al*., 2005; Spitzeck, 2009; Orlitzky *et al*., 2011; Jo & Harjoto, 2012; Atanassov, 2013). In essence, and as has been stated earlier, this debate intensifies when the stakeholder philosophy of corporate governance challenges the shareholder paradigm. A significant debate has been noticed over recent years among academics and practitioners as to what comprises the best corporate governance practices and how corporations can engage in the interests of non-equity stakeholders (Andreadakis, 2012). Companies can concentrate on the interests of non-equity stakeholders by adopting several internal corporate governance mechanisms beneficial to non-equity stakeholders. However, "less attention has been paid to concrete mechanisms for involving a wide array of stakeholders in firm governance and for using these mechanisms as a way of addressing the needs of diverse stakeholders within a strategy of corporate social responsibility (CSR)" (Ayuso *et al.*, 2014, p. 416).[21]

This section reviews the literature on how internal corporate governance mechanisms address non-equity stakeholders, particularly four key non-equity stakeholders associated with commercial banks: depositors, borrowers, employees and society. However, there is a paucity of research in relation to how internal corporate governance mechanisms account for depositors, borrowers, employees and society. Prior

[21] There are various definitions of CSR. For example, Friedman (1970) first defines CSR as follows: "CSR is to conduct the business in accordance with shareholders' desires, which generally will be to make as much money as possible while conforming to the basic rules of society, both those embodied in law and those embodied in ethical custom." "In essence, CSR can be viewed as an extension of firms' efforts to foster effective CG, ensuring firms' sustainability via sound business practices that promote accountability and transparency not only to shareholders but also to the greater society. …. Although, there are various definitions of CSR, it generally refers to serving people, communities, and the environment in ways that go above and beyond what is legally required" (Jo & Harjoto, 2012, p.54).

studies are limited to the relationship between corporate governance and CSR engagement. The present study, therefore, considers the CSR engagement of firms as a synonym for the non-equity stakeholder relationship.[22] Hence, the review on the relationship between two variables has been conducted based on the limited prior empirical evidence related to firms' CSR engagement.

3.4.1 Board Size and Non-Equity Stakeholders

In an empirical study, based on a small survey of the CSR engagement/activities of the boards of the 20 largest UK companies, Mackenzie (2007) suggests that board size positively affects firms' CSR activities. This result indicates that larger boards contribute to developing a good relationship with their non-equity stakeholders; consequently, a positive attitude is built among non-equity stakeholders towards the firms. The study, however, suffers from some significant drawbacks. First, the sample comprises the 20 largest companies, implying that the findings may not be representative for small or medium-sized companies. Second, the study is conducted entirely based on executive survey results. The survey answers from the executives may be overstated. As Mackenzie (2007) suggests:

> *"CSR activity is just window-dressing aimed at distracting attention from the real problems. Most of the board directors I have spoken to reject this criticism. They claim to be sincere in their desire to ensure that their companies behave responsibly in addressing the major social and environmental impacts associated with their business activities" (*p. 942).

Finally, the study concludes without applying any statistical model; rather, it is a qualitative analysis, and the interpretation of qualitative results may vary from case to case. Similarly, Esa & Ghazali (2012) support the finding that board size has a positive relationship with the extent of CSR activity, in their sample of 27 GLCs in Malaysia for the period 2005–2007. The study, however, fails to include most of the factors influencing CSR activity in Malaysian GLCs, as the regression model reports an R^2 of 33.9 percent.

[22]In fact, many prior studies have labelled the relationship with non-equity stakeholders as CSR engagement, which refers to serving the interests of customers, suppliers, employees, society, environment and so on.

Recently, using a sample of large South African listed corporations from 2002–2009 and a sample of large US commercial banks for the period 2009–2011, Ntim & Soobaroyen (2013) and Jizi *et al*. (2014) also argue that board size positively affects CSR index. However, these results may not be generalised for all kinds of corporations in the world as South African and US data may not be pertinent to other countries. Similarly, the actual attitude of corporate boards and owners towards CSR activities may not be reflected by the structural proxies used in these studies. The study conducted by Jizi *et al*. (2014) also offers evidence that board size has a significant positive effect on CSR disclosure by US commercial banks in the study period 2009–2011.

In contrast, taking a sample of 84 Botswanan and Malawian organisations, Lindgreen *et al*. (2010) document that the size of corporate boards does not significantly affect CSR disclosures. However, the study does not take into account actual corporate behaviour, i.e. objective indicators of CSR practices, such as the level of philanthropic donations or layoff practices. Moreover, the study relies on single respondents from organisations and does not incorporate informants from other stakeholder groups.

3.4.2 Sponsor-Directors' Shareholding and Non-Equity Stakeholders

Empirical findings offer conflicting evidence on the relationship between ownership by sponsor-directors and CSR engagement, the proxy for non-equity stakeholders. For instance, Florou (2008) offers positive evidence: in particular, a higher percentage of sponsor-directors' ownership and extended tenure are positively related to corporate policies and principles aimed at building relationships with non-stakeholders, such as the community and employee satisfaction. He contends that incumbent managers have an incentive to develop a relationship with non-equity stakeholders through enhanced CSR activities in order to ease the monitoring pressure from shareholders. Moreover, effective internal corporate governance mechanisms create managerial incentives to improve CSR activities. Similarly, Johnson & Greening (1999) find that senior management ownership has a positive effect on the environment and product quality, known as social performance. Further evidence supporting positive relationships lies in the findings of Jia & Zhang (2013). Using a sample consisting of all privately owned firms (528 firms) listed on the Shenzhen or Shanghai Stock Markets before 2006,

Jia & Zhang find that a higher proportion of managerial (sponsor-directors) ownership is related to a higher occurrence of donations and charity work.

By contrast, a large number of prior studies find a negative association between sponsor-director ownership and the extent of CSR activities. For example, using the sample of 87 non-financial companies in the Bursa Malaysia Composite Index for the financial year 2001, Ghazali (2007) finds that companies in which director owners hold a higher proportion of equity shares (owner-managed companies) disclose significantly less CSR information. Further evidence supporting Ghazali (2007) lies in the findings of Oh *et al*. (2011) that there is a negative association between shareholding by top managers (sponsor-directors) and CSR of a sample of 118 large Korean firms.

Similarly, based on data using a sample of the US publicly listed hotel, restaurant and casino firms at a corporate level and on an annual basis for the period 1995–2009, Paek *et al*. (2013) reveal a significant negative relationship between managerial ownership and employee relations, while the study finds that managerial ownership has an insignificant relationship with diversity, the community, the environment and products. The underlying argument is that when manager-owners possess more shares, they may consider the investment in CSR as being less likely to add value to their interests, instead seeing it as costly compared to the potential benefits for the shareholders and themselves (Ntim, 2013). Recently, Khan *et al*. (2013) also found a negative relationship between managerial (sponsor-director) ownership and CSR disclosures, using a sample of all 116 manufacturing companies listed on the Dhaka Stock Exchange in Bangladesh for the period 2005–2009. However, they find that such a relationship is significantly positive for export-oriented industries.

3.4.3 Institutional Shareholding and Non-Equity Stakeholders

The empirical evidence in relation to the effect of institutional shareholding on CSR engagement, the proxy for non-equity stakeholder, is conflicting. For instance, employing a sample of 118 large Korean firms for the year 2006, Oh *et al*. (2011) report that there is a positive relationship between large institutional ownership and CSR ratings. They offer two key explanations for these results. Firstly, institutional investors holding a significant amount of equity may divest their investment as the share price

reaches the bottom level (Pound, 1988), so there is no option to invest in CSR without a long-term vision. Secondly, socially irresponsible firms are exposed to a higher risk of regulatory action, legal punishment or consumer activism, which may be avoided by investing in CSR. There are, however, some key limitations of the study. Firstly, the study is conducted in the context of Korea; therefore, these results may not be representative of under-developed countries like Bangladesh. Secondly, the study uses cross-sectional data; thus, it is not possible to claim causation. Thirdly, the lack of longitudinal analysis means it is unable to explain the sustainability of the relationship between institutional ownership and CSR ratings. Finally, the study does not investigate the dynamic interactions between owners in terms of CSR. The results of Oh *et al*. (2011) support the evidence of Cox *et al*. (2004), who also find a positive relationship between the two variables, taking a sample consisting of all firms (678 firms) that have been indexed constituents in any quarter during 2001–2002.

There is much other evidence corroborating the positive relationship between institutional investors and CSR engagement, the proxy for non-equity stakeholders. For instance, Teoh & Shiu (1990) and Johnson & Greening (1999) show empirically that if institutional investors consider firms positively, they engage keenly in CSR. Graves & Waddock (1994) use a single value of the Kinder, Domini and Lydenberg (KDL) index and find that institutional ownership positively affects firms' CSR activities, concluding that their CSR involvement does not respond adversely to institutional investors. Sethi (2005) contends that when institutional investors take an investment decision, they are likely to consider the long-term effects of their investment on the environment, sustainability and good corporate citizenship. Similarly, Harjoto & Jo (2011) and Jo & Harjoto (2012) find a positive effect of institutional ownership on CSR.

The second strand of empirical research finds an insignificant or negative relationship between institutional ownership and CSR activities. For instance, Barnea & Rubin (2010) claim that institutional ownership negatively affects firms' CSR practices. Ntim & Soobaroyen (2013) find that firms with a high proportion of block and institutional shareholdings do not seriously consider CSR practices. These results support the arguments of the neo-institutional framework, which focuses on the efficiency and legitimate effects of CSR practices.

However, based on data from EIRIS for the year 2005, Dam & Scholtens (2012) conclude that institutional ownership is neutral in relation to firms' range of CSR engagement. The underlying argument in favour of this result is that institutional investors consider the costs and benefits of CSR thoroughly (Dam, 2008; McWilliams & Siegel, 2001). They also contend that the attitude and behaviour towards CSR activities can differ, because different types of shareholders have a different role in society. For example, financial institutions are intermediaries who manage risk and money on behalf of others; firms and employees have a predominantly strategic agenda; individuals (employees) are usually hampered by scale and informational disadvantages; and the state has to manage a wide range of (conflicting) goals. They also find insignificant support for the perception that firms adopted CSR policies intended to resolve conflict with institutional owners. Instead, other non-financial motives of owners appear to dominate (Dam & Scholtens, 2012).

3.4.4 General Public Shareholding and Non-Equity Stakeholders

There is quite limited academic research on the effect of general public ownership on CSR activities/engagement, the proxy for non-equity stakeholders. It is assumed that this pattern of ownership positively affects non-equity stakeholders or enhances CSR activities (Kiliç *et al.*, 2015) because, as ownership is highly diffused, shareholders' expectation and demand increases (Keim, 1978). Using content and panel data analysis for the period 2008–2012, Kiliç *et al.* (2015) find that diffused ownership significantly affects CSR reporting in the Turkish banking industry. Similarly, Li & Zhang (2010) examine the relationship between ownership structure and Chinese firms' social responsibility. The study bears out the results of Kiliç *et al.* (2015) that the dispersed corporate ownership of non-state-owned firms is positively related to CSR.

3.4.5 Independent Non-Executive Directors and Non-Equity Stakeholders

Existing empirical evidence suggests mixed results regarding the effect of independent non-executive directors on CSR engagement/activities. An overwhelming number of studies (e.g. Ibrahim & Angelidis, 1994; Zahra *et al*., 1993; Johnson & Greening, 1999; Hillman *et al*., 2001; Eng & Mak, 2003; Webb, 2004; Haniffa & Cooke, 2005; Lattemann *et al*., 2009; Jo & Harjoto, 2011, 2012; Michelon & Parbonetti,

2012; Ntim & Soobaroyen, 2013; Sharif & Rashid, 2014; Jizi *et al*., 2014) provide evidence of a positive relationship between independent non-executive directors and CSR disclosures. For example, taking a sample of large South African listed corporations for the period 2002–2009, Ntim & Soobaroyen (2013) find that an independent board with a higher number of non-executive directors is positively linked with a higher volume of CSR practices. Similarly, using a sample of all the commercial banks in Pakistan for the period 2005–2010, Sharif & Rashid (2014) find that there is a positive effect of the inclusion of non-executive directors on CSR reporting information (included activities relating to health, education, natural disasters, activities for employees, environmental issues, product/services/statements and other donations). The findings, however, can be criticised from different viewpoints. Firstly, the study fails to include the beneficiaries' perceptions of banks' CSR practices; rather, the data used in the study is only based on the annual reports of commercial banks, which may have been manipulated. Secondly, the findings may not be generalised for other financial (insurance, investment or leasing firms) sectors and non-financial sectors, since the study covers only the banking sector where firm-specific characteristics may be significant. Finally, these results have not been subjected to a robustness test.

Similar to Ntim & Soobaroyen (2013) and Sharif & Rashid (2014), Jizi *et al*. (2014) find evidence that boards consisting of a higher proportion of independent non-executive directors have a positive effect on CSR disclosure, by taking a sample of large US commercial banks for the period 2009–2011. This result indicates that board independence promotes both shareholders' and non-equity stakeholders' interests. Similarly, employing a sample of 116 manufacturing companies listed on the Dhaka Stock Exchange for the period 2005–2009, Khan *et al*. (2013) reveal that there is a positive association between board independence and the level of CSR disclosures. They presume a legitimate effect from independent non-executive directors on CSR disclosure.

By contrast, another group of researchers (e.g. Baysinger *et al*., 1991; Wang & Dewhirst, 1992; Zahra, 1996; McKendall *et al*., 1999; Chapple & Ucbasaran, 2007; Zhang *et al*., 2011) document evidence of either a negative or no relationship between independent non-executive directors and CSR activities. They suggest that independent non-executive directors do not have any role in CSR activities (Chapple & Ucbasaran,

2007) and environmental law violations (McKendall *et al*., 1999) and do not focus on non-equity stakeholders' interests. Baysinger *et al*. (1991) and Zahra (1996) find that independent outside directors have a negative role in investment on research and development (R&D) and corporate entrepreneurship, because they are inclined to focus less on strategic measures of company performance than inside directors. Their results substantiate the stewardship theory, which explains that independent non-executive directors concentrate on short-termism at the cost of long-term strategic vision. Hence, the inclusion of independent outside directors is a value-destructive policy for customer satisfaction. While Zhang *et al*. (2011) find outside independent directors do not have a significant effect on customer satisfaction.

3.4.6 CEOs' Compensation and Non-Equity Stakeholders

There is anecdotal and empirical evidence that the CEO is a key decision-maker in relation to the interests of non-equity stakeholders (Fabrizi *et al*., 2014). The overall empirical evidence on whether CEOs' compensation affects non-equity stakeholders is indecisive. For example, using a sample comprising 77 Canadian firms, Mahoney & Thorne (2006) examine the relationship between three key components of executive compensation (salary, bonuses and stock options), three different aspects of CSR (total CSR, CSR strengths and positive CSR) and CSR weaknesses (negative CSR). These results suggest that there are significant positive effects of (1) salary on CSR weaknesses, (2) bonuses on CSR strengths, (3) stock options on total CSR, and (4) stock options on CSR strengths. The study finds that the structure of executive compensation, particularly for larger Canadian firms, plays an important role in promoting socially responsible activities.

Contrary to this positive relationship, another group of studies (e.g. Stanwick & Stanwick, 2001; Coombs & Gilley, 2005; Russo & Harrison, 2005; Cai *et al*., 2011; Fabrizi *et al*., 2014; Rekker *et al*., 2014) finds that CEOs' compensation level is negatively associated with CSR engagement, the proxy for non-equity stakeholders. For example, using a large sample of US firms for the period 1996–2010, Cai *et al*. (2011) find that the lag of CSR has a negative effect on both total compensation and cash compensation. The study shows that an interquartile increase in CSR decreases total compensation by 4.35% and cash compensation by 2.78%. The study also finds that

CEOs' compensation inversely affects lagged employee relations. These results are robust, as the study produces the same results after addressing the endogeneity problem using the instrumental variable approach.

Similarly, Fabrizi *et al*. (2014) examine how CEOs' compensation, from both a financial and non-financial perspective, affects the CSR engagement, taking their sample of 597 US firms for the period 2005–2009. They find that both financial and non-financial compensation for CEOs has an effect on CSR practices. In particular, CEOs' financial compensation has a negative effect when aligned with shareholders' interests, and non-financial compensation makes a positive contribution towards CSR engagement. In the same vein, using the sample period 1996–2010, Rekker *et al*. (2014) examine the relationship between CEOs' compensation and CSR engagement by disaggregating both compensation and CSR engagement into their various sub-components, while also considering the impact of the market crisis and the relevance of gender. These results show that total compensation for CEOs plays a negative role in socially responsible firms. However, disaggregation of CSR engagement into its components makes a difference: specifically employee relations, the environment and diversity are relevant here. These results also suggest that the financial crisis and gender weakens the relationship between CSR engagement and CEOs' compensation.

3.4.7 Attributes of the Audit Committee and Non-Equity Stakeholders

There is also limited empirical literature in relation to the effect of several attributes of the audit committee on non-equity stakeholders. Most of the prior empirical research reports an association between the audit committee and CSR disclosure. For instance, using a sample of all 965Australian public companies listed on the ASX and included in Aspect DatAnalysis with a 30 June balance date in 2004, Kent & Stewart (2008) find that the link between the presence of the audit committee and the degree of disclosing CSR information is not statistically significant. However, the frequency of the audit committee meetings has a positive effect on the extent of CSR disclosure, while no evidence of a significant effect from the independent audit committee on the level of CSR disclosure is found. In the same way, using a sample of Malaysian publicly listed companies for the period January to December 2006, Said *et al*. (2009) reveal that there is a positive relationship between the audit committee and the extent of CSR

disclosure. Of most relevance to the present study, using a sample of 116 manufacturing companies listed on the Dhaka Stock Exchange in Bangladesh for the period 2005–2009, Khan *et al*. (2013) find that the presence of the audit committee has a positive effect on CSR disclosures. Recently, Jizi *et al*. (2014) further support the findings of Kent & Stewart (2008) and Said *et al*. (2009). Taking a sample of large US commercial banks for the period 2009–2011, they find that the frequency of the audit committee meetings has a significant relationship with CSR disclosure. This result is consistent with that of a previous study conducted by Lee *et al*. (2004), who suggest the audit committee meetings positively affect the reporting of firms' CSR practices, as it works to increase the attentiveness and efforts of the members of the audit committee towards CSR practices.

Employing a sample of 292 firms listed on Bursa Malaysia for the period 2006–2009, Madi (2012) suggests that an audit committee with a higher number of independent directors and also an audit committee formed solely of independent members make a significant contribution to a higher level of voluntary CSR disclosure. By this evidence, it seems fair to suggest that different attributes of the audit committee enhance the efficacy of the committee in their monitoring role, thereby mitigating the agency problems related to corporate disclosure practices.

3.5 SUMMARY OF THE CHAPTER

This chapter has discussed different theoretical frameworks of corporate governance, existing code of corporate governance for Bangladesh and reviewed the existing empirical literature related to corporate governance, shareholder value and non-equity stakeholders. Firstly, the chapter has discussed two main theories related to corporate governance, namely shareholder theory and stakeholder theory. In addition, a number of supporting theories in shareholder theory (e.g. agency theory, stewardship theory, resource dependence theory, information asymmetry theory and managerial signalling theory) have been discussed. These theories suggest a number of internal corporate governance mechanisms aimed at ensuring control and accountability in management to prevent corporate failures. In other words, these theories have explained the context of corporate governance from different perspectives and suggested controls, policies and guidelines that show corporations ways of achieving objectives to meet

shareholders' needs. Moreover, these theories provide theoretical insight into why some internal corporate governance mechanisms are related to shareholder value and stakeholder value.

Secondly, this chapter also has reviewed the code of corporate governance for Bangladesh that recommends a number of mechanisms aiming to ensure good corporate governance in the corporate sectors in Bangladesh.

Finally, the chapter has reviewed the prior empirical literature on internal corporate governance mechanisms and shareholder value. In particular, it has discussed the effect of internal corporate governance mechanisms on shareholder value, followed by the effect of internal corporate governance mechanisms on non-equity stakeholders. In this regard, and as has been stated before, this study finds that an enormous number of studies have aimed to establish that the shareholder model of corporate governance is the best model for firms. Therefore, these studies have examined the direct relationship between several internal corporate governance mechanisms and firms' financial performance, the proxy for shareholder value. Another strand of prior studies has attempted to establish that the stakeholder model of corporate governance is the best model for firms. In view of that, these studies have examined the direct relationship between several internal corporate governance mechanisms and corporate social responsibility, the proxy for non-equity stakeholders.

These three streams of prior empirical studies generate an important question: *what is the effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value?* It appears that no prior studies have examined the effect of non-equity stakeholders in the relationship between internal corporate governance mechanisms and firms' financial performance, which shows a clear empirical gap in the field of corporate governance. Furthermore, all the prior studies have used two types of approach, namely accounting return-based (e.g. ROA, or ROE) and market-based (e.g. Tobin's Q, market-to-book ratio and stock price) approaches, to measure firms' financial performance, as the proxy for shareholder value. As will be discussed in detail in chapter five, these two approaches do not reflect shareholder value correctly; rather a value-based approach (e.g. economic value added – EVA) more accurately reflects shareholder value. Thus, the rarity of empirical studies on the effect of

internal corporate governance mechanisms and value-based shareholder value represents another gap. This is because a value-based approach may offer empirically different results in relation to the effect of internal corporate governance mechanisms on shareholder value, which could be different from those for return-based and market-based approaches to shareholder value. This gap, therefore, leads to an opportunity to offer the first comparative results as regards shareholder value from three different points of view: accounting, market and value (or economic) approaches.

It is also evident from the above review of the theoretical and empirical literature that the corporate world is polarised as to which model should be employed to maximise shareholder value. This perspective points out a theoretical gap, which leads to an alternative model of corporate governance aiming to reduce the disagreement among the practitioners, academicians, researchers and firms.

It also appears that a number of prior empirical studies following stakeholder paradigm have examined the direct relationship between internal corporate governance mechanisms and non-equity stakeholder value, which involves serving the interests of customers, suppliers, employees, society, environment and others. The present study is related exclusively to banking firms, whose non-equity stakeholders are different from non-financial firms. For example, some of the key non-equity stakeholders of banking firms are depositors, borrowers, regulatory bodies (e.g. the central bank) and like others. Prior empirical studies related to banking firms also have not examined the effect of various internal corporate governance mechanisms on depositors, borrowers, employees and society. As such, the paucity of empirical evidence in relation to non-equity stakeholders and the relationship between various internal corporate governance mechanisms and shareholder value is evident throughout the review. Arguably, these theoretical and empirical gaps will offer an opportunity to make important contributions to the existing corporate governance literature. Also, these gaps will lead to the development of the conceptual framework and hypotheses of the present study.

The next chapter presents and discusses the conceptual framework used for this study and develops relevant hypotheses on which this study has been conducted.

CHAPTER FOUR

CONCEPTUAL FRAMEWORK AND DEVELOPMENT OF HYPOTHESES

4.0 OVERVIEW OF THE CHAPTER

This chapter focuses on the development of the conceptual framework and hypotheses on the basis of which this study has been conducted. Specifically, this chapter seeks to achieve four main objectives. Firstly, it attempts to provide an outline of how the current study is being conducted. Secondly, it seeks to explain the logical relationship between internal corporate governance mechanisms and shareholder value. Secondly, it aims to rationalise the possible relationship between internal corporate governance mechanisms and non-equity stakeholders. Finally, it seeks to justify the apparent relationship between non-equity stakeholders and shareholder value after controlling for the effect of internal corporate governance mechanisms. Altogether 19 hypotheses are developed to validate the relationships between the variables, with one attribute being examined under each hypothesis.

The remainder of this chapter is divided into three sections. Section 4.1 explains the conceptual framework derived from the gaps in the theoretical literature and the prior empirical evidence. Section 4.2 focuses on the development of hypotheses to examine the probable relationships between the chosen variables, and, finally, section 4.3 summarises the chapter.

4.1 PROPOSED CONCEPTUAL FRAMEWORK

The conceptual framework of this study is constructed based on the proposed corporate governance model, namely the “Non-Equity Stakeholder Model of Corporate Governance”. The model argues that the corporate governance model should be oriented to creating and protecting the values and interests of non-equity stakeholders (such as

customers, suppliers, employees, society, the environment and others) in order to maximise sustainable long-term shareholder value.

As has been pointed out, the shareholder model of corporate governance focuses on the governance systems and arrangements which ensure only shareholders' interests, known as "shareholder value". Accordingly, an enormous number of empirical studies examine the primacy of the shareholder model of corporate governance, wherein they postulate that the presence of various internal corporate governance mechanisms ensures maximum shareholder value. In contrast, the stakeholder model of corporate governance focuses on the governance systems and arrangements which ensure the interests of both equity stakeholders (shareholders) and non-equity stakeholders (such as employees, creditors, suppliers, customers, the community, the environment and so on), known as "stakeholder value." Accordingly, another group of researchers examine the primacy of the stakeholder model of corporate governance, in which they postulate that the presence of various internal corporate governance mechanisms ensures maximum stakeholder value. The corporate governance structure has, therefore, become polarised as regards whether the corporate governance arrangements should be oriented to shareholder value or stakeholder value.

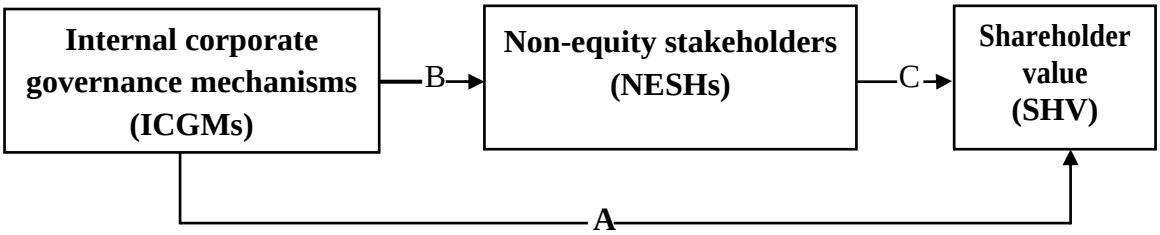

Figure 6: Non-equity stakeholder model of corporate governance for the relationship between ICGMs, SHV and NESHs

Given these contradictory orientations of the corporate governance model, the present study contends that the corporate governance model should not be oriented exclusively to shareholder value or stakeholder value. Instead, this study sheds light on a new premise, namely that corporate governance arrangements should focus on non-equity stakeholder value and interests. Grounded on this hypothesis, this study theorises an alternative model, namely the "Non-Equity Stakeholder Model of Corporate Governance", and subsequently conducts an empirical examination of how non-equity stakeholders influence the nature of the relationship between internal corporate

governance mechanisms and shareholder value in the banking sector in Bangladesh. This premise, therefore, hypothesises that there is no direct relationship between internal corporate governance mechanisms and shareholder value; rather, several internal corporate governance mechanisms primarily institute the relationship with non-equity stakeholders, which, in turn, influence shareholder value. According to the proposed model, the relationship between internal corporate governance mechanisms and shareholder value in the presence of non-equity stakeholders is predicted in Figure 6 above.

This study starts building the conceptual framework by establishing theoretically a direct relationship between internal corporate governance mechanisms and shareholder value (see relationship path A in Fig. 6). It then suggests a direct relationship between internal corporate governance mechanisms and non-equity stakeholders (see relationship path B in Fig. 6). Following this, it also suggests a relationship between internal corporate governance mechanisms and shareholder value through non-equity stakeholders (see relationship paths B and C in Fig. 6). This means that there is no direct relationship between internal corporate governance mechanisms and shareholder value; rather, non-equity stakeholders mediate the relationship.

The comprehensive conceptual framework proposed by this study is presented in detail in Figure 7, showing how the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value is examined. This framework includes three key variables. First are internal corporate governance mechanisms, referred to as independent variables in this study, which include the nine corporate governance mechanisms required in the "comply or explain" framework for listed banks in Bangladesh. These are board size, sponsor-directors' shareholding, institutional shareholding, general public shareholding, independent non-executive directors, CEOs' compensation, the presence of the independent audit committee, the size of the audit committee and the frequency of the audit committee meetings.

Second are non-equity stakeholders, referred to as the mediating variables in this study, which includes four non-equity stakeholders (i.e. depositors, borrowers, employees and society). Third is shareholder value, referred to as the dependent variable

in this study, as measured alternatively by “Return on Equity (ROE)”, “Tobin’s Q (TQ)” and “Economic Value Added (EVA)”. Moreover, there are also four control variables incorporated into this framework, namely firm size, firm age, asset tangibility and gearing.

In order to examine the mediating effects of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value, this study follows Baron & Kenny’s (1986) “three-step approach” (discussed in subsection 5.3.4 in chapter five), which requires uncovering the three types of relationship as follows.

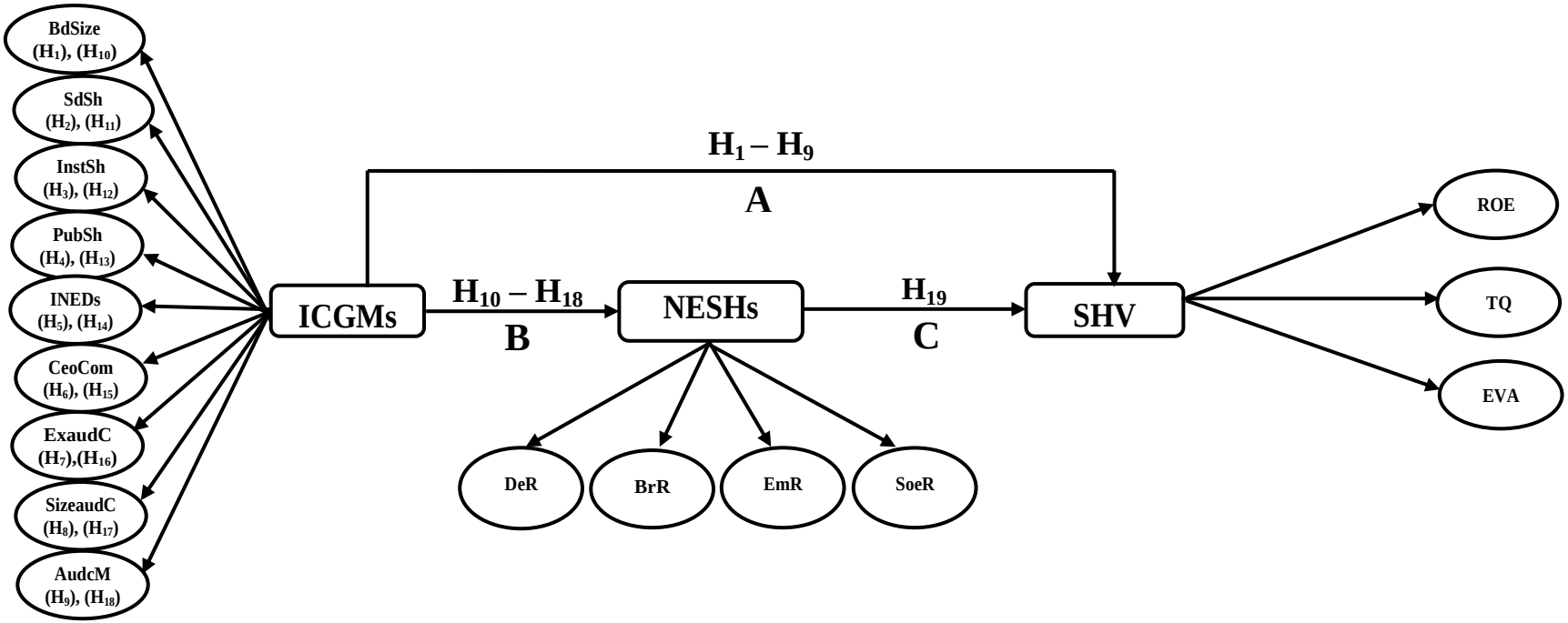

Figure 7: Comprehensive form of the conceptual framework exhibiting how the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value is examined

(*Notes:* **ICGMs** stands for internal corporate governance mechanisms, which are the independent variables, including: (1) BdSize = board size, (2) SdSh = sponsor-directors' shareholding, (3) InstSh = institutional shareholding, (4) PubSh = general public shareholding, (5) INEDs = independent non-executive directors, (6) CeoCom = CEOs' compensation, (7) ExaudC = presence of independent audit committee, (8) SizeaudC = size of audit committee, (9) AudcM = frequency of the audit committee meetings. **NESHs** stands for non-equity stakeholders, which are the mediating variables include (1) DeR= depositors, (2) BrR= borrowers, (3) EmR= employees and (4) SoeR= society. **SHV** stands for shareholder value, which is the dependent variable measured alternatively by (1) ROE = return on equity, (2) TQ = Tobin's Q and (3) EVA = economic value added. *H* indicates hypothesis, and, finally, A, B and C indicate the relationship paths between variables.)

Firstly, the direct relationship between ICGMs and SHV (see relationship path A in Fig. 7): since this study examines nine ICGMs, nine distinctive hypotheses (H_1-H_9) will be examined in isolation, to observe the relationship between each ICGM with SHV. Secondly, the direct relationship of each ICGM with NESHs in isolation (see relationship path B in Fig. 7): thus, nine additional separate hypotheses (H_{10}-H_{18}) will also be examined to reveal the relationship between each ICGM and NESHs. Finally, this study will examine the relationship between NESHs and SHV, after controlling for the effect of ICGMs (see relationship path C in Fig. 7): thus, one further hypothesis (H_{19}) will be tested. This study will also determine the relationships between some firm-specific/control variables and SHV.

The probable relationship between the variables illustrated in Figure 7 is explained in the context of the banking sector in Bangladesh. The model demonstrates that the internal corporate governance mechanisms of banks establish a set of relationships with depositors, borrowers, employees and society and thus affect shareholder value. For example, by far the prevalent source of banks' funds is customers' deposits, money that account-holders keep in a bank, typically known as "core deposits". Account-holders deposit their savings in the banks for safekeeping and to earn interest. The presence of good internal corporate governance mechanisms enables banks trouble-free access to the depositors' funds by guaranteeing to give savings back on time. This means that if banks want to increase the volume of "core deposits", they need to assure depositors that they will give their savings back on demand. This assurance for the depositors is essential from the current perspective of the banking sector in Bangladesh. This is because, and as has been stated before, many state-owned and private banks in Bangladesh have been involved in irregularities, and there has been no improvement in the situation. The current banking crisis in Bangladesh caused by these irregularities has shaken the confidence of depositors (Khaled, 2019). They are now worried about the weak corporate governance in the banking sector in Bangladesh, which makes them reluctant to deposit their savings with banks and so the volume of deposits is falling. The slow growth of deposits and sluggish recovery of loans has increased the liquidity crunch in the banking sector in Bangladesh (Uddin, 2019) which has presented a crisis in trust among depositors about the return of their savings. Although there is a safety net, which ensures that depositors, and sometimes all bank creditors, are given their money back by

the central bank of the country, this assurance is only applicable if banks go into liquidation.

Depositors also expect fair contractual terms and several other common facilities from banks, including quality customer service, convenient ATM service with low or no fees, free balance checking, direct debits, low fees/charges, convenient transaction hours and a harmonious relationship with their bank. A sustainable depositors-bank relationship, which is indispensable, can be achieved by fulfilling depositors' expectations and this can be confirmed by internal corporate governance mechanisms which support depositors. This is because these mechanisms enable them to establish control over banks' management and ensure its accountability and transparency. Control, accountability, and transparency in banking activities result in more effective bank management, which eventually boosts depositors' confidence. Good internal corporate governance mechanisms also assist in controlling fraudulent activities and ensure the prudent use of funds, resulting in reduced operating costs. Consequently, banks can offer a higher rate of interest on "core deposits" to attract depositors, and thereby increase their volume of funds. Adequate funding reduces liquidity risks and leads banks to offer a higher volume of loans to borrowers or to invest in profitable projects, thereby improving banks' financial performance, the proxy for shareholder value.

The key source of income of a bank is the interest charged on the loans and advances granted to different kinds of borrowers, such as industrialists, traders and individual consumers. However, banks also earn significant amounts of non-interest related income from customers for a range of financial and non-financial services. Traditional banking theory suggests that the probability of loan default is one of the key factors in bank loan terms (Francis *et al*., 2012). The agency risk and asymmetric information risk between bank management and outside stakeholders increase the risk of default (Bhojraj & Sengupta, 2003), which results in high-interest rates and rigorous non-price loan terms (Rajan & Winton, 1995).

As has been stated in subsection 2.2.1 in chapter 2, the banking sector in Bangladesh is characterised by a very high number of loan defaults, high-interest rates, high agency problems and many other irregularities related to loans and advances. Up to the end of 2018, total non-performing loans (NPL) in the banking sector in Bangladesh

are BDT 9,337 million, which accounts for 10.50% of the total loans provided (Bangladesh Bank, 2018). The NPL of state-owned commercial banks (SCBs) is 28.2% to the end of the financial year 2017–18 (ibid). A number of loan scams and heists have caused this volume of NPL (see Appendix 1). Moreover, political influence in appointing directors to the board is common in the banking sector in Bangladesh. These political appointments create serious agency problems between bank management and shareholders. They also play a vital role in granting loans to fake companies, which leads to NPL (Rahman, 2014).

Several internal corporate governance mechanisms may act as a tool to minimise agency risk and asymmetric information risk, thereby reducing interest rates and easing the terms of loans and advances. For example, agency risk can be reduced by including "independent non-executive directors" on the board, one of the internal corporate governance mechanisms, to ensure the independence of the board, which is expected to pass fair and unbiased judgment. Similarly, splitting the roles of the CEO and Chairperson, another internal corporate governance mechanism, may help to increase accountability and controllability in functions, through adequate checks and balances on managerial activities. These attributes of the dual role mechanism may then reduce the entrenchment of CEOs, thereby reducing agency risk. Also, by adopting the code of good corporate governance, a bank could credibly provide a *signal* about its quality and transparency to prospective borrowers which asserts that it is better governed, and this minimises the asymmetric information risk. In addition, several other internal corporate governance mechanisms, such as board size, an independent audit committee, multiple directorships and the tenure of the directors, may also help banks to reduce loan prices and ease non-price credit terms. The sound governance structure of banks, therefore, may attract borrowers to enjoy loan opportunities at a reasonable interest rate and with pragmatic and favourable credit terms. Consequently, the borrower base may increase, resulting in a higher volume of income from loans and advances, so that banks can enhance their financial performance, the proxy for shareholder value.

There is a high degree of reciprocal dependency between banks and their employees (managers and non-managers). The success of banks depends to a great extent on the loyalty of employees, while they, in turn, depend on banks for their current and

future earnings or other benefits, for job security and satisfaction, for their overall employment prospects and motivation. There is an agency relationship between corporate management and shareholders, as corporate ownership is separated from its control. As has been explained earlier, the agency relationship may cause agency problems when the management, or any individual(s) in the management, behaves opportunistically by emphasising their personal goals and interests over those of shareholders. This opportunistic attitude of management could cause internal inefficiencies, due to a lack of goal congruence or an information asymmetry between management and shareholders, which results in a reduction of shareholder value.

The presence of sound internal corporate governance mechanisms may reduce agency problems by aligning the interests of management with those of shareholders, thereby increasing firms' financial performance, the proxy for shareholder value. For example, "independent non-executive directors", "independent auditors" or, in certain circumstances, other external agents may be deployed as trustees, making an effective bridge between the management and shareholders in order to align both parties' interests. Also, the presence of good internal corporate governance mechanisms may strongly motivate bank employees by ensuring an excellent working environment and security of service, as well as providing the optimum level of benefits, which help in enhancing productivity and increasing employees' commitment, thereby lowering employee turnover and absenteeism. Moreover, the presence of a sound corporate governance structure in a bank improves its reputation in society, and the employees who work in that bank also make themselves known in the society as the employees of that highly reputed bank. This realisation eventually makes employees dedicated to their responsibilities and committed to their banks, which positively affects their productivity, thereby increasing banks' financial performance, the proxy for shareholder value.

Along similar lines, sound internal corporate governance mechanisms stimulate banks' social commitment, protecting the interests of shareholders against any future community-related crisis by encouraging management to invest sensibly in the development of the community (Lin *et al*., 2015). Moreover, internal corporate governance mechanisms may persuade a bank to be proactive with regard to social issues and ensure compliance with social policies and laws. Otherwise, contraventions of social

policies and legislation can have disastrous consequences, such as penalties and sanctions on banks, thereby reducing shareholder value. In addition, banks' commitment to social development creates a good image for banks and, hence, enhances the social reputation of banks, which contributes positively to changing the attitudes of borrowers, depositors, employees, governments, pressure groups and others, thereby increasing banks' financial performance, the proxy for shareholder value.

The next section focuses on the development of relevant hypotheses to examine the relationship between internal corporate governance mechanisms, shareholder value and non-equity stakeholders.

4.2 DEVELOPMENT OF HYPOTHESES

This section focuses on the development of relevant hypotheses to examine the key three relationships in accordance with the Baron & Kenny's (1986) "three-step approach", to assess the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. First, the relationships between internal corporate governance mechanisms and shareholder value are hypothesised, second, the relationships between internal corporate governance mechanisms and non-equity stakeholders, and finally, the relationships between non-equity stakeholders and shareholder value after controlling for the effect of internal corporate governance mechanisms. The development of hypotheses is guided by the theoretical and empirical arguments presented in the following subsections.

4.2.1 Internal Corporate Governance Mechanisms and Shareholder Value

This study first examines the relationships between shareholder value and the nine internal corporate governance mechanisms required in the "comply or explain" framework for listed banking firms in Bangladesh. Internal corporate governance mechanisms being examined in this study are board size, sponsor-directors' shareholding, institutional shareholding, general public shareholding, independent non-executive directors, CEOs' compensation, independent audit committee, size of the audit committee and frequency of the audit committee meetings. Therefore, nine hypotheses (H_1-H_9) are to be tested to observe the effect of each internal corporate governance mechanism on shareholder value in isolation.

4.2.1.1 Board size and shareholder value

As has been discussed earlier, there has been an inconclusive debate about the optimal board size and its effect on shareholder value. Different and contrasting theoretical frameworks, including agency theory, organisational theory and resource dependence theory exist in the current literature to support both larger and smaller boards.

Agency theory concludes that a smaller board is effective for boosting shareholder value, rather than a larger board (Lipton & Losrch, 1992; Jensen, 1993;

Sonnenfeld, 2002). The underlying reason for the effectiveness of a smaller board is multifaceted. Firstly, a smaller board consumes fewer financial resources (e.g. remuneration and other financial benefits) and non-financial resources, such as executive replacement costs (Borokhovich *et al*., 2006), avoids slow decision-making costs (Lipton & Lorsch, 1992) and reduces the high costs related to monitoring and controlling the bigger board (Haniffa & Hudaib, 2006). Secondly, it is easier to coordinate the board members leading to reduced agency problems (Yawson, 2006). As a corollary, all board members can contribute unequivocally and present their thoughts and ideas consistently in effective decision-making and, in so doing, enhance operating efficiency (Lipton & Lorsch, 1992; Jensen, 1993; Yermack, 1996). Organisational theory lends support to agency theory and posits that members of smaller boards become more effective as the associated advantages of coordination are likely to outweigh the benefits gained from the talent of members of a smaller board (Pfeffer, 1973).

In contrast, resource dependency theory contends that a larger board will probably be effective in enhancing shareholder value (e.g. John & Senbet, 1998; Yawson, 2006). The underlying reasons are also manifold. Firstly, a larger board offers greater access to the external business environment and also brings knowledge, diversified skills, business contacts and wider perspectives, experience and intellect to the board, thereby reducing uncertainties and offering the best opportunity to secure critical corporate resources (Pearce & Zahra, 1992; Goodstein *et al*., 1994; Haniffa & Coke, 2005; Haniffa & Hudaib, 2006; Mollah *et al*., 2012). Secondly, an increasing amount of information, solutions, strategies and critical judgment can be gained from the members of a larger board; consequently, a firm's problem-solving capacity may increase, resulting in better financial performance (Haleblian & Finklestein, 1993). Thirdly, a larger board develops a corporate knowledge base, which augments the managerial ability to make not only the most important, but also the best, business decisions (Yawson, 2006). Finally, boards with a large number of members may enhance corporate financial performance, because board members may have widespread social and professional networks, which may facilitate to added value for the resources of the firms (Setia-Atmaja *et al*., 2009).

As has been observed in subsection 3.3.1 of chapter 3, prior empirical studies have yielded inconclusive evidence, variously establishing a positive relation, a negative

relation, a concave relation or no relation between board size and shareholder value (e.g. Andres & Vallelado, 2008; Adams & Mehran, 2012). For example, a vast number of empirical studies claim that a smaller size of board is more effective in monitoring, controlling and administering a firm; consequently, firms demonstrate better financial performance, the proxy for shareholder value (e.g. Huther, 1997; Vafeas, 1999; Dahya *et al*., 2002; Cheng, 2008; Cheng *et al*., 2008; Coles *et al*., 2008; Eisenberg *et al*., 1998; Loderer & Peyer, 2002; Hermalin & Weisbach, 2003; Bozec, 2005; Mak & Kusnadi, 2005; Haniffa & Hudaib, 2006; Staikouras *et al*., 2007; Guest, 2009; Ntim, 2009; Ahmed, 2010; Elsayed, 2011; Kumar & Singh, 2013; Pathan & Faff, 2013; Farhat, 2014).

By contrast, a significant number of prior empirical studies demonstrate a positive relationship between board size and firms' financial performance, the proxy for shareholder value (e.g. Dalton *et al*., 1999; Adams & Mehran, 2005; Romano & Guerrini, 2014; Gaur *et al*., 2015; Beiner *et al*., 2006; Henry, 2008; Pathan, 2009; Muttakin, 2012; Rouf, 2012; Al-Amarneh, 2014; Farhat, 2014; Nath *et al.*, 2015; Muttakin & Ullah, 2012). Meanwhile, the third group of researchers argues that board size refers only to the number of directors on the board, and this might not be correlated with firms' financial performance, the proxy for shareholder value (e.g. Yammeesri & Herath, 2010; Al-Saidi, 2010; Ştefănescu, 2011; Dedu & Chitan, 2013; Farhat, 2014). Thus, the first hypothesis being tested in this study is that:

H_1: There is a statistically significant relationship between board size and shareholder value, as measured by ROE, TQ and EVA.

4.2.1.2 Sponsor-directors' shareholding and shareholder value

The proportion of sponsor-directors' shareholding is one of the key internal corporate governance mechanisms that can be used to reduce agency problems (Carrillo, 2007; Ntim, 2009). Three contrasting theoretical perspectives, namely the incentive alignment, entrenchment, and agency hypotheses, explain the possible effects of sponsor-directors' ownership on shareholder value (Ntim, 2009; Mollah *et al*., 2012).

The incentive alignment hypothesis asserts that sponsor-directors owning a high percentage of equity shares may lead to increased financial performance, as it reduces the

conflict of interests between sponsor-directors and other equity owners (Jensen & Meckling, 1976; Fama, 1980; Jensen, 1993). Sponsor-directors who own a large number of shares contribute to condensing the agency problem, reducing the conflicts of interests in different ways. For instance, sponsor-directors owning a large number of shares have an additional incentive to monitor managerial activities vigorously (Ntim, 2009; Arouri *et al*., 2014). They also contribute to the board by providing better judgment, based on the inside information they hold (Mollah *et al*., 2012). In addition, they are able to influence the appointment of the members of the board and thereby reduce the presence of non-executive directors, which reduces agency costs and enhances firms' financial performance (Belkhir, 2009). Moreover, they typically have a long-term attachment with firms, which leads to them combining ownership and control and reduces moral hazards; this, in turn, leads to better financial performance (Anderson & Reeb, 2003).

In contrast, the entrenchment hypothesis argues that a higher proportion of sponsor-directors' shareholding creates high levels of agency problems between shareholders and managers (Demsetz, 1983; Fama & Jensen, 1983), thereby diminishing firms' financial performance. This is because directors pay attention to maximising their incentives and may exploit opportunities in favour of their family benefits at the cost of shareholders' interests. A positive relationship is expected between sponsor-directors' shareholding and firms' performance, if sponsor-directors' shareholding rejects the incentive alignment hypotheses and if this relationship also rejects the agency hypothesis; if not, it rejects the entrenchment hypothesis (Mollah *et al*., 2012).

As with the conflicting nature of the theoretical literature, the empirical literature also presents inconsistent evidence on the relationship between the proportion of sponsor-directors' shareholding and shareholder value. One group of researchers (e.g. Kaplan & Minton, 1994; Mehran, 1995; Welch, 2003; Wruck, 1988; Gorton & Schmid, 1996; Hiraki *et al*., 2003; Krivogorsky, 2006; Kapopoulos & Lazaretou, 2007; Mangena & Tauringana, 2008; Chu, 2011; Arouri *et al*., 2014) suggests a positive relationship between the proportion of sponsor-directors' shareholding and firms' financial performance, the proxy for shareholder value. Another strand of research (e.g. Demsetz & Lehn, 1985; Agrawal & Mandelker, 1990; Loderer & Martin, 1997; Himmelberg *et al*., 1999; Lehmann & Weigand, 2000; Weir *et al*., 2002; Cronqvist & Nilsson, 2003;

Tam & Tan, 2007; Oreland, 2007; Ahmed, 2010; Mollah *et al*., 2012) find the proportion of sponsor-directors' shareholding has a negative relationship with shareholder value.

Of particular importance to this study, using data from 30 listed banks on the Dhaka Stock Exchange, Muttakin & Ullah (2012) present evidence to show that sponsor-directors' ownership (managerial ownership) seems to be detrimental to a bank's financial performance (measured by ROA), since it creates managerial entrenchment and opportunities for the misallocation of firms' resources at the expense of shareholder value. This finding supports that of Imam & Malik (2007) and Farooque *et al*. (2010), who suggest the association between firms' financial performance and sponsor-directors' ownership is negative for non-financial Bangladeshi firms. Therefore, the second hypothesis being tested in this study is that:

H_2: There is a statistically significant relationship between sponsor-directors' shareholding and shareholder value, as measured by ROE, TQ and EVA.

4.2.1.3 Institutional shareholding and shareholder value

Conflicting theoretical frameworks, such as agency theory, financial theory, signalling theory and the strategic alignment hypothesis, lay bare the correlation between institutional shareholding and firms' financial performance, the proxy for shareholder value.

According to agency theory, by holding a significant number of equity shares, institutional investors can reduce agency costs, thereby maximising shareholder value. The underlying arguments are that institutional investors perform a surveillance role (Sánchez-Ballesta & García-Meca, 2007) and also play a key role in monitoring firms effectively (Jensen, 1986; Pound, 1988; Tong & Ning, 2004; Ozkan, 2006). They are able to exercise enough pressure on corporate management to alter the governance structure and firms' course of actions in the long-term interests of shareholders (Holderness & Sheehan, 1988; Elyasiani & Jia, 2010) or execute restructuring strategies that are favourable to all shareholders (Bethel & Liebeskind, 1993); they may also be susceptible to rejecting counterproductive strategies while supporting those that are more productive (Holderness & Sheehan, 1988; Hill & Snell, 1988; Bethel & Liebeskind, 1993).

Financial theory shares the similar premise of agency theory, that institutional ownership can enhance the managerial monitoring role from a corporate governance perspective, and thus helps to take strategic decisions which add value and result in improvements in firms' financial performance (Tsai & Gu, 2007). This is because they may pursue effective corporate management decisions by performing an effective monitoring role with collective capacity in the corporate governance arena. These instances create an economic incentive for informed behaviour and present an opportunity for active shareholders to influence corporate policy and performance (Bhattacharya & Graham, 2009). Also, institutional shareholders might act as a means for transmitting information to other shareholders consistent with the philosophy of signalling theory (Chidambaran & John, 2000; Gillan & Starks, 2002). The theory argues that economies of scale in collecting and processing corporate information and effective monitoring are the possible ways of mitigating the problem of asymmetric information and related agency problems (Attig *et al*., 2012; Jafarinejad *et al*., 2015).

On the contrary, the strategic alignment hypothesis postulates an adverse effect on shareholder value from institutional investors, and this based on two assumptions. Firstly, institutional investors may have a passive responsibility in corporate management, given the fact that they may treat themselves as short-term investors, who are not interested in gaining long-term benefits from firms. This attitude reduces their motivation to influence the governance of firms (Pound, 1988; Elyasiani & Jia, 2010; Ruiz-Mallorquí & Santana-Martín, 2011), which may negatively affect firms' financial performance. Secondly, there may be collusion between some of the institutional shareholders and corporate management to expropriate the rights of the dispersed small shareholders, which may be considered to be siding with managers (Brickley *et al*., 1988; Cornett *et al*., 2007). Thus, the role of institutional investors is expected to have a negative influence on firms' financial performance based on the strategic alignment hypothesis (Al-Najjar, 2015).

As has been stated in subsection 3.3.3 of chapter 3, there has been inconclusive empirical evidence about the relationship between institutional ownership and shareholder value. One group of researchers (e.g. McConnell & Servaes, 1990; Nesbitt, 1994; Smith, 1996; Steiner, 1996; Black, 1998; Xu & Wang, 1999; Clay, 2001; Tsai & Gu, 2007; Cornett *et al*., 2007; Attig *et al*., 2012; Al-Najjar, 2015) reports a statistically

significant positive effect of institutional ownership on shareholder value. In contrast, Mollah *et al*. (2012) find that institutional ownership is negatively related to shareholder value. Therefore, the third hypothesis being tested in this study is that:

> H_3: There is a statistically significant relationship between institutional shareholding and shareholder value, as measured by ROE, TQ and EVA.

4.2.1.4 General public shareholding and shareholder value

Theoretically, the relationship between general public shareholding and shareholder value can be explained using agency theory. As has been noted earlier, general public ownership is considered as a dispersed pattern of ownership, as their individual volume of shares is low compared to the total number of a firm's shares. In a large firm, this type of ownership may potentially create free-rider problems, insofar as it deters direct managerial supervision by shareholders (Grossman & Hart, 1980). Moreover, being a small part of a firm's ownership, dispersed shareholders do not have an incentive to supervise their benefits individually or jointly on behalf of all, and they are not individually in a position to dominate firms' decision making. Consequently, managers might have the discretion to pursue their personal goals rather than those of shareholders (Babatunde & Olaniran, 2009). Thus, a conflict of interests between managers and shareholders is very likely due to differences in the presumed incentives they expect: the former are essentially not looking to maximise profits on behalf of the latter (Leech & Leahy, 1991). The conflict between management and the minority shareholders poses an agency problem, and, because of this problem, firms' financial performance, the proxy for shareholder value, are affected negatively.

As has been pointed out in subsection 3.3.4 of chapter 3, there has been inconclusive empirical evidence about the relationship between the proportion of general public equity ownership and shareholder value. For example, Leech & Leahy (1991) and Mollah *et al.* (2012) find a positive relationship, while Demsetz & Lehn (1985) and Dwivedi & Jain (2002) find a negative relationship. Therefore, the fourth hypothesis being tested in this study is that:

> H_4: There is a statistically significant relationship between general public shareholding and shareholder value, as measured by ROE, TQ and EVA.

4.2.1.5 Independent non-executive directors and shareholder value

Four main theoretical arguments can be advanced to elucidate the relationship between independent non-executive directors and shareholder value. These include agency theory, resource dependency theory, information asymmetry and signalling theory, and stewardship theory.

According to agency theory, separating ownership from the control of firms potentially leads to self-interested activities by corporate management (Jensen & Meckling, 1976), and corporate boards dominated by insider executive directors are less likely to be accountable to shareholders (Fama, 1980). Meanwhile, boards comprising a higher proportion of independent non-executive directors may theoretically bring about better financial performance (Jensen & Meckling, 1976; Walsh & Seward, 1990; Shleifer & Vishny, 1997). There are three likely explanations for better financial performance arising from the inclusion of independent non-executive directors on the board. Firstly, they bring unprejudiced judgment to board decisions (Cadbury, 1992; Chhaochharia & Grinstein, 2009). Secondly, they share experience and expertise that may facilitate business relations and enhance the good image of the firms (Haniffa & Hudaib, 2006). Finally, their presumed independence and unprejudiced attitudes help them to avoid politeness and courtesy to the detriment of truth, openness and constructive criticism of insider executive directors in the boardroom, without fear of unfair treatment (Jensen, 1993).

Resource dependency theory also supports a positive association between the two variables. It focuses on the advantages of the social network, or ties, of the independent non-executive directors, who are viewed as a way to expand a firm's boundaries (Boyd, 1990; Peng, 2004). The theory considers independent directors as boundary spanners because they extract resources from the external environment (Pfeffer, 1972). The theory also predicts that firms' performance may be improved by the inclusion of independent non-executive directors on the board, as they are expected to have links with other institutions. This link may facilitate access to critical resources, such as experience, expertise, business contacts and reputation, which may be exploited by the insider executive directors to increase profitability (Nohria, 1994; Hansen, 1999; Carpenter & Westphal, 2001; Haniffa & Hudaib, 2006; Luan & Tang, 2007).

In the same way, information asymmetry & signalling theory suggests that the appointment of independent non-executive directors facilitates a reduction in information asymmetry by possibly signalling insiders' intent to satisfy outsiders or potential investors fairly, and by inference, protecting their investment (Black *et al*., 2006). Their inclusion on the board indicates a high level of corporate financial transparency and better corporate governance, which help to build the confidence of potential investors with more transparent financial statements (Bushman & Smith, 2003; Eng & Mak, 2003; Gul & Leung, 2004). Consequently, it would be easier for firms to acquire more resources from a market, which can be used to achieve a higher volume of corporate profits under the effective monitoring of independent non-executive directors (Luan & Tang, 2007).

By contrast, stewardship theory takes the view that outside independent non-executive directors are not crucial to, or supportive of, a firm's growth. Rather, boards dominated by such directors may negatively affect a firm's financial performance (Weir & Laing, 2000; Bozec, 2005). In fact, they do not enjoy a similar ability to access internal sources of information and knowledge that leads them not to realise the complexities of firms. This limitation is intensified by the fact that independent non-executive directors are typically part-timers, who are also members of other companies' boards (Jiraporn *et al*., 2008), which leaves them with little time to engage in a firm (Ntim, 2009). Consequently, decisions made by a board dominated by independent non-executive directors may be of lower quality, and this may, in turn, cause lower financial performance (Weir & Laing, 2000; Luan & Tang, 2007).

Consistent with the conflicted nature of the theoretical literature, previous empirical studies also yield inconclusive evidence regarding the relationship between the proportion of independent non-executive directors and firms' financial performance, the proxy for shareholder value. One strand of previous empirical studies (e.g. Luan & Tang, 2007; Ravina & Sapienza, 2010; Pombo & Gutiérrez, 2011; Rouf, 2012; Muttakin, 2012; Wang & Lee, 2014; Liu *et al*., 2014; Giráldez & Hurtado, 2014; Chen, 2014; Obradovich *et al*., 2014; Sobhan, 2014; Farhat, 2014) reveals that boards with a higher number of independent non-executive directors enhance shareholder value. In contrast, many previous studies refute the arguments for the inclusion of independent non-executive

directors on the board and oppose their engagement with insider activities. For example, Chang *et al*. (2012), Volonté (2015) and Terjesen *et al*. (2015), amongst others, suggest that independent non-executive directors do not add value to shareholder wealth. Therefore, the fifth relevant hypothesis being tested in this study is that:

> H_5: There is a statistically significant relationship between independent non-executive directors and shareholder value, as measured by ROE, TQ and EVA.

4.2.1.6 CEOs' compensation and shareholder value

The relationship between CEOs' compensation and shareholder value can be explained with the help of several theoretical premises, including agency theory, motivation theory and stewardship theory.

Agency theory suggests many mechanisms of corporate governance, including CEOs' compensation (Ratneser, 2000). The theory suggests that connecting CEOs' or executive compensation to corporate performance can lessen agency problems by aligning CEOs' interests with those of owners (Jensen & Meckling, 1976; Murphy, 1985). Specifically, CEOs' compensation requires correlation with the total return to shareholders, typically through ownership of firms' stock or options on firms' stock (Kakabadse & Kakabadse, 2004). Therefore, CEOs' compensation is expected to enhance firms' financial performance, as this mechanism aligns interests that persuade CEOs to take actions to optimise shareholder returns. However, differences in corporate governance systems in different economic regions may influence the degree of effectiveness of this mechanism (Unite *et al*., 2008).

Management theorists also share a parallel premise with agency theory that suggests social-psychological paradigms which recognise extrinsic motivation. Under the extrinsic motivation approach (broadly, agency), pay is considered to be a key motivation and control mechanism, by making it dependent on performance (Jobome, 2006). This approach is supported by "Theory X", which argues that individuals may be motivated by money (McGregor, 1960), suggesting a positive relationship between CEOs' compensation and firms' financial performance.

In contrast, according to the intrinsic motivation view, executives are inherently motivated. This means that a high level of compensation or pay incentive will not necessarily induce them to perform better (Jobome, 2006). This point of view is substantiated by "Theory Y", which argues that individuals become motivated by a need for meaning, esteem and self-actualisation. They are honest and self-directed in the service of the objectives they are committed to (McGregor, 1960). "A stewardship type model is, therefore, more relevant here; it assumes an environment of trust, and managers that are committed to organisational goals, who do not necessarily face conflicts of interest, and who can, therefore, be trusted not to indulge in pay excesses" (Jobome, 2006, p. 333), suggesting an insignificant or no relationship between CEOs' compensation and firms' financial performance.

Along the lines of theoretical literature, prior empirical studies also provide inconclusive evidence on the relationship between CEOs' compensation and shareholder value. For example, one strand of researchers (e.g. Jensen & Murphy, 1990; Murphy, 1985; Rosen, 1990; Barro & Barro, 1990; Joskow *et al*., 1993; Houston & James, 1995; Rose & Shepard, 1994; Kato & Kubo, 2006; Merhebi *et al*., 2006; Firth *et al*., 2006; Farmer *et al*., 2013; Ramadan, 2013; Lee & Isa, 2015) finds a positive relationship between CEOs' compensation and firms' financial performance, the proxy for shareholder value. In contrast, Brick *et al*. (2006), Abdullah (2006) and Basu *et al*. (2007), amongst others, document evidence of a negative association between CEOs' compensation and shareholder value. Hence, the sixth relevant hypothesis being tested in this study is that:

H_6: There is a statistically significant relationship between CEOs' compensation and shareholder value, as measured by ROE, TQ and EVA.

4.2.1.7 Attributes of the audit committee and shareholder value

This study examines the relationships between three attributes of the audit committee (i.e. presence of the independent audit committee, its size and frequency of the audit committee meetings) and shareholder value. Despite the importance of an audit committee in the corporate sector, theoretical propositions have failed to draw a

conclusive premise on the relationship between these attributes of the audit committee and firms' financial performance (Ntim, 2009).

As has been mentioned earlier, the prime function of the audit committee is to liaise regularly between a firm's external and internal auditors to review financial reports and the audit and accounting activities of firms (Carrillo, 2007; Ntim, 2009). It ensures an effective internal control system that enhances the financial management of a firm and, hence, its financial performance (Brown & Caylor, 2004; Ho, 2005; Farhat, 2014). It also facilitates the timely release of unprejudiced accounting information to shareholders, giving rise to reduce agency costs and information asymmetries (Klein, 1998; Bhagat & Jefferis, 2002; Heenetigala & Armstrong, 2011). The monitoring activities of the independent audit committee may also assist in reducing pecuniary fraud, thereby enhancing shareholder value (Menon & Williams, 1994; Carrillo, 2007). Jensen & Meckling (1976) theorise that an audit is one type of monitoring activity that adds value to shareholders' wealth.

On the contrary, another line of theoretical literature suggests that an independent audit committee may affect shareholder value negatively for several reasons. Firstly, the establishment of an independent audit committee requires extra non-monetary costs (e.g. managerial time) and monetary costs, including travel expenses and additional remuneration for the members of the committee (Vafeas, 1999). Secondly, excessive supervision by an independent audit committee can slow down the implementation of executives' plans (Goodstein *et al*., 1994; Conger *et al*., 1998; Vafeas, 1999). Finally, it may cause duplication of corporate board duties and responsibilities, with additional cost implications for firms, suggesting adverse effects on shareholder value.

In line with the theoretical literature, and as has been noted in subsection 3.3.7.1 of chapter 3, one strand of the prior empirical literature (e.g. Wild, 1994; Xu *et al*., 2005; Khanchel, 2007; Abdullah *et al*., 2008; Dey, 2008; Mohd *et al*., 2009; Chhaochharia & Grinstein, 2009; Sun & Cahan, 2009; Yasser *et al*., 2011; Nuryanah & Islam, 2011) has found a positive association between the presence of the independent audit committee and firms' financial performance, the proxy for shareholder value. Another strand of empirical studies, on the contrary, presents evidence that the presence of an independent audit committee negatively affects shareholder value (e.g. Main & Johnston, 1993;

Vafeas, 1999; Dar *et al*., 2011, amongst others). Therefore, the seventh relevant hypothesis being tested in this study is that:

> *H_7:* There is a statistically significant relationship between the presence of independent audit committee and shareholder value, as measured by ROE, TQ and EVA.

With regard to the size of the audit committee and shareholder value, a larger audit committee negatively affects the firm's performance. This is because, and in accordance to the tenet of agency theory, an audit committee consisting of a large number of members requires extra monetary and non-monetary costs to reduce agency problems between corporate management and shareholders, resulting in a negative effect on firms' financial performance, the proxy for shareholder value. In contrast, resource dependency theory claims better performance in the case of a larger audit committee. This is because a large number of members on an audit committee offers diversified skills and knowledge, which enable them to exploit their experience and expertise to ensure an effective internal control system and to facilitate the timely release of objective accounting information to shareholders, giving rise to better corporate performance.

As with the presence of the independent audit committee, prior empirical studies have also failed to provide unambiguous evidence, as noted in subsection 3.3.7.2 of chapter 3, on the relationship between the size of the audit committee and firms' financial performance. One group of studies (e.g. Bauer *et al.*, 2009; Reddy *et al.*, 2010; Obiyo & Lenee, 2011; Al-Matari *et al.*, 2012a; Swamy, 2011) reports a positive relationship between the size of the audit committee and shareholder value. The second strand of studies (e.g. Bozec, 2005; Al-Matari *et al.*, 2012b; Hsu & Petchsakulwong, 2010; Mollah & Talukdar, 2007; Wei, 2007; Mohd, 2011; Ghabayen, 2012; Nuryanah & Islam, 2011; Al-Matari *et al.*, 2014) finds a negative relationship or no relationship between the size of the audit committee and firms' financial performance. Therefore, the eighth hypothesis being tested in this study is that:

> *H_8:* There is a statistically significant relationship between the size of the audit committee and shareholder value, as measured by ROE, TQ and EVA.

With regard to the frequency of the audit committee meetings, another attribute of the audit committee, and as has been observed in subsection 3.3.7.3 of chapter 3, one strand of empirical studies (e.g. Kyereboah-Coleman, 2007; Khanchel, 2007; Kang & Kim, 2011) finds a positive relationship with firms' financial performance. In contrast, another group of studies (e.g. Mohd *et al*., 2009; Hsu & Petchsakulwong, 2010; Mohd, 2011; Al-Matari *et al*., 2012b) finds a negative or no relationship between the frequency of the audit committee meetings and shareholder value. Therefore, the ninth hypothesis being tested in this study is that:

> H_9: There is a statistically significant relationship between the frequency of the audit committee meetings and shareholder value, as measured by ROE, TQ and EVA.

The next subsection focuses on the development of the relevant hypotheses to examine the possible relationships between internal corporate governance mechanisms and non-equity stakeholders.

4.2.2 Internal Corporate Governance Mechanisms and Non-Equity Stakeholders

In this subsection, this study focuses on the possible relationship between internal corporate governance mechanisms and non-equity stakeholders. In particular, this section attempts to show how nine internal corporate governance mechanisms affect depositors, borrowers, employees and society. Thus, nine separate hypotheses (H_{10}-H_{18}) are to be examined to reveal the relationship of each internal corporate governance mechanism with non-equity stakeholders. As has been mentioned earlier, there is a paucity of research on how different individual internal corporate governance mechanisms influence the non-equity stakeholders associated with banks; therefore, the development of hypotheses has been done based on the previous, limited theoretical and empirical evidence.

4.2.2.1 Board size and non-equity stakeholders

The link between board size and CSR engagement, the proxy for non-equity stakeholders, is conflicting. From the neo-institutional viewpoint, a larger board enhances corporate efficiency and transparency by ensuring greater managerial monitoring and conformity to corporate regulations and norms (Ntim & Soobaroyen, 2013). Since CSR activities are an important dimension of corporate functions, firms with larger boards will be able to increase the relationship with non-equity stakeholders by adopting a higher volume of CSR activities than their smaller counterparts (Jizi *et al*., 2014). In the same way, from the legitimating viewpoint, a larger board ensures the presence of diverse expertise and experience leading to a higher volume of CSR practices (Ntim & Soobaroyen, 2013), and in so doing, the relationship with non-equity stakeholders increases. By contrast, a larger board may be misleading and ineffective because of a lack of effective coordination and communication among the board members (Jensen, 1993). Thus, a dominant and powerful CEO can take advantage of poor coordination and communication to influence CSR activities negatively and thereby adversely affect non-equity stakeholders.

As with the theoretical link, one group of prior empirical studies (e.g. Mackenzie, 2007; Ntim & Soobaroyen, 2013; Jizi *et al*., 2014, amongst others) finds a positive correlation between board size and CSR engagement, the proxy for non-equity

stakeholders. In contrast, Lindgreen *et al*. (2010) find board size having an insignificant impact on CSR activities/disclosures. Therefore, the tenth hypothesis being tested in this study is that:

> H_{10}: There is a statistically significant relationship between board size and non-equity stakeholders, as constituted by depositors, borrowers, employees and society.

4.2.2.2 Sponsor-directors' shareholding and non-equity stakeholders

According to Farooque *et al*. (2007), and as has been noted before, companies managed by sponsor-directors (owner-managed) are widespread in Bangladesh, and in most cases, the board of directors consists mainly of founder family members. This type of concentrated ownership allows executives to control the company and adopt their chosen strategies and policies with regard to the social activities of firms (Khan *et al*., 2013). Consistent with agency theory, senior managers who are sponsor-directors have the authority to share corporate resources among a wider range of stakeholders in a way that ensures a return from them (Oh *et al*., 2011). If the allocation of resources to a broader range of stakeholders (e.g. customers, suppliers, employees, society, the environment and so on) enhances corporate value, managers will be inclined to undertake CSR activities (Orlitzky *et al*., 2003), which may positively affect the attitudes of non-equity stakeholders towards firms.

Moreover, the perception of sponsor-directors regarding the necessity and value of CSR influences their responsibility towards non-equity stakeholders (Choi & Wang, 2007; Muller & Kolk, 2010; Selart & Johansen, 2011). According to the integrative viewpoint, sponsor-directors' shareholding generates a composite pressure on agent-like managers to perceive corporate social practices as a strategic tool. This motivates managers to facilitate CSR related effort (Jia & Zhang, 2013) and, consequently, a positive attitude is created among non-equity stakeholders towards firms.

Prior empirical findings also yield conflicting results on the relationship between sponsor-directors' ownership and CSR activities, the proxy for non-equity stakeholders. One strand of research (e.g. Johnson & Greening, 1999; Florou, 2008; Jia & Zhang, 2013) suggests a positive association between sponsor-directors' ownership and CSR

activities. Conversely, another strand of research (e.g. Ghazali, 2007; Oh *et al*., 2011; Paek *et al*., 2013; Khan *et al*., 2013,) shows that sponsor-directors ownership is negatively related to CSR activities. Therefore, the eleventh hypothesis being tested in this study is that:

> H_{11}: There is a statistically significant relationship between sponsor-directors' shareholding and non-equity stakeholders, as constituted by depositors, borrowers, employees and society.

4.2.2.3 Institutional shareholding and non-equity stakeholders

The relationship between institutional ownership and non-equity stakeholders can be explained from different hypothetical viewpoints. From the legitimating viewpoint, institutional shareholders have more pecuniary and critical resources (e.g. thoughts and competencies) than individuals or small groups of shareholders (Ntim & Soobaroyen, 2013). They dominate in corporate decision-making regarding investments or CSR activities and the selection of executives, and therefore they have an additional incentive to monitor corporate disclosures because of their significant stake in the firm's ownership (Oh *et al*., 2011; Ntim & Soobaroyen, 2013). This increased pledge for a wider range of CSR activities can improve corporate legitimacy, by taking support from other influential non-equity stakeholders, such as customers, employees, pressure groups and government (Ntim & Soobaroyen, 2013; Ntim, 2013).

By contrast, according to Arora & Dharwadkar (2011), establishing the relationship between internal corporate governance mechanisms and non-equity stakeholders through positive CSR activities is not quite as simple. This is because positive CSR activities do have prospective long-term financial benefits, but these are uncertain in nature. Therefore, institutional shareholders with a long-term orientation may prefer positive CSR activities (Turban & Greening, 1997; Arora & Dharwadkar, 2011). Otherwise, where the costs of CSR activities are likely to outweigh the benefits, corporate governance mechanisms concentrate on short-termism, and, hence, the firm's relationship with its non-equity stakeholders is likely to be reduced. Along similar lines, Bushee (1998) supports the view that institutional shareholders concerned with fulfilling their short-term goals and achieving their performance may not want corporations to

invest in the CSR sector because of goal conflicts concerning time horizons and the uncertainty of outcomes. This situation may lead to pressure on corporate managers to reduce their CSR activities. In particular, this situation is applicable to those institutional shareholders who are mainly oriented to the short term or momentum traders (Neubaum & Zahra, 2006), those who prefer to remain submissive and inert (Pound, 1988; Wahal, 1996; Edwards & Hubbard, 2000) or those who have reasonably diversified and indexed portfolios (Dharwadkar *et al*., 2000).

Aguilera *et al*. (2006) explain the relationship from a different point of view. They argue that institutional investors encourage CSR activities for instrumental and moral reasons. In terms of instrumental reasons, social, environmental and governance issues are factors that are able to strongly influence firms' financial performance, either positively or negatively. Accordingly, several institutional shareholders consider that caring about these non-equity stakeholder issues well may be the leading factor in achieving a competitive advantage, while mismanaging the same factors may lead to a competitive disadvantage. Similarly, in terms of the moral motives, the activities of various influential institutional investors towards non-equity stakeholder are also motivated by legal requirements (such as the fiduciary duties of trust law) and moral imperatives. These duties compel institutional investors to act in the beneficiaries' best interests. However, moral motives yield a dilemma: while the legal requirements and morality are inducements to press for the beneficiaries' best interests, these may not be what the beneficiaries desire. They, however, postulate that moral motives may also be an attempt to limit the CSR engagement of institutional shareholders; consequently, the attitude of non-equity stakeholders associated with firms may be affected negatively.

Moreover, the institutional perspective on a different region may encourage or discourage responsibility towards the non-equity stakeholders in different ways. For example, institutional investors in developed economies in North America and Europe may put enormous pressure on managers to take decisions in favour of non-equity stakeholders (Campbell, 2007). In contrast, managers in non-Western countries, particularly Asian and African countries, may not come across the same institutional influences (Oh *et al*., 2011). In such cases, they may be strongly interested in pursuing

short-term strategies that enhance firms' operating profits and increase their financial and non-financial rewards (ibid.).

Along the lines of these theoretical and postulated notions, prior empirical results on the relationship between institutional shareholding and CSR engagement, the proxy for non-equity stakeholders, are also inconclusive. One group of researchers (e.g. Teoh & Shiu, 1990; Johnson & Greening, 1999; Cox *et al*., 2004; Sethi, 2005; Oh *et al*., 2011; Harjoto & Jo, 2011) finds a positive effect from institutional investors on CSR practices. By contrast, another group of empirical researchers (e.g. Barnea & Rubin, 2010; Dam & Scholtens, 2012; Ntim & Soobaroyen, 2013, amongst others) finds a negative association between institutional shareholders and CSR engagement. Therefore, the twelfth hypothesis being tested in this study is that:

H_{12}: There is a statistically significant relationship between institutional shareholding and non-equity stakeholders, as constituted by depositors, borrowers, employees and society.

4.2.2.4 General public shareholding and non-equity stakeholders

The relationship between general public shareholding and non-equity stakeholders can be explained from the viewpoints of legitimating and agency theory. According to agency theory, and as has been said before, general public shareholders possess a small part of a company's equity, which is known as dispersed ownership. Dispersed owners do not have the motivation to supervise and monitor management activities, and they do not hold this position in order to lead the firm for their benefit. As a result, corporate management might have the discretion to pursue whichever policies they want, and general public owner remains neglected by them. The relationship between corporate management and general public ownership creates a conflict of interests, which is known as a problem of agency. This agency problem may lead to corporate management concentrating less on the benefits of depositors, borrowers, employees and society. Thus, this suggests that a higher proportion of general public ownership may negatively affect the attitudes of non-equity stakeholders towards firms.

Similarly, from the legitimating viewpoint, general public shareholders do not have pecuniary and critical resources (e.g. thoughts and competencies), or they may have

these resources, but they cannot use them to make the corporate management orient themselves towards non-equity stakeholder, as they are only a small group of shareholders. This means that they are unable to dominate corporate decision-making regarding investments to boost their relationship with non-equity stakeholders, because of their insignificant individual stake in corporate ownership. This situation suggests a lesser commitment towards non-equity stakeholders. Consequently, corporate legitimacy cannot be improved by gaining the cooperation of influential non-equity stakeholders, such as customers, employees, pressure groups and government. Thus, this position assumes that there may not be any significant effect exerted by the proportion of general public shareholding on non-equity stakeholders. There is a scarcity of empirical studies examining the relationship between general public ownership and non-equity stakeholders. The present study postulates a positive or negative association between these two variables. Therefore, the thirteenth relevant hypothesis being tested in this study is that:

> H_{13}: There is a statistically significant relationship between general public shareholding and non-equity stakeholders, as constituted by depositors, borrowers, employees and society.

4.2.2.5 Independent non-executive directors and non-equity stakeholders

There are three main theoretical paradigms (i.e. resource dependency, neo-institutional and stewardship theories) that can be advanced to explain the link between independent non-executive directors and non-equity stakeholders. Resource dependency theory postulates that the inclusion of independent non-executive directors is a source of critical resources, information and legitimacy to boards (Ayuso & Argandoña, 2009). Independent non-executive directors are reluctant to define organisational performance narrowly, as they do not lay emphasis primarily on pecuniary measures, but are more susceptible to social needs (Ibrahim & Angedilis, 1994; Ibrahim *et al*., 2003). Additionally, outside independent directors are more conversant about the varying demands of diverse stakeholders and may feel able to support costly decisions, such as those that involve compliance issues (Johnson & Greening, 1999; Zahra *et al*., 1993). These inferences suggest that the proportion of independent non-executive directors will have a positive effect on non-equity stakeholders.

Along similar lines to resource dependency theory, neo-institutional theory assumes that there is an inherent legitimacy gap in modern corporations in which ownership is separated from control (Ntim & Soobaroyen, 2013). This gap poses a challenge for the decisions taken by the management in the best interests of shareholders (Ntim, 2013). The gap or concern could be played down by appointing independent non-executive directors onto the boards, who will pay closer attention to achieving goal congruence between corporations and non-equity stakeholders (Deegan, 2002). Hence, the inclusion of independent non-executive directors on the boards may be more effective in influencing the corporate management to be engaged in the most promising CSR activities (Pfeffer & Salancik, 1978; Ntim, 2013), and by this means, the attitude of non-equity stakeholders towards firms is positively affected.

The inclusion of a higher number of independent non-executive directors on the board signals a firm's intention to pay greater attention to its non-equity stakeholders, including the external environment and legitimacy (Pfeffer & Salancik, 1978). The presence of independent non-executive directors can, therefore, play a crucial role in advancing the interests of non-equity stakeholders by reducing the legitimacy gap and agency problems (Ntim & Soobaroyen, 2013). More pertinent to this study, Jamali *et al*. (2008) and Arora & Dharwadkar (2011) substantiate the neo-institutional hypothesis that a bank with a board consisting of a higher number of independent non-executive directors is likely to be more engaged in CSR practices (Jizi *et al.*, 2014), which then positively affects the state of mind of non-equity stakeholders towards firms.

According to the stewardship perspective, however, the inclusion of an increased number of independent non-executive directors on boards could persuade corporate management to concentrate on short-termism at the cost of a long-term strategic vision. This is because shareholders, particularly financial institutions or block shareholders, appoint independent non-executive directors primarily to protect their own interests. Therefore, a board consisting of an increased number of independent non-executive directors may not consider the optimum volume of positive CSR activities, as these activities do not focus on short-term gain (Baysinger & Hoskisson, 1990; Lorsch & MacIver, 1989). Consequently, investment in the CSR arena may expect an inverse relationship with the inclusion of a higher number of independent non-executive

directors on the board (Hoskisson *et al*., 2002; Deutsch, 2005), leading to the negative attitude of non-equity stakeholders towards firms.

In keeping with the theoretical frameworks, the existing empirical evidence also suggests mixed and inconsistent results on the relationship between the proportion of independent non-executive directors and CSR engagement, the proxy for non-equity stakeholders. One strand of research (e.g. Ibrahim & Angelidis, 1994; Zahra *et al*., 1993; Johnson & Greening, 1999; Hillman *et al*., 2001; Eng & Mak, 2003; Webb, 2004; Haniffa & Cooke, 2005; Lattemann *et al*., 2009; Harjoto & Jo, 2011; Jo & Harjoto, 2011, 2012; Michelon & Parbonetti, 2012; Ntim & Soobaroyen, 2013; Jizi *et al*., 2014; Sharif & Rashid, 2014) yields evidence that the proportion of independent non-executive directors has a positive effect on CSR engagement. In contrast, another group of studies (e.g. Baysinger *et al*., 1991; Wang & Dewhirst, 1992; Zahra, 1996; McKendall *et al*., 1999; Chapple & Ucbasaran, 2007; Zhang *et al*., 2011) presents evidence either of a negative or no association between the proportion of independent non-executive directors and CSR activities. They suggest that the proportion of independent non-executive directors is not related to CSR activities (Chapple & Ucbasaran, 2007), such as the violation of environmental law (McKendall *et al*., 1999), and that they do not have a stakeholder orientation. Similarly, Zhang *et al*. (2011) find that outside independent directors do not have a significant effect on customer satisfaction. Therefore, the fourteenth relevant hypothesis being tested in this study is that:

> H_{14}: There is a statistically significant relationship between independent non-executive directors and non-equity stakeholders, as constituted by depositors, borrowers, employees and society.

4.2.2.6 CEOs' compensation and non-equity stakeholders

A related strand of research considers CEOs' compensation as a factor which decisively affects the nature or outcome of CSR activities (Fabrizi *et al*., 2014). Indeed, CEOs formulate corporate strategies and are intensely concerned with promoting their corporate image through CSR activities (Waldman *et al*., 2006), although CEOs consider the benefits and costs when deciding whether, and to what extent, firms will engage in CSR activities (Fabrizi *et al*., 2014). Therefore, as an internal corporate governance

mechanism, the compensation of CEOs may influence CSR activities (Jian & Lee, 2015), the proxy for non-equity stakeholders.

The underlying theory to illustrate the relationship between CEOs' compensation and CSR activities is agency theory (Jensen & Meckling, 1976), where the incentives for CEOs are aligned with those of shareholders (Tosi & Greckhamer, 2004). Graafland *et al*. (2010) suggest a utility model, which is useful for explaining the alignment of CEOs' compensation and CSR activities. The basic premise of the model is that a firm's optimal level of CSR activities hinges on the CEO's strategic motivation. From this perspective, the CEO will be motivated to enhance CSR activities, provided that these give rise to pecuniary benefits for shareholders. It is thought that this enhancement in shareholder wealth is aligned with an increase in the income of CEOs. In order to elevate their consumption, they are extrinsically motivated towards CSR activities, suggesting a positive relationship between CEOs' compensation and non-equity stakeholders. Specifically, it is an agency problem, if dominant CEOs exploit CSR activities in order to promote their private benefits rather than the advantages of shareholders and non-equity stakeholders (Jizi *et al.*, 2014). Moreover, CEOs who are philanthropically minded will derive intrinsic value from engaging in CSR activities, and they will try to achieve a trade-off between their income and firms' CSR activities (Rekker *et al*., 2014). In these circumstances, CEOs may be enthusiastic about enhancing CSR activities, suggesting a positive link between CEOs' compensation and non-equity stakeholders.

Prior empirical studies yield conflicting evidence on the relationship between CEOs' compensation and CSR activities, the proxy for non-equity stakeholders. One strand of studies (e.g. McGuire *et al*., 2003; Mahoney & Thorne, 2005, 2006; Deckop *et al*., 2006; Berrone & Gomez-mejia, 2009) finds CEOs' compensation having a positive effect on CSR engagement. By contrast, another group of studies (e.g. Stanwick & Stanwick, 2001; Coombs & Gilley, 2005; Russo & Harrison, 2005; Cai *et al*., 2011; Fabrizi *et al*., 2014; Rekker *et al*., 2014) finds that CEOs' compensation levels are negatively associated with CSR activities, the proxy for non-equity stakeholders. Therefore, the fifteenth hypothesis being tested in this study is that:

H_{15}: There is a statistically significant relationship between CEOs' compensation and non-equity stakeholders, as constituted by depositors, borrowers, employees and society.

4.2.2.7 Attributes of the audit committee and non-equity stakeholders

As has been mentioned earlier, different attributes of the audit committee, particularly its independence, size and frequency of meetings, help to align executive directors' and employees' interests with those of shareholders and non-equity stakeholders (Eighme & Cashell, 2002). For example, the frequency of audit meetings and the independence of the audit committee may contribute to facilitating the timely release of unprejudiced accounting information to stakeholders. This unprejudiced accounting information may enhance the firm's corporate image; therefore, a positive relationship is hypothesised between different attributes of the audit committee and non-equity stakeholders.

Other premises can also be advanced concerning the relationship between attributes of the audit committee and non-equity stakeholders. For instance, agency theory suggests that an effective audit committee is characterised by independence, high activity intensity and optimum size that may enhance the trustworthiness of corporate reporting, thereby reducing the problem of information asymmetry (McMullen, 1996). A larger audit committee may put sufficient pressure on corporate management to disclose information voluntarily, which may enhance transparency in corporate reporting systems (Goh, 2009). This premise is particularly important for banks, as they are involved in complex and risky business operations (Pathan, 2009). An audit committee ensuring more and transparent disclosure of CSR activities may lead to a positive impact on non-equity stakeholders. For example, if the CSR disclosures of competitors are high and transparent, indicating a higher volume of CSR engagement, then that may enhance their corporate image among non-equity stakeholders. The competitor's attitude to CSR engagement and disclosures may put greater pressure on managers to invest more in CSR activities. Therefore, the attributes of the audit committee being tested (its size, independence and frequency of meetings) may motivate managers towards CSR activities, predicting a positive effect of these attributes of the audit committee on non-equity stakeholders.

However, another line of theoretical literature suggests that the audit committee does not affect CSR engagement or may affect CSR engagement negatively for several reasons. Firstly, an audit committee, as a mechanism of corporate governance, is most likely to provide quality financial statements from the firms to shareholders and ensures that firms meet with compulsory disclosures (Davidson *et al*., 2005). The committee does so by liaising regularly between firms' external and internal auditors. These responsibilities of the audit committee do not relate to CSR engagement. Secondly, firms dominated by family members tend to undermine the effects of the audit committee on CSR engagement. Ahmed & Siddiqui (2011), for example, report an opinion of one of the board members of a commercial bank in Bangladesh, who has a family connection and holds the majority of shares:

> *"Audit committee is like an ornament for my bank . . . I do not think they have any role in the functioning of the bank, nor do they have anything to do with the auditors. They are there simply because it is a regulatory requirement . . . I have heard that in many companies, audit committee members are wives/family members of the directors who do not know much about the business"* (Ahmed & Siddiqui, 2011, p. 22).

The above comments weaken the impact of audit committees on CSR engagement. Finally, excessive supervision of management by audit committees can ruin the executives' plans (e.g. Conger *et al*., 1998; Vafeas, 1999), which may negatively affect CSR engagement. Given the above circumstances, a negative association between attributes of the audit committee and non-equity stakeholders is predicted.

There is a distinctly limited prior empirical literature on the relationship between different attributes of the audit committee and CSR engagement, the proxy for non-equity stakeholders. Based on the limited empirical literature, conflicting evidence is noted on this relationship. For instance, Kent & Stewart (2008) provide evidence that there is no significant relationship between the presence of an independent audit committee and the disclosure of CSR information, while the frequency of the audit committee meetings is positively related to the extent of CSR disclosure. Meanwhile, Said *et al*. (2009) and Madi (2012) support this evidence presented by Kent & Stewart (2008). Of most relevance to this study, using a sample of companies listed on the Dhaka

Stock Exchange in Bangladesh, Khan *et al*. (2013) reveal that the presence of the audit committee has a significant positive effect on CSR disclosures. A number of recent studies (e.g. Jizi *et al*., 2014; Al-Shaer, 2014) further support the evidence of Khan *et al*. (2013). These studies, however, suggest that the audit committee tends to have no role in promoting a higher level of disclosure, which alone does not affect corporate reputation. Therefore, the sixteenth, seventeenth and eighteenth relevant hypotheses being tested in this study are that:

H_{16}: There is a statistically significant relationship between the presence of independent audit committee and non-equity stakeholders, as constituted by depositors, borrowers, employees and society.

H_{17}: There is a statistically significant relationship between the size of the audit committee and non-equity stakeholders, as constituted by depositors, borrowers, employees and society.

H_{18}: There is a statistically significant relationship between the frequency of the audit committee meetings and non-equity stakeholders, as constituted by depositors, borrowers, employees and society.

The next subsection focuses on the development of the relevant hypothesis to examine the possible relationship between non-equity stakeholders and shareholder value.

4.2.3 Non-Equity Stakeholders and Shareholder Value

This subsection focuses on the development of a hypothesis to examine the effect of non-equity stakeholders on shareholder value after controlling for the effect of internal corporate governance mechanisms being tested. Therefore, one more hypothesis (H_{19}) is to be tested.

According to the instrumental stakeholder viewpoint, which is a key strand within stakeholder theory, a positive relationship is assumed between non-equity stakeholders and shareholder value. According to the basic premise of instrumental stakeholder theory, and as has been stated earlier, firms believe their non-equity stakeholders are a part of their business environment that must be in favour of their business operations to ensure revenues, profits and ultimately shareholder value (Berman *et al*., 1999). In this context, a good relationship with non-equity stakeholders may affect shareholder value positively, because concentrating on a good relationship with non-equity stakeholders enhances their motivation to support operations by the firm that maximise shareholder value (Deng *et al*., 2013). Moreover, focusing on non-equity stakeholders' interests may enable firms to stay away from decisions that might prevent non-equity stakeholders from being oriented towards the firm (Berman *et al*., 1999; Wang *et al*., 2015). This possibility emerges because, as has been stated earlier, it is the non-equity stakeholders who eventually control the resources that can enable corporate decisions to be translated into reality (Pfeffer & Salancik, 1978), thereby having a significant effect on firms' operating performance.

From the instrumental stakeholder standpoint, there is an explicit and implicit contract between shareholders and non-equity stakeholders, and these contracts expose a relationship between the two groups. The standpoint asserts that all non-equity stakeholders are sources of critical resources, which may be supplied by them to firms in exchange for the rights stated in explicit contracts (e.g. wage contracts and product warranties) or in implicit contracts (e.g. promises of job security to employees and continued service to customers) (Deng *et al*., 2013). The underlying argument here is that, unlike explicit contracts, implicit contracts are unformulated, and firms can evade their implicit commitments without legal recourse from non-equity stakeholders who have little or no legal standing (ibid.). In fact, the implementation of implicit contracts

relies on non-equity stakeholders' expectations about firms honouring their promises (Cornell & Shapiro, 1987). For instance, an effective relationship with employees and a firm's response to their social needs generate a positive image in the community that may attract a more skilled and experienced workforce (Dutton *et al*., 1994). This effort eventually translates into employees being committed to their duties and thereby enhancing firms' operating performance. Further, such firms are often viewed as an attractive employer for potential employees (Greening & Turban, 2000; Backhaus *et al*., 2002). Similarly, customers may respond to the positive social activities of a firm by buying products or services or by paying premium prices for products or services from that firm (Bhattacharya & Sen, 2003). Also, particular investors, such as institutional investors, are keener to invest in firms branded as socially responsible or supportive of non-equity stakeholders (Graves & Waddock, 1994; Johnson & Greening, 1999; Barnett & Salomon, 2006).

By contrast, neo-classical economic theory envisages a negative association between non-equity stakeholders and shareholder value, believing that firms which are caring and responsible towards the interests of non-equity stakeholders are at a competitive disadvantage compared to their uncaring rivals (Aupperle *et al*., 1985). This is because they impose a direct cost on firms (Ullmann, 1985; Barnett & Salomon, 2006; Mahoney & Roberts, 2007), and, hence, firms' operating profit decreases. For instance, firms following rigorous environmentally friendly principles may put them at a competitive disadvantage. This is because firms have to spend a higher volume of resources on non-productive CSR projects, and, thus, these firms' financial performance decreases (Deng *et al*., 2013). This view argues that investing resources for CSR is a transfer of wealth from shareholders to non-equity stakeholders, suggesting that they enjoy the benefits of CSR activities at the cost of shareholder wealth. Also, the "managerial opportunism hypothesis" can be advanced to support the rationale for a negative linkage between these two variables. The fundamental argument of the hypothesis is that when a firm's financial performance is sound, managers may reduce spending on CSR activities in order to increase the short-term profit to which managers' personal compensation (such as cash bonuses, deterrence from potential retrenchment) is tied (Preston & Bannon, 1997). Conversely, when firms' financial performance is poor, managers may attempt to divert the attention of shareholders to non-equity stakeholders

by spending on conspicuous social programmes (Mahoney & Roberts, 2007). In both cases, managers' behaviour is opportunistic, and this may affect shareholder value negatively.

There is a paucity of academic studies into the effect of non-equity stakeholder on shareholder value. The limited empirical studies document mixed results on the relationship between non-equity stakeholders and shareholder value. For example, Okun (2012) examines whether the level of deposits affects firms' financial performance, the proxy for shareholder value, in a sample of 44 commercial banks in Kenya for the period 2004–2011. Applying a cross-sectional regression model, the study finds that the deposit ratio of banks has a significant positive relationship with ROE and ROA, the proxies for shareholder value. These results support those of Ochung (1999), who also finds a significant association between the level of bank deposits and the performance of financial institutions in Kenya. Similarly, Naceur & Goiaed (2001) find that high levels of deposits in Tunisian banks for the period 1980–1995 increase the funds available to grant loans and advances to borrowers and for use by banks for different profitable projects, thereby increasing the banks' profitability.

By contrast, banks which are heavily dependent on customer deposits earn a significantly lower profit. In a study using bank data collected from 80 countries' commercial banks for the period 1988–1995, Demirguc-Kunt & Huizinga (1998) find that banks that depend mainly on core deposits for funds are less profitable. This is because a certain number of branches are needed to collect core deposits from customers, which incur a significant level of expenses, hence reducing banks' financial performance, the proxy for shareholder value. Similarly, Heggestad (1977) finds that time and savings deposits have a statistically significant negative effect on banks' profitability. He maintains that banks with a high volume of time and savings deposits incur high costs in relation to funds and thus earn less profit.

On the other hand, Dietrich & Wanzenried (2009) investigate the relationship between the yearly growth in banks' core deposits and their profitability, using 1919 observations from 453 banks in Switzerland. They find no evidence that an increase in the amount of core deposits leads to higher income for banks. However, Gul *et al.* (2011) find a mixed relationship between the amount of core deposits and banks' financial

performance, as measured by return on assets (ROA) and return on capital employed (ROCE) in a sample of 15 Pakistani commercial banks for the period 2005–2009. The study shows that there is a positive relationship between the amount of core deposits and ROA, but it is negatively associated with ROCE.

Commercial banks mostly earn revenue by charging interest on loans and advances granted for different investment activities (Jayaratne & Morgan, 1997), thereby increasing their financial performance. Therefore, there is a positive relationship expected between the volume of lending and banks' financial performance, the proxy for shareholder value. As has been stated earlier, critical academic literature is scarce on lending performance and banks' financial performance; however, a limited number of previous studies conducted on the issue substantiate the positive relationship between them. For example, Okoye & Eze (2013) examine the effect of the lending rate and monetary policy rate on the financial performance of Nigerian banks for the period 2000–2010. The study finds that the lending rate is positively related to banks' short-term and long-term financial performance.

A good relationship with employees is undoubtedly an important source of firms' competitive advantage; this has a positive effect on employees' productivity and efficiency, thereby increasing firms' revenue. In particular, an effective relationship between employees and the firm reduces absenteeism and staff turnover and increases employees' productivity, commitment and effort. As a result, firms' revenue increases, resulting in improved financial performance. According to Robertson-Smith & Markwick (2009), employees' commitment to the firm may have a significant effect on the bottom-line profit of firms. Similarly, using data collected from public and private sector employees in the Lahore, Rawalpindi and Islamabad region in Pakistan, Dost *et al.* (2011) find that employees' commitment has a significant positive relationship with firms' performance. This means that a positive relationship is expected between employees and banks' financial performance, the proxy for shareholder value.

There is a scarcity of prior academic research relating to the effect of firms' relationship with society on shareholder value. Most of the studies are limited to examining the relationship between corporate philanthropy or corporate social responsibility (CSR) and financial performance. However, the evidence from empirical

studies on the association between CSR engagement (the proxy for non-equity stakeholders) and shareholder value has been inconclusive, reporting positive and negative relationships. For instance, meta-analyses conducted by Orlitzky *et al.* (2003), Albertini, (2013) and Wang *et al.* (2015) confirm that socially responsible firms contribute positively to shareholder value. Along similar lines of meta-analysis, one group of researchers (e.g. Moskowitz, 1972; Bowman & Haire, 1975; Parket & Eilbirt, 1975; Sturdivant & Ginter, 1977; McGuire *et al*., 1988; Ruf *et al*., 2001; Simpson & Kohers, 2002; Scholtens, 2008; Lin *et al*., 2009; Sun, 2012, Palmer, 2012) substantiates the evidence of a positive relationship between the two variables.

In contrast, another group of researchers (e.g. Lopez *et al*., 2007; Becchetti *et al*., 2008; Moore, 2001; Lioui & Sharma, 2012) suggests a negative relationship between CSR activities and shareholder value. Cost is one of the possible factors resulting in a negative relationship between the two variables, because costs associated with developing a relationship with non-equity stakeholders may outweigh the benefit of social contributions (Vance, 1975; Palmer, 2012). Therefore, the final hypothesis (H_{19}) being tested in this study is that:

H_{19}: After controlling for the effect of internal corporate governance mechanisms, there is a statistically significant relationship between non-equity stakeholders and shareholder value, as measured by ROE, TQ and EVA.

4.3 SUMMARY OF THE CHAPTER

This chapter has, firstly, elucidated the conceptual framework developed for the present study. The framework has been developed based on the proposed "Non-Equity Stakeholder Model of Corporate Governance" and the evidence of previous empirical studies. The conceptual framework argues that internal corporate governance mechanisms influence the relationship with non-equity stakeholders, which, in turn, results in shareholder value. Secondly, the development of hypotheses for this study has been rationalised based on the related corporate governance theories and empirical evidence from the previous literature.

The next chapter discusses the research methods and design undertaken for this study.

CHAPTER FIVE

RESEARCH METHODS AND DESIGN

5.0 OVERVIEW OF THE CHAPTER

This chapter discusses the research methodology adopted for this study. There are four interrelated objectives of this chapter. Firstly, it seeks to offer a full description of the data collection, data reliability and research design for this study, in order to explain how the research is carried out. Secondly, it presents a justification for the various data collection procedures and methodological choices made in each phase of this study. Finally, it also aims to describe the strengths and limitations of the different data collection procedures and methodological choices that have been made throughout this study.

The remainder of this chapter is organised as follows. Section 5.1 describes the data collection procedures, including the population and sample selection process. Section 5.2 outlines the variables used in this study and their units of measurement, while section 5.3 discusses the data analysis processes undertaken in the research and the research model specifications. Section 5.4 describes the methods for checking the robustness/sensitivity of the results, and, finally, section 5.5 summarises the chapter.

5.1 DATA COLLECTION

This section attempts to outline the population used in this study and the sample selection process, the nature of data and the sources of data used in carrying out this research. Specifically, the section is divided into three subsections. Subsection 5.1.1 describes the population and sample selection process, while subsection 5.1.2 discusses the types and sources of data used in this study. Finally, subsection 5.1.3 describes the data structure used in this study.

5.1.1 Population and Sample

This study aims to explore the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value in listed banking firms in Bangladesh. There are 63 banks (see Table 7) currently operating in Bangladesh, comprising two categories of banks, namely scheduled and non-scheduled banks (Bangladesh Bank, 2016b). Scheduled banks require a licence under the Bank Company Act 1991 (amended in 2013) to perform their banking activities. These banks consist of state-owned commercial banks, private commercial banks, Islamic commercial banks, foreign commercial banks and some specialised banks. By contrast, non-scheduled banks, which by law cannot perform all the activities of scheduled banks, are instituted for particular and definite purposes and are controlled under legislation that is established to accomplish those objectives (ibid.).

Table 7: Summary of total banks in Bangladesh

Categories of banks	***No. of banks***	***Percentage of the population***
Scheduled banks:		
State-owned commercial banks	6	9.5
State-owned specialised banks	2	3.0
Private (traditional) commercial banks	32	51.0
Private (Islamic) commercial banks	8	13.0
Foreign commercial banks	9	14.0
Total scheduled banks	*57*	*90.5*
Non-scheduled banks	6	9.5
Population size	**63**	**100.0**

Source: Bangladesh Bank (2016b)

The target population of this study is the scheduled banks listed on the Dhaka Stock Exchange, as only these banks are relevant to this study motive that attempts to examine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. Only 30 commercial banks, which together account for approximately 48% of the total number of banks, are listed on the Dhaka Stock Exchange (DSE, 2016a). These banks are required to comply with the Code of Corporate Governance as a requirement of being listed on the Dhaka Stock Exchange (DSE, 2016b), while banks that are not listed on the Dhaka Stock Exchange do not necessarily guarantee compliance with the governance code. Therefore, the final population size of this study is 30, which includes only the commercial banks

listed on the Dhaka Stock Exchange. A purposive sampling technique has been adopted in which this study chooses to examine primarily the entire population that has a particular set of similar characteristics. For example, all banks are to be commercial in nature, listed on the Dhaka Stock Exchange, and ensuring compliance with the governance code (or otherwise providing an explanation). Accordingly, the population consists of 1 state-owned commercial bank and 29 private commercial banks, of which 22 are traditional, and 7 are Islamic commercial banks (see Appendix 3).

However, banks must also meet the following three criteria to be included in the final sample: (a) a bank's full five-year annual reports from 2011 to 2015 must be available either on the respective bank's official website or from other reliable sources, as stated in the following subsection 5.1.2; (b) the corresponding five-year financial and non-financial information required for this study must also be available; (c) the sampled banks must have a positive equity value. Accordingly, the final sample for this study consists of 29 out of the 30 listed commercial banks, which together account for approximately 97% of the population. One of the listed banks is omitted from the sample for having a negative equity value for the entire study period. The final sample size comprises 1 state-owned commercial bank and 28 private commercial banks, of which 22 are traditional, and 6 are Islamic commercial banks (see Table 8).

Table 8: Summary of the sampled banks

Categories of banks	*No. of banks*	*Percentage*
State-owned (traditional) commercial banks	1	3.0
Private (traditional) commercial banks	22	76.0
Private (Islamic) commercial banks	6	21.0
Sample size	**29**	**100.0**

Source: DSE (2016a)

5.1.2 Data and Sources

Four key types of data are used in examining the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value in the listed Bangladeshi commercial banks. The first category of data is the internal corporate governance mechanisms required of the listed banks under the "comply or explain" code. Secondary sources, i.e. the annual reports of the sampled banks, are the particular source of data required for this study. Specifically, all the data

related to internal corporate governance mechanisms are collected manually from the annual reports of the sampled banks. The annual reports are mainly obtained from the websites of the respective banks. However, some of the annual reports of the sampled banks are not available on the banks' website for a particular year; they are either collected directly from the corporate head office of the respective banks or supplementary sources, namely the Dhaka Stock Exchange database. The second category of data is the relationships of non-equity stakeholders, and the third and fourth categories of data are shareholder value and control or firm-specific data, respectively. All data relating to non-equity stakeholders, shareholder value and firm-specific aspects are also collected from the annual reports of the respective sampled banks.

The underlying reasons for using secondary data are manifold. Firstly, the characteristics of data used in this study imply that these data cannot be collected from primary sources, i.e. these are secondary source-based data, for example, the board size and number of the audit committee meetings held in the sampled banks in the study period. Secondly, the usage of secondary data requires substantially less resource, specifically time and money (Ghauri & Gronhaugh, 2010). Thirdly, secondary data related to a study is apparently of higher quality than primary data (Stewart & Kamins, 1993). This is highly relevant to this study because an independent external audit team conducts formal auditing activities every financial year to confirm the validity of the contents of annual reports of banks, in particular, to confirm the true and fair presentation of financial statements, which enhances data reliability. Fourthly, secondary data are collected from a source that is permanent in nature, and others can verify the data, along with the source, without difficulty (Denscombe, 1998). Finally, a significant number of previous corporate governance studies have also selected annual reports as a key secondary source of data.

5.1.3 Data Structure – Panel Data

Three data structures are commonly offered for empirical analysis: time series, cross-section and longitudinal. They generate three patterns of datasets, namely time-series datasets, cross-sectional datasets and panel datasets, respectively (Gujarati, 2003). "In the time-series, data values of one or more variables are observed over a period while, in cross-section data, the values of one or more variables are collected for several

sample units, or entities, at the same point in time" (ibid., p. 636). Panel dataset analysis combines both time series and cross-sectional effects of the sample data and identifies the sources of effects that are probably combined (Wooldridge, 2002; Gujarati, 2003).

This study uses a panel dataset, rather than a time-series or cross-sectional dataset. In this study, the panel dataset consists of multiple observations of each bank (sampling unit) for the period 2011–2015. The sample comprises 29 banks with five study periods, providing balanced panel datasets with 145 observations. There are several underlying reasons for using balanced panel datasets over the two other types and for choosing a consecutive five-year period for this study. Firstly, cross-sectional or time-series data may not add value to the empirical analysis; rather, panel datasets are optimum for this purpose (Gujarati, 2003; Greene, 2003). Secondly, panel datasets can deal with observable and unobservable individual heterogeneity (Baltagi, 1998) more effectively than the typical cross-section or time-series data. The procedures for panel data estimation can consider heterogeneity by allowing for bank-specific variables, while the lack of control for heterogeneity leads to misleading results. In this study, panel data from the period 2011–2015 for each bank can ensure the control of heterogeneity undertaken in the sampled banks. Thirdly, panel datasets yield more informative data, high variability, less collinearity among variables, high degrees of freedom and greater efficiency compared to cross-sectional or time-series datasets (Baltagi, 1998). These attributes help to get more reliable estimates and test more sophisticated behavioural models (ibid.). Finally, panel datasets minimise the effect of the endogeneity problems (Larcker & Rusticus, 2007). In particular, panel datasets make this study "possible to control for some types of omitted variables, even without observing them, by observing changes in the dependent variable over time" (Amran, 2010, p. 157). They also mitigate problems of endogeneity caused by simultaneity and measurement error.

In addition to the above mentioned statistical reasons, there are some practical arguments for using five-year panel datasets. The first reason is that this approach follows previous corporate governance studies, which have used five-year balanced panel datasets (e.g. Boyd, 1995; Yermack, 1996; Gompers *et al*., 2003; Gani & Jermias, 2006; Haniffa & Hudaib, 2006; Bhagat & Bolton, 2008; Ntim, 2009; Ahmed, 2010). The second reason is that using five-year panel datasets is also similar generally to the

traditional capital markets-based study (Strong, 1992; Kothari, 2004). The final reason is that the five-year panel ends in 2015, because it is the most recent year for which data was available at the time of data collection. Accordingly, 2011 is the first year for each five-year panel dataset.

5.2 VARIABLES DEFINITIONS AND MEASUREMENTS

There are three key variables associated with this study, namely: internal corporate governance mechanisms referred to as the independent variables; shareholder value referred to as the dependent variable; and non-equity stakeholders referred to as the mediating variables. In addition, four control or firm-specific variables are used in this study. The descriptions and modes of measurement of all the variables used in this study are presented in the following subsections.

5.2.1 Definition and Measurement of Independent Variables

Independent variables consist of a number of internal corporate governance mechanisms by which banks are controlled and directed in order to reduce the inefficiencies caused by moral hazard and adverse selection (Gregory, 2004). These mechanisms include: board size (BdSize), sponsor-directors' shareholding (SdSh), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), Chief Executive Officers' (CEOs') compensation (CeoCom), presence of the independent audit committee (ExaudC), size of the audit committee (SizeaudC) and frequency of the audit committee meetings (AudcM). Appendix 4 contains descriptions of the acronyms of all the independent variables employed in this study and also shows how each variable is operationalised.

All the independent variables being examined are operationalised in line with previous studies. For example, board size is measured as the total number of directors serving on a bank's board at the end of its financial year (Yermack, 1996; Mangena & Tauringana, 2008; Ntim, 2009; Ahmed, 2010). Following the study conducted by Hossain (2014), sponsor-directors' shareholding is operationalised by taking the percentage of all ordinary shares held by the sponsors and directors of each sampled bank. Similarly, institutional shareholding and general public shareholding are measured

taking the proportion of the ordinary shares held by institutional investors and general public, respectively, at the end of the financial year (Ntim, 2009; Mollah *et al*., 2012). Consistent with Hossain (2014), both local and non-local institutional investors have been incorporated in the institutional shareholding pool.

Independent non-executive directors refer to the total number of independent non-executive directors serving on the board of a bank at the end of its financial year (Haniffa & Hudaib, 2006; Ntim, 2009; Ahmed, 2010). CEOs' compensation is measured as the amount of total annual benefits (including salaries, bonuses and other financial benefits) paid to the CEO of a sampled bank.

Consistent with previous literature (e.g. Laing & Weir, 1999; Mangena & Chamisa, 2008; Henry, 2008; Ntim, 2009), the presence of the independent audit committee[23] is operationalised as a dummy variable that takes a value of "1" if the presence of an independent audit committee is confirmed at the end of a bank's financial year, and zero (0) otherwise. The size of the audit committee is measured as the number of the audit committee members serving on a bank's audit committee at the end of its financial year. Finally, the frequency of the audit committee meetings is measured as the total number of meetings held by the audit committee of a bank in each financial year.

5.2.2 Definition and Measurement of Mediating Variables

Non-equity stakeholders are used as mediating variables in this study. As has been stated earlier, non-equity stakeholders are those individuals, groups or other entities involved with a bank, but who do not have ownership of a bank, i.e. anyone involved with a bank other than shareholders. Non-equity stakeholders associated with a commercial bank include depositors, borrowers, employees, relevant departments of the government of Bangladesh (e.g. Ministry of Finance), various regulatory authorities (e.g. the central bank: Bangladesh Bank, the Bangladesh Securities and Exchange Commission, the Stock Exchange), other commercial and non-commercial banks, trade union, community groups/societies, suppliers, board members, professional and industry

[23]As per the BSEC notification no. SEC/CMRRCD/2006-158/134/Admin/44, the Chairman of the audit committee should be an independent Director. Accordingly, the study deems an audit committee to be independent if the committee is formed with the Chairman, who is an independent director.

associations and others. This study, however, attempts to examine the mediating effect of only four key non-equity stakeholders related to commercial banks: depositors, borrowers, employees and society.

The mediating effect of four non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value can be shown in two ways. Firstly, the separate mediating effect of each non-equity stakeholder can be shown, for example, examining the mediating effect of depositors on the relationship between internal corporate governance mechanisms and shareholder value or, similarly, examining the mediating effect of borrowers, employees and society in isolation on the relationship between internal corporate governance mechanisms and shareholder value. Secondly, the composite mediating effect of four non-equity stakeholders can be shown on the relationship between internal corporate governance mechanisms and shareholder value. This study attempts to examine the separate mediating effect of four non-equity stakeholders for the following reasons. Firstly, exploring the individual mediating effect of each of the four non-equity stakeholders is important for the policymakers of the sampled banks. If the composite mediating effect of non-equity stakeholders is determined, policymakers will not be able to know which mediating variable does or does not affect the relationship between internal corporate governance mechanisms and shareholder value. For example, it may be that borrowers do not mediate the relationship, which will remain unexplored if the composite mediating effect is analysed, as it determines the average effect.

Secondly, in constructing the composite index value, one important methodological issue is whether or not to construct a weighted or equally weighted (unweighted) composite index value for determining the composite mediating effect of four non-equity stakeholders. The weighted composite index value treats all four non-equity stakeholders based on their relative importance to the sampled banks, while the equally weighted composite index value treats all four non-equity stakeholders as of equal importance to the sampled banks. Constructing a weighted composite index value and examining its mediating effect on the relationship between internal corporate governance mechanisms and shareholder value is more rational than the unweighted or equally weighted composite index value. However, there are a number of limitations in

constructing a weighted composite index value of four non-equity stakeholders in this study.

Firstly, there is no precise theoretical framework for assigning weights to non-equity stakeholders based on their relative importance to banks. On the basis of their relative importance, depositors may be considered more influential non-equity stakeholders for banks because banks characteristically depend on the core deposits collected from the depositors for their funds. Liquidity problems are reduced by increasing the volume of core deposits, and adequate funding leads banks to offer a higher volume of loans to borrowers or to invest in profitable projects. In this case, the key question is how much weight should be assigned to the depositors.

Secondly, the significance of non-equity stakeholders could be assessed in terms of their power and interest, using Mendelow's matrix. They may be grouped as a key player (high power with high interest), as latent (high power with low interest), as apathetic (low power with high interest), or as a defender (low power with low interest). Again, the key question is how much weight should be assigned to each group of non-equity stakeholders.

Finally, given the complexity of the issues involved, there is a way of assigning a relative weight for non-equity stakeholders arbitrarily. However, constructing arbitrary weights may create a bias towards a specific non-equity stakeholder. In these circumstances, using an equally weighted index can avoid assigning an arbitrary weight to each set of non-equity stakeholders, but, and as has been stated before, this does not give a realistic picture of their value.

Non-equity stakeholders are rarely quantified in previous empirical studies. Some prior studies quantify CSR engagement, which includes multiple stakeholders (e.g. community, environment, diversity, employee relations, product quality and safety), using the KLD (Kinder, Lydenburg, Domini & Co.,) index. For example, Greenley & Foxall (1997) use a survey methodology, and Waddock & Graves (1997) use the KLD index to measure a firm's orientation towards multiple stakeholders (Hillman & Keim, 2001). Jo & Harjoto (2011) measure CSR engagement based on the strength and concern items used in the KLD social rating database (see Appendix 5).

KLD is a measure frequently used in previous studies to assess corporate social performance (e.g. Ruf *et al*., 1993; Graves & Waddock, 1994; Sharfman, 1996; Waddock & Graves, 1997; Berman *et al*., 1999; Hillman & Keim, 2001; Deckop *et al*., 2006; Jo & Harjoto, 2011; Atanassov, 2013). KLD is a social choice investment advisory firm that uses independent rating specialists to measure how well companies meet the expectations of multiple stakeholders (Atanassov, 2013). It considers a range of dimensions of different stakeholders; in particular, it assesses different stakeholders' dimensions based on their strength and concern and assesses how well firms care for their stakeholders. These include the strengths and concerns of community relations, environmental performance, employee relations, diversity-related performance, product quality and safety and some KLD exclusionary items, such as alcohol, gambling, tobacco, firearms, military and nuclear energy (Hillman & Keim, 2001). It uses multiple data sources to obtain the strengths and concerns of stakeholders. These include "annual questionnaires sent to investor relations offices, financial statements, annual and quarterly reports, general press releases, government surveys and academic journal publications" (Atanassov, 2013, p. 9).

This study, however, has not used similar stakeholders and measurement processes to the KLD to operationalise non-equity stakeholders. This is because banking companies in Bangladesh do not maintain records of similar dimensions of non-equity stakeholders as the KLD index. As has been stated before, the present study includes only four key non-equity stakeholders related to commercial banks, namely depositors, borrowers, employees and society. For this reason, depositors, borrowers, employees and society have been operationalised using a proxy for their attitudes towards the sampled banks.

The attitude of depositors towards the sampled banks is the state of mind of depositors to deposit their savings in banks. It is measured as the total amount of savings deposited by depositors into all categories of accounts (such as deposits in savings accounts, current accounts, fixed deposit accounts and similar) in the sampled banks in each financial year. It is assumed that if the volume of deposited money (i.e. core deposits) increases or decreases, then this indicates the attitude of depositors towards the sampled banks as positive or negative, respectively.

The attitude of borrowers towards the sampled banks is the state of mind of borrowers in taking loans and advances from the sampled banks. It is measured as the total amount of money borrowed by all categories of borrowers (such as individuals and corporations) from the sampled banks in each financial year. It is assumed that if the volume of loans and advances increases or decreases, then this indicates the attitude of borrowers towards the sampled banks as positive or negative, respectively.

The attitude of employees towards the sampled banks is the extent to which employees are committed to the banks, meaning the investment of employees in their role or their attachment to the sampled banks where they are working. It is measured as the amount of average net revenue earned by each employee, calculated by dividing the total net revenue earned by a sampled bank in each financial year by the total number of employees of the bank at the end of its financial year. This study assumes that if the amount of average net revenue earned by each employee increases or decreases, then this indicates the attitude of employees towards the sampled banks as positive or negative, respectively.

Finally, the attitude of society towards the sampled banks refers to the interaction between the sampled banks and society. It is measured as the yearly amount of net profit spent by the sampled banks for social development, such as education, health, the green environment, pollution prevention and similar. This study assumes that if the yearly amount of net profit spent by the sampled banks on social development increases or decreases, then this indicates the attitude of society towards the sampled banks as positive or negative, respectively. Appendix 6 contains descriptions of the acronyms of the mediating variables employed in this study and also shows how the variables are measured.

5.2.3 Definition and Measurement of Dependent Variables

The internal corporate governance mechanisms are the basic function of shareholder value, which is, therefore, the dependent variable of this study. The term “shareholder value” is commonly used in the business sector. This is because companies have adopted as their definitive goal the creation of shareholder value: i.e. the principal objective of firms is to enhance shareholder value. Rappaport (1998) describes

shareholder value as a part of a firm's total economic value that consists of its debt value and equity value; the equity value portion of the firm is considered to be its shareholder value. Black *et al.* (1998) also defined shareholder value as the difference between the debt value and the value of a firm, where the value of a firm refers to total discounted future cash flows.

In the late 1980s, the idea of shareholder value was introduced as a key corporate performance indicator (Beaver, 2001). This means that whether shareholder value increases or decreases, it is indicated by corporate performance is good or bad, respectively. Therefore, shareholder value refers to the value enjoyed by the stockholders as a result of a firm's success. It indicates the ultimate commercial success of a company. By and large, value is created for shareholders by firms achieving optimal financial performance (Nenonen & Storbacka, 2008). According to Petravičius and Tamošiūnienė (2008, p. 195), "value to the shareholders is achieved only when the residual measure of (adjusted) profit minus the cost of capital is positive – that is, when 'profit' exceeds the cost of capital". Therefore, this study uses a bank's financial performance as the proxy for shareholder value of it.

Choosing an appropriate measure to quantify firms' performance/shareholder value is a challenge. This is because measuring shareholder value is a subjective issue, as there are many ways and perspectives to measure it. A number of prior corporate governance studies have generally measured shareholder value from (i) the accounting return perspective, using return on assets (ROA), return on equity (ROE), or return on sales (ROS) (referred to as accounting return-based methods in this study), and (ii) market return perspective, using stock performance (SP) and Tobin's Q (TQ) (referred to as market-based methods in this study).

Along the lines of previous studies, the present study has used ROE under the accounting return-based method and Tobin's Q under the market-based method. In addition, this study has measured shareholder value from the economic return perspective, using economic value added (EVA) (referred to as value-based measures in this study). To the best of our knowledge, no prior Bangladeshi research has employed EVA to measure shareholder value or firms' financial performance in the context of

corporate governance studies. Therefore, this study fills a gap and has used a new variable for the first time.

There are two reasons to use these three alternative measures of shareholder value. Firstly, different groups of stakeholders place emphasis on different forms of profitability (European Central Bank, 2010). Previous evidence suggests that corporate governance structures behave in a different way for insider and outsider value (Black *et al*., 2006). As such, ROE (the accounting return-based method) is the insider value, attempting to capture the effects of corporate governance mechanisms on shareholder wealth from the insiders' viewpoint (i.e. company management), while Tobin's Q (market-based method) and EVA (value-based method) attempt to capture the effects of corporate governance mechanisms on shareholder wealth from the outsiders' perspectives (i.e. investors/shareholders). Secondly, and as will be discussed further below, each approach has its pros and cons, so to use variables under the accounting return-based, market-based and value-based measures of shareholder value allows each measure to make up for the weaknesses of others (Hossain, 2014). Hence, using three alternative measures indicates an attempt to examine the robustness of the findings. Appendix 7 contains descriptions of the acronyms of the proxies of shareholder value (dependent variables) used in this study and also shows how the proxies are measured.

Accounting return-based measures – ROE: Accounting return-based measures are the most traditional techniques for operationalising firms' financial performance, the proxy for shareholder value. Previous evidence documents that ROA and ROE are used widely to measure firms' financial performance or shareholder value. These measures are profit-related techniques which are backwards-looking return-based measures of shareholder value (Farooque *et al*., 2007). A higher percentage of ROA and ROE suggest an effective use of firms' assets in achieving the economic interests of shareholders (Haniffa & Hudaib, 2006). According to Joh (2003), accounting returns are better performance indicators for a firm than stock market measures for a number of reasons. Firstly, the stock price may not reflect the actual performance of a firm as market irregularities may manipulate it. Secondly, a firm's economic sustainability can be forecasted from accounting return-based measures, while stock market measures are unable to predict it all the time. Finally, both private and public firms' performance can

be measured using accounting return-based measures, while the performance of public firms cannot be measured using stock market measures.

However, accounting return-based measures have been strongly criticised on the grounds of manipulation. This means that accounting return-figures are subject to manipulation. They may be systematically undervalued or overvalued, and also other distortions or manipulations are possible within accounting policies and estimates (Sánchez-Ballesta & García-Meca, 2007). They may also be biased in the case of tax regulations and extraordinary short-run variation in revenue (Mollah *et al*., 2012). Moreover, they focus on short-termism and ignore long-term and sustainable performance.

As has been mentioned earlier, this study uses ROE to measure shareholder value under the accounting return-based method, instead of ROA, although both variables seem to be superficially similar, i.e. both estimate firms' ability to earn returns from their investments. However, a closer look at these two variables exposes a key distinction. ROE looks at how efficiently and effectively a firm's management utilises shareholder money to earn profits; i.e. ROE provides an idea of how effectively a company's assets are utilised to enhance the economic interests of shareholders (Haniffa & Hudaib, 2006). Specifically, it is a comprehensive pointer to a firm's performance, which offers an indication of how well managers use the funds invested by shareholders to generate returns (Palepu *et al*., 2003). On the other hand, ROA, which shows a different dimension of a firm's management efficiency and effectiveness, indicates how much return a company earns for every dollar of its total assets, including current and non-current assets. This means that it gives shareholders an idea of how effectively a company is translating its assets or invested capital into net profit. Some argue that enhancing a firm's return on every dollar of its total assets ensures shareholder value. Others, however, argue against such an assertion and advance the argument that higher ROA may not necessarily enhance the shareholder value of a company, as shareholders are not the only claimants on the total assets belonging to a firm. In this study, therefore, ROE is selected as a proxy variable for shareholder value under the accounting return-based measure. This is because it is more closely related to shareholder value than ROA, as it is a direct estimation of the economic earnings of a shareholder's investment. ROE

is measured by dividing net income (after preference stock dividends, but before common stock dividends) by the total equity excluding preference shares (Vintilă & Gherghina, 2012), giving the following equation:

$$\text{ROE} = \frac{\text{Net income} - \text{Dividend for preference shares}}{\text{Total equity} - \text{Preference equity}}$$

However, ROE has received a barrage of criticism concerning how it is constructed and its potential measurement errors. The European Central Bank (2010) has criticised ROE as a bank performance measure from various perspectives. Firstly, it is not an objective performance method, as it does not take into account risk. For example, risk factors represented by the proportion of risky assets and the solvency situation are not taken into account in the measurement of an ROE figure, and ROE can increase significantly in the case of high leverage. Secondly, ROE focuses on short-termism, as it does not consider either a bank's long-term strategy or the damage caused by the predicament it is in. For example, it fails to consider the long-term effect of restructuring and consolidation, suggesting that ROE only indicates performance more generally. Thirdly, ROE does not reflect the actual performance of a bank. Although it accurately measures operating performance in the case of the continuing operations of a bank, in more challenging times, extraordinary elements or non-recurrent transactions may appear to be significant items, and these are not reported in ROE measure. Finally, ROE figures can be manipulated using accounting principles and estimates; thus, it may provide a misleading or incorrect indication of performance.

Given the limitations of ROE, it may be rational to focus further on methods for measuring bank performance which encompass additional aspects of performance, and not just a backwards-looking (profitability) indicator, such as ROE. In particular, it is necessary to consider frameworks which emphasise more forward-looking assessments of performance, which consider risk factors and which may not be easily manipulated: for example, methods which can incorporate the quality of assets, the funding capacity and the risk associated with the production of value (European Central Bank, 2010). For this reason, this study employs two additional dependent proxy variables for shareholder value, namely TQ and EVA.

Market-based measures – TQ: "Tobin's Q (TQ) is a forward-looking market/hybrid measure" (Hossain, 2014). It is one of the most commonly used market-based methods for measuring a firm's financial performance (Lang *et al*., 1996), the proxy for shareholder value in this study. Unlike ROE, it has a great instinctive appeal and is of enormous theoretical and practical significance (Chung & Pruitt, 1994), as it reflects risk-adjusted performance (Sánchez-Ballesta & García-Meca, 2007). This attribute makes it a very popular proxy for firms' financial performance. According to Weir *et al*. (2002), the higher the TQ ratio, the better the market perception of firms' financial performance, the proxy for shareholder value.

Theoretically, TQ is the ratio of the market value of a firm's tangible assets to their replacement costs (Sang, 1998). However, the computation of the ratio is not straightforward and "its empirical construction is subject to considerable measurement error" (ibid., p. iii). In particular, the measurement errors and lack of availability of data in relation to the replacement costs of tangible assets is a strong barrier in adopting the theoretical concept of Tobin's Q (Hossain, 2014). For this reason, several prior studies formulate TQ in different ways, as has this study (e.g. Haniffa & Hudiab, 2006; Farooque *et al.*, 2007; Ntim, 2009; Ahmed, 2010). Prior empirical studies in the area of corporate governance and firms' financial performance operationalise TQ in such a way that the book value of total assets is employed as the proxy for the replacement cost of tangible assets. As with ROE, this study applies a standardised formula to calculate TQ ratio in which a firm's total market value plus its total debt is divided by its total assets (Haniffa & Hudiab, 2006; Hossain, 2014).

However, TQ also comes with several limitations, which weaken its attractiveness. Firstly, TQ does not reflect the actual financial performance of a firm as the denominator is sensitive to asset recognition requirements and depreciation policies (Hossain, 2014). That means, as with ROE, TQ ratio may be considered as a poor indicator of firms' performance, specifically when using different accounting policies and estimates in calculating book value of total assets (Chiang & Lin, 2007). Secondly, TQ ratios of different companies may give a misleading idea about financial performance, if the capital market in which firms are operating is unstructured and very volatile (Hossain, 2014). Finally, Dybvig & Warachka (2012) consider the previous

evidence and contend that the problem of endogeneity confounds the relationship between a firm's financial performance and TQ. Specifically, inefficiency due to under-investment results in a worse financial performance but actually increases TQ. This means that "under-investment confounds the relationship between Tobin's Q and firm performance since firm performance has an ambiguous impact on Tobin's Q. Better firm performance can either decrease or increase Tobin's Q depending on the relative importance of scale decisions versus cost discipline, respectively" (ibid., p. 20). Therefore, high or low TQ is not always evidence of the better or poorer financial performance of a firm.

Value-based measures – EVA: Given the limitations allied to TQ under market-based measures stated above, this study uses a complementary variable under the value-based method, namely "economic value added" (EVA). The value-based measures of performance focus on the real value created for shareholders by assessing the economic outcomes (profits) from the economic assets of a bank for a given financial year (European Central Bank, 2010). EVA is a modern financial performance indicator that determines whether a firm earns economic profit, which is the value created over and above the requisite return on a firm's capital employed (Stewart, 1990; Kimball, 1998; Thampy & Baheti, 2000; Popa *et al*., 2009). Specifically, a firm creates real wealth for its shareholders only when it earns economic profits, which refers to the earnings left after meeting costs associated with all sorts of capital employed (Thampy & Baheti, 2000).

However, a firm's economic profit differs from its accounting profits. Accounting profit is a firm's net income, which is the excess of revenues over expenses and taxes (Kimball, 1998). The opportunity cost of equity capital is not deducted when accounting profit is calculated, but it is done when economic profit is determined. "A firm earns economic profits only to the extent that its earnings exceed the returns it might earn on other investments. Thus, earnings will always exceed economic profits, and a firm can be profitable in an accounting sense, yet unprofitable in an economic sense" (ibid., p. 36). As a result, accounting profit may suggest a firm is performing well, while it may, in fact, be diminishing shareholder value (Fraker, 2006; Popa *et al*., 2009).

EVA can be measured by deducting capital charges from net operating profit after taxes (NOPAT) (Stewart, 1990). Specifically, this study calculates the EVA of each bank

in the sample by subtracting the average cost of shareholders' equity from the profit after tax plus the provision for loans and advances in each financial year being examined. This calculation can be stated as:

$$EVA = NOPAT - \text{Average cost of equity}$$

NOPAT, in the case of a bank, is the net operating profit after tax plus the provision for loans and advances charged against profit. Equity denotes the total amount of shareholders' equity at the year-end, plus the accumulated provision charged against profit for loans and advances (Bank Asia, 2015). The average cost of equity for a Bangladeshi bank is the opportunity cost, i.e. the expected risk-free return on equity (based on the weighted average rate of 10-year treasury bonds issued by the Government of Bangladesh) plus a 2% risk premium (ibid.). Appendix 8 contains a calculation of EVA in detail made by a commercial bank in Bangladesh. The value of EVA may be either positive or negative. A positive EVA reflects that the shareholder value of banks is increasing, while a negative EVA reflects that shareholder value is diminishing (Fraker, 2006).

EVA is distinct from ROE and TQ for two reasons. Firstly, in the calculation of accounting profit for ROE, the cost of debt finance is taken into account, whereas the cost of equity finance (opportunity cost) is ignored. In practice, firms only generate wealth if they generate a return in excess of the return required by both equity and debt capital providers. Secondly, profit is calculated following the "Generally Accepted Accounting Principles (GAAP)" that do not replicate the wealth that has been created and are subject to manipulation by accountants. EVA is a performance indicator that overcomes these limitations by taking into account the opportunity cost of equity finance and making necessary adjustments to avoid the distortion of results by accountants. Thus, it measures corporate performance over any given period more accurately, as it translates accounting profits into economic reality (Popa *et al*., 2009).

5.2.4 Definition and Measurement of Control Variables

The central point of this study is to examine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. There are, however, some variables other than internal corporate

governance mechanisms that may influence shareholder value. All prior empirical studies related to corporate governance show that several other variables, not related to internal corporate governance mechanisms, have an effect on shareholder value. These variables are not desirable as they threaten the internal validity of the results by offering an alternative relationship between the variables due to the problem of endogeneity. Along the lines of previous studies, some of these factors are included in the regression equation as control variables. This study recognises four control variables: asset tangibility (Asttang), debt-equity ratio (Gear), firm size (FmSize) and firm age (FmAge).

Asset tangibility is a variable that influences banks' financial performance (Michaux & Mon, 2014), the proxy for shareholder value. This variable is measured dividing a bank's total property, plant and equipment (PP&E) assets by its book value of total assets (ibid.). The debt-equity ratio is measured by dividing the total debt of a bank by its total shareholders' equity (Ahmed, 2010). Many proxies have been used in prior corporate governance-related studies to measure firm size, such as the annual sales revenue earned by a firm (Ntim, 2009), the number of employees working in a firm (Waddock & Graves, 1997) or the total assets employed by a firm (Alfaraih *et al*., 2012; Pervan *et al.,* 2012). This study adopts the last approach, i.e. firm (bank) size is measured as the natural logarithm of total assets employed by a particular bank. Firm age is usually operationalised by the number of years that a bank has been operating (Pervan *et al.,* 2012). This study, however, prefers the number of years a bank has been listed on the Dhaka Stock Exchange as an alternative approach, because the same regulations govern banks traded on the stock exchange, providing equality of opportunity for all banks in terms of the weight of regulations applied to them. Appendix 9 contains descriptions of the acronyms for all the control variables employed in this study and shows how they are measured.

5.3 DATA ANALYSIS – MODEL ESTIMATION

This study employs several quantitative or statistical tools or models to describe and analyse data and the relationship between variables. This section discusses the models used for the panel data in this study. The section is divided into four subsections. Subsection 5.3.1 outlines the model estimation for panel data, while subsection 5.3.2

discusses the approaches of the diagnostic tests. Subsection 5.3.3 describes the specific regression model to be used in this study to examine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value, and, finally, subsection 5.4.3 describes ways of examining the robustness and sensitivity of the results.

5.3.1 Model Estimation for Panel Data

As has been stated before, this study uses panel data to examine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. Three estimation models with different assumptions are typically employed to analyse panel data. They are (1) the pooled ordinary least squares (OLS) regression model, (2) the fixed-effects model and (3) the random-effects model.

5.3.1.1 Pooled OLS regression model

OLS is the method widely used in regression analysis because of its instinctive attractiveness and simplicity compared to other methods. It also contains a number of very appealing statistical properties that have made it one of the most powerful and popular methods of regression analysis (Gujarati, 2003). The general estimated pooled OLS regression model for analysing panel data is as follows.

$$Y_i = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \ldots\ldots + \beta_n X_n + u$$

Here, Y denotes the dependent variable and $X_{123..n}$ denote the independent variables. $\beta_{123\ldots n}$ denotes the coefficients of the independent variables, α denotes the constant term and u denotes the error term.

However, OLS for multiple regression analysis depends on several essential assumptions about the population from which data have been extracted. The analysis yields reliable results only if the following underlying assumptions are met (Gujarati, 2003).

(1) The OLS regression model requires that the independent variables are linearly related to the dependent variables.

(2) The individual data points of *Y* for each *X* are normally distributed about the line of means (regression line).
(3) There is not a high degree of correlation (multicollinearity) between two or more independent variables.
(4) The OLS regression model requires homoscedasticity. This means that the variance of errors (*u*) is identical throughout all levels of the independent variables.
(5) The OLS regression model requires that there is little or no serial correlation/autocorrelation in the data.

However, there are a number of pitfalls in applying the pooled OLS regression model for which the model may produce misleading results. Firstly, it performs badly if there are outliers in the dataset. Secondly, the model yields unreliable results if it fails to meet the above-mentioned underlying assumptions. Thirdly, "it pools all observations and estimates regression by ignoring the cross-section and time-series nature of the data, in which case the error term captures everything" (Nwakuya & Ijomah, 2017, p. 276). In particular, the model pools all 145 observations of the 29 banks together and runs the regression model, neglecting the cross-section and time series of the data for the study period. Finally, it denies the individuality/heterogeneity that may exist among several units, i.e. banks. Specifically, the model does not distinguish among the 29 banks included in this study. Therefore, it is often not the best model to apply in practice.

5.3.1.2 Fixed-effects model

This model controls/removes the effects of time-invariant characteristics to determine the net impact of independent variables on dependent variables. Consequently, estimated coefficients cannot be biased because of the omitted time-invariant characteristics (Nwakuya & Ijomah, 2017). A key inference of the model is that those time-invariant characteristics are distinctive for each bank (unit of this study) and should not be correlated with other banks' characteristics. Each bank is different; therefore, the bank's error term and the constant should not be correlated with the others. The general estimated fixed effects model for analysing panel data is as follows.

$$Y_{it} = \alpha_i + \beta_1 X_{1it} + \beta_1 X_{2it} + \beta_3 X_{3it} + \ldots\ldots\ldots\ldots \beta_n X_{nit} + u_{it}$$

Here

α_i (i =1….n)	= unknown intercept for each entity
Y	= dependent variable
$X_{123..n}$	= independent variables
$\beta_{123..n}$	= coefficients of the independent variables
u_{it}	= the error term
i	= entities (I,2,3…..20), and t = times (1,2,3…n)

The model allows heterogeneity or individuality among the 29 banks included in this study by allowing them to have their own intercept value. "The term fixed effects is due to the fact that, although the intercept may differ across individuals, each individual's intercept does not vary over time; that is, it is time-invariant" (Gujarati, 2003, p. 642).

5.3.1.3 Random-effects model

The alternative to the fixed-effects model is the random-effects model. Unlike the fixed-effects model, it includes time-invariant variables, which are absorbed by the intercept in the fixed-effects model (Torres-Reyna, 2007). The random-effects model assumes that "individual error components are not correlated with each other and are not autocorrelated across both cross-section and time-series units" (Gujarati, 2003, p. 648). The general estimation of the random-effects model is as follows.

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \ldots\ldots\ldots\ldots \beta_n X_{nit} + u_i + v_{it}$$

Here, u_i indicates unobservable individual heterogeneity, and v_{it} denotes remainder disturbance. If variation across entities has an effect on the predicted variable, the random-effects model is used (Torres-Reyna, 2007).

5.3.1.4 Choosing the appropriate model for this study

Choosing the appropriate model for any study is a challenge. Selecting the appropriate model between the fixed-effects and random-effects models depends on a number of conditions (Gujarati, 2003; Judge *et al*., 1982). Firstly, if a cross-sectional error term or individual-specific error component and the independent variables are uncorrelated, the random-effects model is appropriate; otherwise, the fixed-effects model

is appropriate (Gujarati, 2003). Secondly, if the number of cross-sectional units is small, but the amount of time series data is large, the fixed-effects model is appropriate (Judge *et al*., 1982); otherwise, the random-effects model is appropriate.

Based on the conditions above; however, it is often difficult to choose the appropriate model among the pooled OLS regression model, the fixed-effects and random-effects models. However, a number of econometric tests, for example, the Hausman Specification test and the Breusch-Pagan Lagrange Multiplier (B-P LM) test, can be conducted to choose the appropriate model for the panel data used in this study.

Firstly, this study conducts the Hausman Specification test in deciding whether the random-effects model should be used or whether the fixed-effects model should be used instead. The null and alternative hypotheses in the Hausman Specification test are as follows.

H_o: Random-effects model is appropriate

H_a: Fixed-effects model is appropriate

If the p-value of Chi-Square (Prob>chi^2) of the Hausman Specification test is significant at 5% (i.e. $p<0.05$), rejecting the null hypothesis, this indicates that the random-effects model is not appropriate and that, rather, the fixed-effects model is appropriate.

Secondly, this study conducts the B-P LM test to decide between the pooled OLS regression model and the random-effects model for panel data. The null and alternative hypotheses in the B-P LM test are as follows.

H_o: Pooled OLS regression model is appropriate

H_a: Random-effects model is appropriate

If the p-value of Chi-Square (Prob>chi^2) of the B-P LM test is significant at 5% (i.e. $p<0.05$), rejecting the null hypothesis, this indicates that the pooled OLS regression is not the appropriate model, but that, rather, the random-effects model is appropriate.

Finally, the most important aspects of panel data analysis are the problems of heteroscedasticity and serial correlation (autocorrelation) that can affect the estimation of the random-effects model (Wahba & Elsayed, 2015). As will be stated later, this study

will conduct the Breusch-Pagan/Cook-Weisberg test for checking the presence of heteroskedasticity problems and the Wooldridge test and Durbin-Watson *d* test for checking the presence of autocorrelation problems. If the presence of a heteroskedasticity problem is confirmed, the optional robust standard error will be incorporated into the model to control for heteroskedasticity. If the presence of first-order autocorrelation is confirmed in the datasets, the random-effect GLS regression model with AR(1) disturbances will be used to control for autocorrelation.

5.3.2 Diagnostic Tests

After fitting a multiple regression equation, it is essential to assess whether the regression assumptions (e.g. assumptions of normality and linearity, no multicollinearity, heteroscedasticity and autocorrelation) are not violated. Therefore, assessing the goodness-of-fit of data models is essential, particularly when using not only omnibus tests but also test designed for a certain direction of the alternative. Otherwise, the model may be deemed faulty and may yield a misleading conclusion. The diagnostic tests begin by checking for outliers and by performing normality and linearity tests of the sample chosen for this study. Following these tests, multicollinearity, heteroscedasticity and autocorrelation tests will also be performed.

5.3.2.1 Outliers

An outlier is any value of an observation that is numerically distant from most of the other data points in a set of data (Hair *et al*., 2014). The presence of outliers may influence regression analysis, which may lead to misleading results (Gujarati, 2003). The common sources of outliers include sampling errors, measurement errors, human error (errors in data collection and entry) and the deliberate reporting of incorrect data by the participants. There are several ways to detect an outlier, including using histograms, scatter plots, number lines, box plot techniques and the interquartile range. This study will use a box plot technique to detect outlier values in the dataset, as the technique is easy to use.

If an outlier occurs due to one of the stated reasons, it is necessary to limit the effect of the outliers on the results. Two well-known techniques have been used in the

corporate governance literature to limit the effect of outliers, namely "winsorising" and "excluding outliers" (Beiner *et al.*, 2006; Chhaochharia & Grinstein, 2009; Ntim, 2009). Following the studies of Klapper & Love (2004), Ntim (2009) and Chhaochharia & Grinstein (2009), this study will winsorise all the variables affected by outliers, instead of excluding them from the regression equation. This is because excluding outlier values from the regression equation may adversely affect the results.

5.3.2.2 Normality and linearity

Multiple regression analysis requires that all the variables being examined in a study have a normal distribution. Variables are normally distributed if they are less skewed or kurtotic or if the variables have no significant outliers. Non-normally distributed variables may be misleading regarding the relationship between the variables and may provide misinformation about the significance tests. In multiple regression, normality is required for valid hypothesis testing; however, it is not needed to estimate the regression coefficients (Hair *et al*., 2014). The normality assumption can best be assessed by a fitted normal curve, a histogram of residuals, a P-P normal probability plot, or the skewness/kurtosis values of the variable (Gujarati, 2003). It can also be checked by the Kolmogorov-Smirnov (K-S) test, Shapiro-Francia W test, Shapiro-Wilk W test, Jarque-Bera test, a Kernel density estimate plot or a Q-Q-plot (Pallant, 2001). The current study will check the assumption of normality of each variable by conducting the Shapiro-Francia W test, Shapiro-Wilk W test and the Jarque-Bera test. If the p-value is less than 0.05, this indicates that the data are not normally distributed; otherwise, data are normally distributed.

In order to estimate a true relationship between variables, multiple regression analysis requires a linear relationship between the dependent and independent variables. Otherwise, the regression analysis yields an underestimation or overestimation of the true relationship, which may lead to a Type II error for independent variables in the case of underestimation; and a Type I error in the case of overestimation. Moreover, linearity is important for assessing outliers, as linear regression is sensitive to outlier effects (Gujarati, 2003). However, non-linearity does not always lead to misleading conclusions if the standard deviation of the dependent variable is higher than the standard deviations

of the residuals (Amran, 2010). The current study will check the assumption of linearity between independent and dependent variables by using Pearson's correlation matrix.

5.3.2.3 Multicollinearity

The multiple regression analysis does not require high correlation or multicollinearity between two or more independent variables (Cheng *et al*., 2008). This means that multicollinearity occurs when two or more of the independent variables are highly correlated. When predictor variables are highly correlated, this indicates that changes in one independent variable relate to a change in another independent variable. That is, it is more difficult to change one independent variable without changing another, as there is a high correlation between them. This kind of behaviour between the independent variables suggests that they do not behave independently, which is a required assumption of the multiple regression analysis.

High correlation between the independent variables is a significant problem. This is because "the OLS estimators and their standard errors can be sensitive to small changes in the data" (Gujarati, 2003, p. 350), and thus the model yields a wrong estimate of the coefficient. This means that the OLS regression model yields an incorrect relationship between the independent and dependent variables by generating an incorrect sign or wrong statistical power (p-value) of the regression coefficient (Cheng *et al*., 2008).

Thus, the degree of multicollinearity among the independent variables should be checked. Pearson's correlation matrix is widely used to check for the existence of multicollinearity among the regressors. One of the suggested rules of thumb for confirming the presence of a severe multicollinearity problem is if the coefficient of correlation of two independent variables is shown to be in excess of 0.8; then, it is assumed that there is a multicollinearity problem (Gujarati, 2003).

However, Pearson's correlation matrix is not the best way to check the problem of multicollinearity, as the matrix suffers from important limitations (Hossain, 2014). For example, "high zero-order correlations are a sufficient, but not a necessary condition for the existence of multicollinearity because it may exist even though the zero-order or simple correlations are comparatively low, say less than 0.50" (Gujarati, 2003, p. 359).

Given this limitation, and following a number of prior studies (e.g. Ntim, 2009; Ahmed, 2010), variance inflation factor (VIF) and tolerance statistics (TOL) tests are also carried out to check the presence of multicollinearity. A TOL value close to 1 indicates low multicollinearity, whereas a value close to 0 suggests a severe multicollinearity problem (Gujarati, 2003). A VIF statistic below the value of 10 suggests there is no severe multicollinearity problem (Hossain, 2014).

5.3.2.4 Homoscedasticity

Another key assumption of linear regression analysis is homoscedasticity, which means the variance of the errors is identical throughout all levels of the independent variable. This means that "the variation around the regression line (which is the line of average relationship between *Y* and *X*) is the same across the *X* values; it neither increases nor decreases as *X* varies" (Gujarati, 2003, p. 68). In contrast, when the conditional variance of the *Y* population varies with *X*, an unequal spread or variance is indicated, known as heteroscedasticity. Taking into account the effect of heteroscedasticity on the regression analysis is important, as it can severely weaken the analysis and lead to severely erroneous conclusions, which may cause a Type I error (Berry & Feldman, 1985; Tabachnick & Fidell, 1996), i.e. the null hypothesis may be rejected when it should not be (Amran, 2010). However, insignificant heteroscedasticity has little impact on significance tests (Berry & Feldman, 1985).

There are a number of methods for detecting the presence of homoscedasticity in the model. These include using a scatterplot diagram or conducting the Breusch-Pagan Godfrey test, the White General Heteroscedasticity test, the Part test, the Glejser test (Greene, 2003; Gujarati, 2003) or the Breusch-Pagan/Cook-Weisberg test. The current study checks for the presence of heteroscedasticity by conducting the Breusch-Pagan/Cook-Weisberg test. If a p-value is greater than 0.05, it indicates a failure to reject the hypothesis, and thus the variance of the residual is not heterogeneous, i.e. homoscedasticity (Amran 2010); otherwise, the presence of heteroscedasticity is indicated.

5.3.2.5 Autocorrelation

The multiple regression analysis assumes that there is a little or no serial correlation (autocorrelation) in the dataset. Serial correlation or autocorrelation refers to the "correlation between members of a series of observations ordered in time [as in time series data] or space [as in cross-sectional data]" (Kendall & Buckland, 1971, p. 8). This means that "the classical regression model assumes that the disturbance term relating to any observation is not influenced by the disturbance term relating to any other observation" (Gujarati, 2003, p. 442). Autocorrelation may occur for several reasons, one of the common ones being the *inertia* or *sluggishness* related to the time series or when the value of $y\ (x + 1)$ is not independent from the value of $y\ (x)$: i.e. successive observations are probably interdependent. Other causes of autocorrelation are specification bias, resulting from the exclusion of important variables from the model or using the incorrect functional form, the cobweb phenomenon, data massaging and data transformation (Gujarati, 2003).

There are many techniques used to check for the presence of autocorrelation in the data. For example, the scatterplot technique, Wooldridge test and Durbin-Watson *d* test can be used. The current study conducts both the Wooldridge test and Durbin-Watson *d* test to confirm whether there is a little or no first-order autocorrelation in the dataset.

The null hypothesis in the Wooldridge test is that there is no first-order autocorrelation. If the p-value is less than 0.05, the null hypothesis is rejected, meaning that there is autocorrelation; otherwise, the test fails to reject the null hypothesis, indicating there is no autocorrelation. In the case of the Durbin-Watson *d* test, the null hypothesis is that the residuals are not linearly autocorrelated, where *d* can presume values between 0 and 4. A value of d = approximately 2 (i.e. between 1.5 to 2.5) indicates there is no autocorrelation. A value significantly below 2 (particularly, a value < 1) indicates that the data is positively autocorrelated, while a value of *d* significantly above 2 indicates that the data is negatively autocorrelated.

5.3.3 Research Model Specifications

This study follows Baron & Kenny's (1986) "three-step approach" to determine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. Under this approach, three independent regression analyses are conducted, and the significance of the coefficients is observed in each regression model. According to this approach, a multiple regression analysis is first conducted with internal corporate governance mechanisms predicting shareholder value to test the first nine hypotheses (H_1-H_9). These hypotheses state that there are significant relationships between internal corporate governance mechanisms and shareholder value. Therefore, to examine these relationships, the first regression model is to be estimated in the system as follows:

$$SHV_{it} = \alpha + \beta_1 BdSize_{it} + \beta_2 SdSh_{it} + \beta_3 InstSh_{it} + \beta_4 PubSh_{it} + \beta_5 INEDs_{it} + \beta_6 CeoCom_{it} + \beta_7 ExaudC_{it} + \beta_8 SizeaudC_{it} + \beta_9 AudcM_{it} + \beta_{10} Asttang_{it} + \beta_{11} Gear_{it} + \beta_{12} FmSize_{it} + \beta_{13} FmAge_{it} + u_i + v_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Here SHV stands for shareholder value, three alternative proxy variables, namely return on equity (ROE), Tobin's Q (TQ) and economic value added (EVA), are used to operationalise shareholder value.

α	constant term
$\beta_1 : \beta_{13}$	parameters for the independent variables
Subscript *(i)*	number of firms
Subscript *(t)*	time period
u_i	unobservable individual-specific effect
v_{it}	remainder disturbance
BdSize	board size
SdSh	sponsor-directors' shareholding
InstSh	institutional shareholding
PubSh	general public shareholding
INEDs	independent non-executive directors

CeoCom	chief executive officers' (CEOs') compensation
ExaudC	presence of the independent audit committee
SizeaudC	size of the audit committee
AudcM	frequency of the audit committee meetings
Asttang	asset tangibility
Gear	debt-equity ratio
FmSize	firm size
FmAge	firm age

Secondly, another multiple regression analysis is conducted with internal corporate governance mechanisms predicting non-equity stakeholders to test the second nine hypotheses (H_{10}-H_{18}). These hypotheses state that there are significant relationships between internal corporate governance mechanisms and non-equity stakeholders. Therefore, to examine these relationships, the second regression model is to be estimated in the system as follows:

$$NESHs_{it} = \alpha + \beta_1 BdSize_{it} + \beta_2 SdSh_{it} + \beta_3 InstSh_{it} + \beta_4 PubSh_{it} + \beta_5 INEDs_{it} + \beta_6 CeoCom_{it} + \beta_7 ExaudC_{it} + \beta_8 SizeaudC_{it} + \beta_9 AudcM_{it} + \beta_{10} Asttang_{it} + \beta_{11} Gear_{it} + \beta_{12} FmSize_{it} + \beta_{13} FmAge_{it} + u_i + v_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Here NESHs stands for non-equity stakeholders, as constituted by four key non-equity stakeholders, namely depositors (DeR), borrowers (BrR), employees (EmR) and society (SoeR).

Finally, the third multiple regression analysis is conducted with internal corporate governance mechanisms and non-equity stakeholders predicting shareholder value to test hypothesis H_{19}. This hypothesis states that there are significant relationships between non-equity stakeholders and shareholder value after controlling for the effect of internal corporate governance mechanisms. Therefore, the third regression model is to be estimated in the system as follows:

$$SHV_{it} = \alpha + \beta_1 BdSize_{it} + \beta_2 SdSh_{it} + \beta_3 InstSh_{it} + \beta_4 PubSh_{it} + \beta_5 INEDs_{it} + \beta_6 CeoCom_{it} + \beta_7 ExaudC_{it} + \beta_8 SizeaudC_{it} + \beta_9 AudcM_{it} + \beta_{10} NESHs_{it(M)} + \beta_{11} Asttang_{it} + \beta_{12} Gear_{it} + \beta_{13} FmSize_{it} + \beta_{14} FmAge_{it} + u_i + v_{it} \ldots\ldots\ldots\ldots\ldots\ldots (3)$$

As has been stated before, the present study will examine the separate mediating effect of each of four non-equity stakeholders (e.g. depositors, borrowers, employees and society). Therefore, under regression model 3, four separate regression models (regression models 3a–3d) are to be estimated to test the hypothesis that there is a significant relationship between each of four mediating variable and shareholder value after controlling for the effect of internal corporate governance mechanisms.

Firstly, regression analysis with depositors (DeR) and internal corporate governance mechanisms predicting shareholder value is to be conducted in the system as follows:

$$SHV_{it} = \alpha + \beta_1 BdSize_{it} + \beta_2 SdSh_{it} + \beta_3 InstSh_{it} + \beta_4 PubSh_{it} + \beta_5 INEDs_{it} + \beta_6 CeoCom_{it} + \beta_7 ExaudC_{it} + \beta_8 SizeaudC_{it} + \beta_9 AudcM_{it} + \beta_{10} DeR_{it(M)} + \beta_{11} Asttang_{it} + \beta_{12} Gear_{it} + \beta_{13} FmSize_{it} + \beta_{14} FmAge_{it} + u_i + v_{it} \quad (3a)$$

Secondly, regression analysis with borrowers (BrR) and internal corporate governance mechanisms predicting shareholder value is to be conducted in the system as follows:

$$SHV_{it} = \alpha + \beta_1 BdSize_{it} + \beta_2 SdSh_{it} + \beta_3 InstSh_{it} + \beta_4 PubSh_{it} + \beta_5 INEDs_{it} + \beta_6 CeoCom_{it} + \beta_7 ExaudC_{it} + \beta_8 SizeaudC_{it} + \beta_9 AudcM_{it} + \beta_{10} BrR_{it(M)} + \beta_{11} Asttang_{it} + \beta_{12} Gear_{it} + \beta_{13} FmSize_{it} + \beta_{14} FmAge_{it} + u_i + v_{it} \quad (3b)$$

Thirdly, regression analysis with employees (EmR) and internal corporate governance mechanisms predicting shareholder value is to be conducted in the system as follows:

$$SHV_{it} = \alpha + \beta_1 BdSize_{it} + \beta_2 SdSh_{it} + \beta_3 InstSh_{it} + \beta_4 PubSh_{it} + \beta_5 INEDs_{it} + \beta_6 CeoCom_{it} + \beta_7 ExaudC_{it} + \beta_8 SizeaudC_{it} + \beta_9 AudcM_{it} + \beta_{10} EmR_{it(M)} + \beta_{11} Asttang_{it} + \beta_{12} Gear_{it} + \beta_{13} FmSize_{it} + \beta_{14} FmAge_{it} + u_i + v_{it} \quad (3c)$$

Finally, regression analysis with society (SoeR) and internal corporate governance mechanisms predicting shareholder value is to be conducted in the system as follows:

$$SHV_{it} = \alpha + \beta_1 BdSize_{it} + \beta_2 SdSh_{it} + \beta_3 InstSh_{it} + \beta_4 PubSh_{it} + \beta_5 INEDs_{it} + \beta_6 CeoCom_{it} + \beta_7 ExaudC_{it} + \beta_8 SizeaudC_{it} + \beta_9 AudcM_{it} + \beta_{10} SoeR_{it(M)} + \beta_{11} Asttang_{it} + \beta_{12} Gear_{it} + \beta_{13} FmSize_{it} + \beta_{14} FmAge_{it} + u_i + v_{it} \quad (3d)$$

Here, subscript $_{(M)}$ denotes the mediating variable.

5.3.4 Determining the Mediating Effect of Non-Equity Stakeholders on the Relationship between Internal Corporate Governance Mechanisms and Shareholder Value

As has been stated in subsection 5.3.3, this study conducts three separate regression analyses following the "three-step approach" suggested by the Baron & Kenny (1986) to determine the mediating effect of non-equity stakeholders (NESHs) on the relationship between internal corporate governance mechanisms (ICGMs) and shareholder value (SHV). In this study, and as has been mentioned earlier, ICGMs are the independent variables, SHV is the dependent variable (measured by ROE, TQ and EVA) and NESHs are the mediating variables.

According to the "three-step approach", first, a statistically significant relationship is expected between ICGMs and SHV, which is estimated in regression model 1. Second, a statistically significant relationship between ICGMs and NESHs is also expected, which is estimated in regression model 2. Finally, a statistically significant relationship between NESHs and SHV is also expected after controlling for the effect of ICGMs, which is estimated in regression model 3. If significant relationships exist between ICGMs and SHV in regression model 1 and between ICGMs and NESHs in regression model 2, then the third regression analysis is conducted. It is inferred that mediation is not possible or likely if relationships between the variables are shown to be insignificant in regression models 1 and 2. When the third regression analysis is conducted, and if the relationship between NESHs and SHV remains significant after controlling for the effect of ICGMs, then it can be deduced that some form of mediation exists (i.e. full or partial mediation). Specifically, as ICGMs and NESHs are both simultaneously included in regression model 3 to predict SHV, and if ICGMs are no longer significant but NESHs remain significant in predicting SHV, the result supports *full mediation*. If ICGMs and

NESHs both significantly predict SHV at the same time, the result supports *partial mediation* (Baron & Kenny, 1986).

5.4 ROBUSTNESS TESTS/SENSITIVITY ANALYSES

Following previous corporate governance studies, this study will conduct a series of sensitivity analyses aiming to check the robustness of the results. Firstly, these analyse the uncertainty of the "three-step approach" suggested by Baron & Kenny (1986), and used in this study to determine the mediating effect, and test whether the main results are sensitive to an alternative method, namely the Sobel test; secondly, these check the sensitivity of the results to the alternative measurement of variables; thirdly, these check further sensitivity of the results to the composite mediating effect of non-equity stakeholders; and, finally, these analyse the statistical validity of the main results.

5.4.1 The Sobel Test

Baron & Kenny's (1986) "three-step approach", discussed above, is a widely used method to determine the mediating effect. This approach, however, contains several limitations. For example, the approach may lead to Type II errors caused by missing some true mediation effects (MacKinnon *et al*., 2007). This means that there might be a mediating effect, even if ICGMs and SHV are not significantly related to each other in step 1 (i.e. regression model 1 does not yield statistically significant result) (James & Brett, 1984; Kenny *et al*., 1998; Shrout & Bolger, 2002; James *et al*., 2006; Kenny, 2008). This may be caused by the small sample size of this study or other extraneous variables. Moreover, this approach does not test the significance of the indirect pathways, i.e. a significance test for the effect of ICGMs on SHV through NESHs.

Considering these limitations, and following Luo *et al*. (2014), Henssen *et al*. (2014), Yu-Shu *et al*. (2015), and Wahba & Elsayed (2015), the present study has conducted an alternative test, namely the Sobel test, to check the validity of the main results of this study. The test is a parametric test that relies on the normality assumption. It determines the mediating effect by multiplying the coefficients of two regression models (Sobel, 1982). They are (1) regression model 2 with the ICGMs predicting NESHs and (2) regression model 3 with the ICGMs and NESHs predicting SHV. Later, it

determines whether or not the mediating effect of NESHs on the relationship between ICGMs and SHV is significant. If the test statistics are significant (i.e. $p<0.05$), it confirms the mediating effect of NESHs (Nuijten, 2011). The process of determining the mediating effect employing the Sobel test is illustrated by depicting a number of paths as follows.

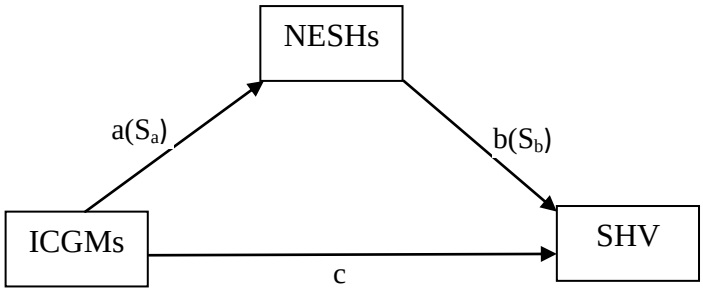

Figure 8: NESHs mediate the relationship between ICGMs and SHV

In the figure, a, b and c are the causal paths, and they are also regression coefficients. S_a and S_b are the standard errors of the regression coefficients of a and b, respectively. The Sobel test uses the following formula to calculate the test statistics.

$$Sobel\ test\ statistic = \frac{a \times b}{\sqrt{(b^2 \times S_a{}^2 + a^2 \times S_b{}^2)}}$$

Here, *a* denotes the unstandardised coefficient of the regression model 2 for the relationship between ICGMs and NESHs; S_a denotes the standard error of *a*; *b* denotes the unstandardised coefficient of the regression model 3 for the relationship between NESHs and SHV after controlling for the effect of ICGMs (when ICGMs are also predictors of SHV); and S_b denotes the standard error of *b*.

5.4.2 Alternative Measurement of Variables

Following prior studies (e.g. Chowdhury, 2015; Amran, 2010), the present study will further check the sensitivity of the main results for alternative measurements of the variables. This study will measure two variables in an alternative way, namely FmSize and EmR.

As has been mentioned before, firm size (FmSize) is initially operationalised by the total assets of each sampled bank. Following Ntim (2009), this will be replaced with the total annual revenue earned by each sampled bank. Thus, this study will re-run all

regression models after this alternative measurement of FmSize. Initially, employees (EmR) are the proxy for the attitude of employees towards the sampled banks, which is measured as the amount of average revenue earned by each employee of the sampled bank in each financial year. It will also be replaced by the amount of average net profit before tax earned by each employee of the sampled bank in each financial year. This study will re-run regression models 2 and 3c after measuring EmR in this alternative way.

5.4.3 Composite Mediating Effect of Non-Equity Stakeholders

As an alternative to the separate mediating effect of each of four non-equity stakeholders in the analysis, this study will check sensitivity of the results against their composite mediating effect on the relationship between internal corporate governance mechanisms and shareholder value of the banking sector in Bangladesh. To do so, this study will use the composite index value of the attitudes of four non-equity stakeholders (NESHs-Index) towards the sampled banks. This is the arithmetic average of the combined scores of the attitudes of depositors (DeR), borrowers (BrR), employees (EmR) and society (SoeR) towards the sampled banks. The annual composite index value of four non-equity stakeholders is calculated as follows:

$$\frac{\mathrm{DeR} + \mathrm{BrR} + \mathrm{EmR} + \mathrm{SoeR}}{4}$$

5.4.4 Statistical Validity of the Results

This section will focus on the robustness of the main results obtained through discussing the validity of the sampling procedure. Also, and following the study of Salleh (2009), it will look into the statistical validity of the results obtained in this study. It is challenging and essential to choose an appropriate statistical model for analysing data that reflects on the nature of data. A statistical model produces precise and accurate results depending on meeting a number of statistical assumptions. Violation of these assumptions leads to incorrect statistical procedures that may give rise to a faulty and misleading conclusion. The underlying assumptions are: (1) data are free from outliers; (2) there is no high degree of correlation among the independent variables; (3) data are normally distributed; (4) the regression model requires homoscedasticity; and, finally, (5)

the regression model requires that there is little or no serial correlation/autocorrelation in the data. In addition, the validity of sampling and the reliability of the variables' measurement procedures will be discussed.

5.5 SUMMARY OF THE CHAPTER

This chapter discusses in detail the research methods and design undertaken for this study. Firstly, it discusses the population and sample selection process. The population size comprises the 30 banking companies in Bangladesh listed on the Dhaka Stock Exchange, and the sample size consists of 29 of them. Secondly, it focuses on the research time horizon of this study. The current study uses panel data for five financial years, starting from 2011 and ending in 2015. This is because panel datasets offer several advantages over time series and cross-sectional data. Thirdly, this chapter outlines four key variables (namely independent, dependent, mediating and control variables) and several subsets of key variables followed by their units of measurement. Fourthly, it discusses the econometric methods to be undertaken to analyse data for the research. This chapter discusses the regression estimation methods and the "three-step approach" suggested by Baron & Kenny (1986) to be used to examine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. Further, it outlines the processes of checking the robustness/sensitivity of the results.

The next chapter presents and discusses the empirical results.

CHAPTER SIX

EMPIRICAL RESULTS AND DISCUSSION

6.0 OVERVIEW OF THE CHAPTER

This chapter presents and discusses the empirical results of this study. It seeks to achieve seven main objectives. Firstly, it aims to present how outliers in different variables have been dealt with. Secondly, it attempts to present detailed descriptive statistics of all the continuous dependent, independent, mediating and control variables. Thirdly, it aims to test the assumption of the normality of the data. Fourthly, it provides the results of the bivariate analysis using Pearson's correlation matrix. The fifth objective is to test the nature of the data used in this study to select an appropriate econometric model for analysing the data. Sixth, it discusses the multivariate regression results. Finally, it determines the mediating effect of non-equity stakeholders (NESHs) on the relationship between internal corporate governance mechanisms (ICGMs) and shareholder value (SHV).

The remainder of the chapter is organised as follows. Section 6.1 reports the results of outliers checking, while section 6.2 presents the results of univariate analysis. Section 6.3 reports the results of the normality test on the panel data, section 6.4 outlines the results of the bivariate correlation analysis, while section 6.5 presents the results of testing for the panel data. Section 6.6 reports and discusses the multivariate regression results, while section 6.7 presents the results of the mediating effect of NESHs on the relationship between ICGMs and SHV. Finally, section 6.8 summarises the chapter.

6.1 DEALING WITH OUTLIERS OF DIFFERENT VARIABLES

This study carries out a screening test to detect outliers to make data representative and meaningful in order that the correlation and regression results reflect the actual effect of NESHs on the relationship between ICGMs and SHV. To detect outliers, this study uses the box plot technique, which shows that there is a presence of a number of extreme

values (outliers) in the dependent variables, namely return on equity (ROE), Tobin's Q (TQ) and economic value added (EVA). For example, the minimum (maximum) value for ROE is 2.52% (29.96%), while that of TQ is 0.77 (1.41). In addition, some extreme values are found in the independent variables, namely sponsor-directors' shareholding (SdSh), institutional shareholding (InstSh), CEOs' compensation (CeoCom) and the audit committee meetings (AudcM). For example, the minimum (maximum) value for SdSh is 0% (76%), while that of CeoCom is 0.54 (19.24). Outliers are also found in the control variables (e.g. FmSize, Gear and FmAge) and the mediating variable (e.g. EmR).

To limit the effect of outliers, "winsorising" and "excluding outliers" are two well-known techniques within the corporate governance literature (Beiner *et al.,* 2006; Chhaochharia & Grinstein, 2009; Ntim, 2009). Following the studies of Klapper & Love (2004), Ntim (2009) and Chhaochharia & Grinstein, (2009), all the variables affected by outliers are winsorised at 5% and 95% to minimise the effect of outliers.

In order to winsorise all the 145 firm-years, values of each of the dependent, independent, control and mediating variables were ranked in ascending order. The top and bottom 7 values of each of the variables affected by the outliers were replaced by the 8th and 138th values, respectively. As will be explained further below, the statistics that are presented for the dependent, independent, control and mediating variables are values after winsorisation.

6.2 UNIVARIATE ANALYSIS OF CONTINUOUS VARIABLES

This section presents the results of univariate analysis, i.e. descriptive statistics concerning all the continuous dependent, independent, mediating and control variables.

6.2.1 Descriptive Statistics for the Dependent Variables

Panels *A*, *B* and *C* of Table 9 present descriptive statistics for the dependent variables, as measured by ROE, TQ and EVA. First, Panel *A* of Table 9 shows that the overall average ROE after winsorisation is 12.78% for all the sampled banks for the study period. Year-by-year data in Table 9 show that the average ROE is 16.59% in 2011, which falls to 11.38% in 2012, while the rate then remains almost unchanged until the financial year 2015. These results indicate that the banking sector in Bangladesh

encountered a financial catastrophe after 2011 which has lasted until the last year of the study period.

Table 9: Summary descriptive statistics for dependent variables

Variables	Year	Mean	Std. Dev.	Minimum	Maximum
	All	12.78	4.59	2.52	24.77
	2011	16.59	5.23	7.66	24.77
Panel A:	2012	11.38	4.39	3.02	23.40
ROE (%)	2013	11.71	3.61	3.42	17.00
	2014	12.41	3.79	4.00	20.50
	2015	11.80	3.87	2.52	19.30
	All	1.01	0.05	0.90	1.13
	2011	1.07	0.06	0.90	1.13
Panel B:	2012	1.01	0.03	0.90	1.08
TQ	2013	0.99	0.03	0.90	1.04
	2014	0.99	0.04	0.90	1.13
	2015	0.98	0.04	0.90	1.13
	All	2591.45	909.82	1168.28	4646.07
	2011	2714.22	786.97	1447.31	4646.07
Panel C:	2012	2517.49	873.10	1168.28	4646.07
EVA	2013	2354.55	871.77	1299.18	4646.07
(BDT in million)	2014	2574.08	924.65	1244.84	4646.07
	2015	2796.91	1066.349	1273.09	4646.07

Notes: Variables are defined as follows: return on equity (ROE), Tobin's Q (TQ) and Economic value added (EVA). Percentage of ROE, values of TQ and EVA are reported after winsorisation. This is why the minimum and maximum and annual values for some of these variables are the same.

Table 9 further shows that the ROE ranges from a minimum of 2.52% to a maximum of 24.77%, with a standard deviation of 4.59 for the study period. These results indicate a huge difference in the accounting return-based shareholder value among the sampled banks.

Panel *B* of Table 9 shows that the combined average value of Tobin's Q (TQ) after winsorisation is 1.01 for all sampled banks for the study period. Consistent with the ROE, year-specific data in Table 9 show that the average value of TQ in 2011 is 1.07, which decreases to 1.01 in 2012; the values lie within 1, indicating that the market value of the sampled banks is greater than the banks' recorded asset value. However, the average value of TQ for the study period 2013–2015 is less than 1, indicating that the market-based shareholder value of the sampled banks is under-valued compared to the recorded value of the assets. The trend suggests the same inference as ROE, namely that the banking sector in Bangladesh has experienced from financial disaster in the period 2012–2015.

Finally, Panel *C* of Table 9 shows that the average value of economic value added (EVA) after winsorisation is BDT 2591.45 million for all the sampled banks for the study period. Year data in Table 9 show that the average EVA in 2011 is BDT 2714.22 million, which subsequently decreases to BDT 2517.49 million and BDT 2354.55 million in 2012 and 2013, respectively. These results possibly signal the effect of the country's economic crisis on value-based shareholder value. However, EVA starts to improve in 2014, indicating the start of an improvement in the value-based financial performance of the sampled banks after the economic crash.

In conclusion, Panels *A*, *B* and *C* of Table 9 present shareholder value, as measured by the accounting return-based method (i.e. ROE), market-based method (i.e. TQ) and value-based method (i.e. EVA) of the sampled banks for the study period 2011–2015. The findings show that the sampled banks have achieved the highest ROE percentage and scored highest TQ value in 2011; however, the values of both performance indicators have reduced significantly in the study period 2012–2015, while the sampled banks achieve a significantly higher amount of EVA in 2011 compared to 2012 and 2013 and then again start to improve in 2014. These results suggest that the banking sector in Bangladesh has performed better in the study year 2011, compared to the study period 2012–2015.

It is somewhat surprising that the banking sector in Bangladesh performed strongly in 2011 when the global economy, particularly in the banking sector of the developed economies, was experiencing acute recession because of the world economic crisis. This may be due to the over-reliance of the Bangladeshi economy on foreign remittance and export income from the garments sector that were not affected immediately. Soon after, however, these results suggest the world economic recession did affect the Bangladesh economy negatively, particularly the banking sector in the study period 2012–2015.

6.2.2 Descriptive Statistics for the Continuous Independent Variables

The descriptive statistics for internal corporate governance mechanisms, referred to as the independent variables, are presented in Panels *D* to *K* of Table 10.

Table 10: Summary descriptive statistics for all continuous independent variables

Variables	Year	Mean	Std. Dev.	Minimum	Maximum
	All	13.46	3.66	6.00	23.00
	2011	14.45	4.21	6.00	23.00
Panel D:	2012	13.00	3.49	6.00	21.00
BdSize	2013	13.38	3.40	6.00	20.00
	2014	13.41	3.59	6.00	20.00
	2015	13.03	3.61	6.00	20.00
	All	37.35	15.80	6.73	67.25
	2011	35.99	18.21	6.73	67.25
Panel E:	2012	37.80	15.69	10.23	63.09
SdSh	2013	37.52	15.51	10.23	66.38
	2014	38.09	15.52	10.23	67.25
	2015	37.36	14.89	8.48	62.12
	All	15.47	9.22	0.00	34.90
	2011	15.12	9.38	0.00	34.90
Panel F:	2012	15.90	9.16	0.00	33.91
InstSh	2013	13.92	9.09	0.00	34.90
	2014	15.70	9.23	0.00	34.90
	2015	16.70	9.63	0.00	34.90
	All	40.60	17.49	6.60	83.45
	2011	41.73	21.21	8.70	83.45
Panel G:	2012	39.68	16.95	7.90	71.60
PubSh	2013	41.96	17.35	8.90	76.16
	2014	39.70	16.63	9.81	72.72
	2015	39.92	15.90	6.60	69.64
	All	15.00	9.11	0.00	37.00
	2011	6.28	5.88	0.00	22.00
Panel H:	2012	12.66	9.10	0.00	36.00
INEDs	2013	17.38	7.57	0.00	33.00
	2014	18.93	7.87	0.00	33.00
	2015	19.66	7.83	9.00	37.00
	All	10.78	2.76	5.28	16.73
	2011	9.59	2.45	5.28	14.44
Panel I:	2012	10.22	2.60	5.28	15.94
CeoCom	2013	11.21	2.61	5.28	16.73
	2014	11.21	2.82	5.28	16.73
	2015	11.69	2.96	5.28	16.73
	All	4.26	0.89	3.00	7.00
	2011	4.17	1.07	3.00	7.00
Panel J:	2012	4.28	0.84	3.00	5.00
SizeaudC	2013	4.24	0.83	3.00	5.00
	2014	4.21	0.86	3.00	5.00
	2015	4.38	0.86	3.00	6.00
	All	9.97	5.92	3.00	25.00
	2011	9.07	6.14	3.00	25.00
Panel K:	2012	9.17	5.96	3.00	25.00
AudcM	2013	9.97	5.76	4.00	24.00
	2014	10.69	5.94	4.00	24.00
	2015	10.97	5.98	4.00	25.00

Notes: Variables are defined as follows: board size (BdSize), sponsor-directors' shareholding (SdSh), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), size of the audit committee (SizeaudC), frequency of the audit committee meetings (AudcM). Values of SdSh, InstSh, CeoCom and AudcM are reported after winsorisation. This is why the minimum, maximum and annual values of some of these variables are the same.

Panel *D* of Table 10 shows that the average board size (BdSize) of the sampled banks for the study period is 13.46 with a standard deviation of 3.66, indicating that there is large variation in board size among the sampled banks. The average board size of Bangladeshi banks is consistent with Germany and France, whose average board size is 16.3 and 13.9, respectively (UK Board Index, 2017). However, the board size of the banking sector in Bangladesh is large compared to those of many developed economies. For example, board size in the UK is 10.1, Poland is 8, the Netherlands is 8.3, the USA is 10.8, Switzerland is 10.6, Sweden is 10.9, Denmark is 9.8 and Canada is 11 (ibid).

Yearly data presented in Table 10 report that the average percentage of BdSize lies between 13.00 and 14.45. Table 10 also shows that board size ranges from a minimum of 6 directors to a maximum of 23 directors for the study period, indicating that the board size of the sampled banks is within the range suggested by the Bangladesh Bank and the Bangladesh Securities and Exchange Commission (BSEC). However, some of the sampled banks have exceeded the highest limit of board size. The Bangladesh Bank (2013) provides guidelines that there will be a maximum 20 (twenty) directors on the board, while the guidelines for corporate governance issued by the BSEC (2006) provide that the board size shall not be fewer than 5 (five) and more than 20 (twenty) directors.

Empirically, these results are in line with Ahmed (2010), who reports the board size ranging from a minimum of 6 to a maximum of 27 members, with an average of 13.48 members in listed Bangladeshi banks over the study period 2003–2009. These results, however, contrast with those of Farooque *et al.* (2010), who report a range from a minimum of 3 to a maximum of 37 members, with an average board size comprising 8.3 members in all listed financial and non-financial Bangladeshi firms for the study period 1995–2001. These results indicate that the banking sector in Bangladesh conforms to resource dependency theory, which argues, as has been stated earlier, that a larger board offers greater access to the external business environment and also brings knowledge, diversified skills, business contacts and broader perspectives, experiences and intellect to the board. As a result, it reduces uncertainties and offers the best opportunity to secure critical corporate resources (Pearce & Zahra, 1992; Goodstein *et al*., 1994; Haniffa & Coke, 2005; Haniffa & Hudaib, 2006; Mollah *et al*., 2012).

Panel *E* of Table 10 shows that the overall average percentage of sponsor-directors' shareholding (SdSh) of the sampled banks in the study period is 37.35 after winsorisation. Year data in Table 10 show that the average percentage of SdSh in the study period lies between 35.99 and 38.09. Table 10 also shows that the percentage of SdSh ranges from a minimum of 6.73 to a maximum of 67.25, with a standard deviation of 15.80. These results suggest that the average Bangladeshi listed banks have a concentrated ownership structure, and this pattern of ownership remains almost same over the study period 2011–2015, although there is a large variation in this pattern of ownership among the individual sampled banks. Sponsor-directors are the concentrated shareholder groups, who have relatively high control over bank management, and they exercise high voting power, dominating the Bangladeshi banking sector.

These results are similar to those of a number of prior studies on Bangladesh. For example, Farooque *et al.* (2007) show an average percentage of sponsor- directors' ownership in Bangladeshi financial and non-financial firms in the study period 1995–2001 as 38.70. Ahmed (2010) finds the average ownership of sponsor-directors to be 40.19% in a sample of 25 listed Bangladeshi banks for the study period 2003–2008. These results are also consistent with the study carried out by Haniffa & Hudaib (2006), who report that the combined mean value of the directors' shareholding for the study period 1996–2000 is 34.53%, which bears out the presence of concentrated ownership patterns in Malaysian listed companies. However, these results contrast with those of some of the emerging or developed markets. For example, Mangena & Chamisa (2008) find an average of 20% for a sample of control and 23% for a sample of suspended South African listed firms. While Mollah *et al.* (2012) find an average sponsor-directors' ownership in the emerging market of Botswana of 9.88%. These results also differ from those of the studies of Yermack (1996) and Weir *et al.* (2002), who find the average directors' ownership is 9% and 3%, respectively, in their sample of US and UK-listed firms.

Panel *F* of Table 10 shows that the average ownership of institutional shareholders (InstSh) in the sampled banks for the study period is 15.47% after winsorisation. Yearly data in Table 10 show that the average ownership of InstSh of the study period lies between 13.92% and 16.70%. Table 10 also shows that the institutional

ownership ranges from a minimum of 0% to a maximum of 34.90%, with a standard deviation of 9.22. These results indicate that there is a remarkable variation in the proportion of institutional shareholding among the sampled banks. These results also suggest that the institutional shareholders have limited control over the funds of the sampled banks and no dominating power over banking firms in Bangladesh.

These results are consistent with those of previous Bangladeshi studies. For example, Ahmed (2010) finds institutional shareholders own an average of 9.78% in the listed sampled banks for the study period 2003–2008, and Farooque *et al.* (2007) find an average of 18.3% in the non-financial sector. Farooque *et al.* (2010) also find an average of 13.40% in both the financial and non-financial sectors. However, the result differs from that of some of the developed and emerging economies. For example, Henry (2008) finds a range of institutional shareholding in the UK firms from 60% to 75%, while Ntim (2009) finds an average of 71% in South African firms, and Mollah *et al.* (2012) find an average of 36.76% in the Botswanan Stock Market. By and large, these results suggest that institutional shareholders in the developed and emerging markets exert a dominating and controlling power over firms; however, the same is not true for less-developed countries like Bangladesh.

Panel *G* of Table 10 shows that the average percentage of general public shareholding (PubSh) for all sampled banks in the study period is 40.60. Year-by-year data in Table 10 show that the average percentage of PubSh during the study period lies in the range 39.68–41.96, indicating that the proportion of general public shareholding of the sampled banks in Bangladesh is almost same, with a little variability, over the study period 2011–2015. Table 10 also reports that the ownership of PubSh ranges from a minimum of 6.60% to a maximum of 83.45%, with a standard deviation of 17.49. These results indicate that there is a remarkable variation in the proportion of ownership of general public among the individual sampled banks. These results also suggest that general public collectively holds a higher proportion of shareholding than other types of ownership, but, typically, they individually own a very small percentage of total equity. This is why general public shareholding is considered to be a dispersed ownership pattern, implying insignificant voting power in selecting directors and controlling banking companies in Bangladesh (Hossain, 2014). These results support those of prior

studies on Bangladeshi listed firms. For example, Ahmed (2010) finds general public ownership of the listed sampled banks is 42.58% for the study period 2003–2008; Farooque *et al.* (2007) find 30.70% in the non-financial sector, while Farooque *et al.* (2010) report 33.9% in the financial and non-financial sectors in Bangladesh. However, the result differs from that of an emerging market in Africa. For example, Mollah *et al.* (2012) find general public shareholding is an average of 11.41% of the listed firms in Botswana.

Panel *H* of Table 10 shows that the proportion of independent non-executive directors (INEDs) on the boards of the listed banks in Bangladesh is an average of 15% during the study period. The table also shows that the range for this variable extends from a minimum of 0 to a maximum of 37%, with a standard deviation of 9.11. These results indicate a high variation in the proportion of INEDs within the sampled banks over the study period 2011–2015. These results also indicate that some of the sampled banks fail to comply with the guidelines of the Bangladesh Bank and Bangladesh Securities and Exchange Commission (BSEC) concerning the proportion of independent non-executive directors on the board. The Bangladesh Bank provides guidelines that there will be a maximum of 3 (15%) independent directors when the board size consists of 20 directors. The corporate governance notification of BSEC provides that the company will consist of a board with a minimum of 1/5 (20%) of independent directors.

On the whole, these results suggest that executive directors dominate the majority of boards of the listed banks. Consequently, the very small proportion of independent non-executive directors on the board may not be able to oversee the activities of the high proportion of executive directors effectively. These findings are supported by the evidence of a prior Bangladeshi study conducted by Ahmed (2010), who finds the average percentage of INEDs on the boards of the listed banks is 0.18%, with a minimum of 0 and a maximum of 1.43% over the study period 2003–2008.

Panel *I* of Table 10 shows that the average CEOs' compensation (CeoCom) of the sampled banks for the study period is BDT 10.78 million after winsorisation. The compensation ranges from a minimum of BDT 5.28 million to a maximum of BDT 16.73 million, with a standard deviation of 2.76. Annual data in Table 10 shows that the

average compensation of the CEOs in the study period lies between BDT 9.59 and 11.69 million. The findings indicate that the banking sector in Bangladesh pays a good level of compensation to the CEOs in the context of the country's economy,[24, 25] and the amount gradually increases over the study period 2011–2015. However, there is a remarkable variation in the CEOs' compensation among the sampled banks. These results substantiate those of previous studies conducted by Ahmed (2010) and Chowdhury (2015). Ahmed (2010) reports that there is a wide variation in the compensation paid to the CEOs of the sampled banks, and the amount of compensation rises greatly over the six-year study period. Similarly, Chowdhury (2015) finds CEOs' remuneration in all the listed firms in Bangladesh increases significantly over the study period 2000–2011.

Panel *J* of Table 10 shows that the size of the audit committee (SizeaudC) of the sampled banks for the study period is constituted with an average of 4.26 members. Yearly data in Table 10 show that the average number of members of the audit committee lies between 4.17 and 4.38 over the study period, with a standard deviation of 0.89, indicating a minor variation in the size of the audit committee among the sampled banks. The range of audit committee size is from a minimum of 3 to a maximum of 7 for the study period. These results indicate all the sampled banks have complied with the code recommended by the Bangladesh Securities and Exchange Commission that the audit committee must consist of at least 3 members. These results also suggest that the banking sector in Bangladesh believes that a smaller size of audit committee is more effective. However, the size of audit committees in some banks is excessive. This is because they have crossed the maximum limit suggested by the Banking Regulation and Policy Department of the Bangladesh Bank (2013). The regulation sets a guideline that the audit committee shall be composed of a maximum of 5 non-executive members of which 2 shall be independent directors.

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[24] No specific compensation structure or range of structure is suggested by the BEI (2004) or the BSEC (2006) in their guidelines and principles for corporate governance. BEI (2004) states principles about board compensation as follows: "Board compensation should be sufficient to compensate directors for the time and effort required to complete their duties well" (p. 14).

[25] Average per capita income at the current price of a Bangladeshi is BDT 114,621 ($1,465) in 2015–2016 (BBS, 2016). The highest national salary scale in cash for the highest grade of the public job in Bangladesh is BDT 936,000 ($11,963) per year (Ministry of Finance, Government of Bangladesh, 2015, https://www.mof.gov.bd/en/PayScale/Public%20Bodies.pdf.)

Panel *K* in Table 10 shows that the average frequency of the audit committee meetings (AudcM) is 9.97, with a range of a minimum 3 times to a maximum of 25 times, and that the standard deviation is 5.92 during the study period. These results suggest that there is a wide variation in the frequency of the audit committee meetings held among the sampled banks. These results also indicate that some of the sampled banks fail to comply with the guideline about the audit committee meetings provided by the regulators. The Banking Regulation and Policy Department of the Bangladesh Bank (2013), the BSEC (2006) and the BEI (2004) recommend that the audit committee should hold at least 4 meetings in a year.

By and large, these results indicate a high variation in the attitude of the sampled banks towards the internal financial control systems through the audit committee meetings. This means that all the sampled banks do not put equal importance on the effectiveness of the audit committee as a tool of their internal control system. The results of a prior study in Bangladesh conducted by Ahmed (2010) also support these findings of the audit committee meetings. Using a sample of 25 listed banks in Bangladesh for the study period 2003–2008, Ahmed (2010) finds that the most of the sampled banks hold audit committee meetings ranging from 0 to7 times in a year, indicating slack in the internal control systems.

6.2.3 Descriptive Statistics for the Mediating Variables

Panels *L* to *O* of Table 11 report descriptive statistics for the mediating variables used in this study. As has been mentioned earlier, this study attempts to assess the mediating effects of four non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value.

Panel *L* of Table 11 shows that the mean value (standard deviation) of DeR is BDT 136073.3 million (82299.01) with a range from BDT 10723.40 (million) to BDT 615359.2 (million) for the study period 2011–2015. Yearly data in Table 11 show that the DeR increases gradually over the study period, indicating that the positive attitude of the depositors towards the sampled banks increases steadily. However, there is a large amount of variation noticed in the amount of money deposited in the sampled banks by

depositors, indicating that the positive attitude of depositors towards the sampled banks varies to a great extent.

Table 11: Summary descriptive statistics for mediating variables

Variable	Year	Mean	Std. Dev.	Minimum	Maximum
	All	136073.3	82299.01	10723.40	615359.2
Panel L:	2011	97092.97	55845.44	10723.40	341853.7
DeR	2012	120070.3	67561.84	13659.88	417844.1
(BDT in million)	2013	136261.1	76857.77	11795.64	473141.0
	2014	154692.8	90085.3	22165.68	560696.3
	2015	172249.2	97846.4	25382.96	615359.2
	All	113746.9	71138.15	7652.49	530194.5
Panel M:	2011	84273.23	50282.41	7652.49	305840.6
BrR	2012	99022.97	61266.29	9064.16	372920.7
(BDT in million)	2013	110364.9	65652.47	10742.63	403194.8
	2014	127693.8	75152.07	12501.2	463475.5
	2015	147379.7	85305.57	14251.5	530194.5
	All	4.35	2.59	.88	12.30
Panel N:	2011	4.14	2.49	.88	11.50
EmR	2012	4.22	2.71	.92	11.74
(BDT in million)	2013	4.37	2.83	.98	12.30
	2014	4.52	2.62	.93	11.50
	2015	4.49	2.45	1.04	11.69
	All	93.96	166.44	1.65	1115.6
Panel O:	2011	68.82	114.04	1.65	450.23
SoeR	2012	74.36	111.73	4.36	523.53
(BDT in million)	2013	97.58	158.76	6.15	787.50
	2014	114.25	216.20	10.0	1115.6
	2015	114.79	207.59	8.74	902.0

Notes: Variables are defined as follows: attitude of depositors towards the sampled banks (DeR), attitude of borrowers towards the sampled banks (BrR), attitude of employees towards the sampled banks (EmR), and finally, attitude of society towards the sampled banks (SoeR). Value of EmR is reported after winsorisation. This is why the minimum, maximum, and annual values for some of this variable are the same.

Panel *M* of Table 11 shows that the mean value and standard deviation of BrR are BDT 113746.90 million and 71138.15, respectively, for the study period 2011–2015. The range of BrR extends from a minimum of BDT 7652.49 million to a maximum of BDT 530194.50 million during the study period. Consistent with DeR, yearly data report that the amount of BrR increases gradually over the study period, indicating that the positive attitude of the borrowers towards the sampled banks increases progressively.

Panel *N* of Table 11 reports that EmR ranges from BDT 0.88 million to BDT 12.30 million, with an average (standard deviation) of BDT 4.35 million (2.59). Annual data show that EmR increases year-over-year from 2011-2014; however, it decreases slightly in 2015. These results indicate that the attitude of employees towards the

sampled banks is positive over the study period, except in 2015; however, there is a great deal of variation noticed in the attitude of employees towards the sampled banks.

Panel *O* of Table 11 shows that the average contribution of the sampled banks to society (SoeR) is BDT 93.96 million and that the standard deviation is 166.44 for the study period. The Table also reports the contribution ranges from a minimum of BDT 1.65 million to a maximum of BDT 1115.60 million. These results indicate that every sampled bank does not emphasise the development of society equally. The result is not unexpected, because the contribution of the sampled banks to society hinges on their financial performance. Annual statistics, however, indicate that the average contribution by the sampled banks has increased year-on-year, suggesting that the positive attitude of society towards the sampled banks increases.

6.2.4 Descriptive Statistics for the Control Variables

The descriptive statistics for the control variables used in this study are presented in Panels *P* to *S* of Table 12. Firstly, Panel *P* shows that the mean value and standard deviation of asset tangibility (Asttang) are 0.0209 and 0.0104, respectively, with a range from a minimum of 0.0026 to a maximum of 0.0521 for the study period. These results indicate that Bangladeshi banks possess a very low amount of long-term assets, as they invest a lower amount of funds in fixed assets. Maintaining a reasonable proportion of fixed assets to total assets is essential for firms to avoid the mismanagement of assets (Ahmed, 2010). It is, however, common for banks to maintain a lower amount of asset tangibility compared to merchandising or manufacturing companies (Hossain, 2014). This is because banks render financial services for which they do not require investment in long-term assets to look after the interests of investors and depositors (Ahmed, 2010). Instead, banks need to maintain a high volume of liquid assets to meet the claims of depositors on demand.

Secondly, Panel *Q* of Table 12 shows that the mean value and standard deviation of debt-equity ratio (Gear) after winsorisation are 11.16% and 2.82, respectively, with a range from a minimum of 5.48% to a maximum of 17.57% for the study period. The findings indicate that the sampled banks are using 11.16% debt for their asset financing, and there is a notable variation in the ratio of debt-equity among the sampled banks. The

average debt-equity ratio of the current study is lower compared to a prior study by Ahmed (2010), who finds the average debt-equity ratio of 25 listed sampled banks in Bangladesh to be 15.21% for the study period 2003–2008.

Table12: Summary descriptive statistics for control variables

Variables	Year	Mean	Std. Dev.	Minimum	Maximum
	All	0.0209	0.0104	0.0026	0.0521
	2011	0.0207	0.0119	0.0036	0.0514
Panel P:	2012	0.0202	0.0106	0.0026	0.0455
Asttang	2013	0.0208	0.0104	0.0041	0.0462
	2014	0.0222	0.0107	0.0042	0.0521
	2015	0.0206	0.0089	0.0046	0.0472
	All	11.16	2.82	5.48	17.57
	2011	10.14	2.65	5.48	17.57
Panel Q:	2012	11.44	2.80	6.22	17.57
Gear (%)	2013	11.37	2.87	7.11	17.57
	2014	11.50	2.76	6.69	17.57
	2015	11.37	2.97	7.43	17.57
	All	168737.3	59976.59	67619	300549.8
Panel R:	2011	123160.4	47852.61	67619	300549.8
FmSize	2012	150363.3	48776.62	81734	300549.8
(BDT in million)	2013	166828.9	51573.15	88959	300549.8
	2014	190129.7	54372.38	111576	300549.8
	2015	213204.1	56461.55	131438	300549.8
	All	13.68	6.49	3.00	29.00
	2011	11.86	6.85	3.00	28.00
Panel S:	2012	12.86	6.85	4.00	29.00
FmAge	2013	13.76	6.62	5.00	29.00
	2014	14.52	6.08	6.00	27.00
	2015	15.41	5.86	7.00	27.00

Notes: Variables are defined as follows: asset tangibility (Asttang), debt-equity ratio (Gear), firm size (FmSize) and firm age (FmAge). Values of FmSize, Gear and FmAge are reported after winsorisation. This is why the minimum, maximum, and annual values for some of these variables are the same.

A relatively high debt-equity ratio is expected in the banking sector compared to non-financial sectors. This is because banks collect core deposit money, and they subsequently invest money in the form of loans and advances. The results relating to the debt-equity ratio suggest that the amount of core deposits for the listed banks in Bangladesh has decreased during the study period 2011–2015, compared to the study period 2003-2008. The possible reasons are varied. Firstly, potential depositors may have found alternative investment avenues with higher returns than the deposit interest rate offered by the sampled banks. Secondly, the present code for bank governance in Bangladesh may not be supportive for depositors; consequently, the level of confidence of the depositors in the listed banks may have fallen. Finally, and as has been stated before, the world economic recession affected the Bangladeshi economy negatively

during the study period 2012–2015, which may have reduced the income level of individuals and firms; consequently, the amount of core deposits may have been reduced.

Thirdly, Panel *R* of Table 12 provides evidence for firm size (FmSize), as proxied by the total assets of the sampled banks. The panel shows that the mean (standard deviation) value of FmSize is BDT 168737.3 million (59976.59), with a range from a minimum of BDT 67619 million to a maximum of BDT 300549.8 million for the study period. Annual data indicate that the total assets of the sampled banks have gradually increased from BDT 123160.4 million in 2011 to BDT 213204.1 million in 2015. These results indicate that the sampled banks have gradually increased the volume of investment in total assets by reinvesting part of their earnings.

Finally, Panel *S* of Table 12 shows that the average age of the sampled banks (FmAge) after winsorisation is 13.68 years, with a range from a minimum of 3 years to a maximum of 29 years in the study period. The standard deviation is 6.49, which means that there is a huge variation in the age of banks selected for this study. These results indicate that some of the sampled banks have been listed on the Dhaka Stock Exchange only a few years ago, but others much longer ago. This variability in age may have an effect on compliance levels with the Code of Corporate Governance. Also, the young banks may not have the same level of relationship with non-equity stakeholders as the older banks. Consequently, the shareholder value of the older banks is expected to be higher than that of the young banks because of high positive attitude of non-equity stakeholders towards the older banks.

6.3 RESULTS OF THE TEST FOR NORMALITY OF PANEL DATA

As has been stated before, multiple regression analysis requires that all variables being examined in a study are normally distributed. This is because variables which are not normally distributed may be misleading in terms of the results and may provide misinformation about the significance tests. The present study checks the assumption of normality of each variable by conducting three normality tests, i.e. the Shapiro-Wilk W test, the Shapiro-Francia W test and the Jarque-Bera test.

Table 13: Estimations of the test for the normality of variables

Variables	Shapiro-Wilk W test (Prob>z)	Shapiro-Francia W test (Prob >w)	Jarque-Bera test (Prob>chi^2)	Original/ Transformed	Conclusion
ROE	0.47597	0.30498	0.2434	Original	Normal
TQ	0.04070	0.05917	0.1234	Original	Normal
EVA	0.00000	0.00001	0.0009	Original	Non-normal
EVA-log	0.46114	0.25190	0.2245	Transformed	Normal
BdSize	0.17419	0.54953	0.6254	Original	Normal
SdSh	0.00029	0.00477	0.0338	Original	Non-normal
SdSh^2	0.04394	0.05814	0.0509	Transformed	Normal
InstSh	0.41619	0.90568	0.1769	Original	Normal
PubSh	0.05264	0.11250	0.1190	Original	Normal
INEDs	0.00811	0.19502	0.2329	Original	Normal
CeoCom	0.62053	0.78060	0.6600	Original	Normal
SizeaudC	0.00648	0.51723	0.0008	Original	Non-normal
SizeaudC^2	0.0557	0.64920	0.5288	Transformed	Normal
AudcM	1.00000	1.00000	0.2739	Original	Normal
DeR	0.02444	0.04261	0.5678	Original	Normal
BrR	0.15177	0.20977	0.8043	Original	Normal
EmR	0.08726	0.14584	0.4934	Original	Normal
SoeR	0.00030	0.00171	0.0017	Original	Non-normal
SoeR^2	0.12480	0.05738	0.0527	Transformed	Normal
Asttang	0.17554	0.27695	0.5260	Original	Normal
Gear	0.00005	0.00005	0.0056	Original	Normal
Gear-log	0.09532	0.21120	0.7697	Transformed	Normal
FmSize	0.00143	0.00066	0.0136	Original	Normal
FmSize-log	0.58571	0.52536	0.0814	Transformed	Normal
FmAge	0.00003	0.00010	0.0092	Original	Non-normal
FmAge-log	0.08495	0.12480	0.2567	Transformed	Normal

Notes: Variables are defined as follows: return on equity (ROE), Tobin's Q (TQ), economic value added (EVA), log form of economic value added (EVA-log), board size (BdSize), sponsor-directors' shareholding (SdSh), sponsor-directors' shareholding squared (SdSh^2), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), size of audit committee (SizeaudC), size of audit committee squared (SizeaudC^2), frequency of the audit committee meetings (AudcM), depositors (DeR), borrowers (BrR), employees (EmR), society (SoeR), society squared (SoeR^2), asset tangibility (Asttang), debt-equity ratio (Gear), log form of debt-equity ratio (Gear-log), firm size (FmSize), log form of firm size (FmSize-log), firm age (FmAge), and finally, log form firm age (FmAge-log).

Table 13 shows that a number of variables are normally distributed in their original form, as the results of all the normality tests conducted fail to reject the null hypothesis (i.e. $p>0.05$). These variables include ROE, TQ, BdSize, InstSh, PubSh, INEDs, CeoCom, AudcM, DeR, BrR, EmR and Asttang. In contrast, the remaining variables, i.e. EVA, SdSh, SizeaudC, SoeR, Gear, FmSize and FmAge, are not normally distributed, as the results of all the normality tests conducted reject the null hypothesis (i.e. $p<0.05$). Thus, this study has transformed the variables EVA, Gear, FmSize and

FmAge into log form, and SdSh, SizeaudC and SoeR into squared form to make them normally distributed.[26]

These transformed variables have been put through all the normality tests again, which confirm that the p-values are greater than 0.05 or close to 0.05, indicating they are normally distributed after their transformation. For example, the Shapiro-Francia W test and the Jarque-Bera test report that the p-value of SdSh variable after the transformation ($SdSh^2$) is higher than 0.05, while the Shapiro-Wilk W test reports the p-value for the same variable is close to 0.05; thus, it is assumed that the remaining non-normality of this variable may be statistically tolerable. Similarly, it is assumed that any remaining abnormalities in the remaining variables chosen for this study are not so severe as to cause serious violation of the multivariate regression analysis.

6.4 RESULTS OF BIVARIATE CORRELATION ANALYSES

In order to determine the correlation between various continuous dependent and independent variables, bivariate analysis is conducted using Pearson's correlation matrix. Tables 14–19 present the absolute values of Pearson's correlation coefficient (*r*) for all continuous dependent, independent, mediating and control variables included in regression models 1–3d. The negative sign of the correlation coefficient indicates that the variables are negatively correlated with others, e.g. as one independent variable increases, the dependent variable decreases and *vice-versa* (Hossain, 2014). The positive sign suggests that the variables are positively correlated with others, e.g. as one independent variable increases, the dependent variable also increases, and, similarly, if one independent variable decreases, the dependent variable also decreases (ibid.).

6.4.1 Results of Pearson's Correlation among Internal Corporate Governance Mechanisms and Shareholder Value

Pearson's correlation matrix presented in Table 14 shows a significant positive low degree of correlation of $SdSh^2$ with ROE and EVA-log. These results indicate that the Bangladeshi banks with a higher proportion of the sponsor-directors' shareholding enhance accounting return-based and value-based shareholder value to a low degree and

[26] In order to look for an appropriate normally distributed form of data, the study has used the "ladder of power" technique in the Stata software.

vice-versa. In contrast, the correlation coefficients relating to InstSh with ROE and TQ report that there are low degrees of negative correlation between the variables, indicating banks with a higher proportion of institutional ownership tend to reduce their accounting return-based and market-based shareholder value to a low degree and *vice-versa.*

There is a low degree of significant negative correlation between PubSh, INEDs, $SizeaudC^2$ and TQ. These results indicate that banks with a higher proportion of general public shareholding, a higher proportion of independent non-executive directors and a larger audit committee tend to reduce market-based shareholder value to a low degree and *vice-versa.* Similarly, AudcM is found to have a low degree of significant negative correlation with ROE, meaning that frequent the audit committee meetings are likely to reduce accounting return-based shareholder value to a low degree and *vice-versa.*

Table 14: Estimations of Pearson's correlation among internal corporate governance mechanisms and shareholder value

Variables	ROE	TQ	EVA-log	BdSize	$SdSh^2$	InstSh	PubSh	INEDs	CeoCom	$SizeaudC^2$	AudcM	Asttang	Gear-log	FmSize-log	FmAge-log
ROE	1														
TQ	0.266***	1													
EVA-log	0.368***	0.143*	1												
BdSize	0.071	-0.119	0.126	1											
$SdSh^2$	0.174**	0.102	0.197**	0.072	1										
InstSh	-0.161*	-0.138*	-0.107	-0.022	-0.177**	1									
PubSh	0.123	-0.213**	0.028	0.127	-0.547***	-0.222***	1								
INEDs	-0.035	-0.205**	0.029	-0.275***	0.248***	0.188***	-0.226**	1							
CeoCom	0.042	-0.104	-0.027	-0.137*	-0.052	0.083	0.292***	0.191**	1						
$SizeaudC^2$	-0.068	-0.182**	-0.059	0.309***	-0.335***	0.325***	0.134	-0.130	0.002	1					
AudcM	-0.221***	-0.080	0.021	0.207**	0.048	-0.017	-0.261***	0.081	-0.239***	0.062	1				
Asttang	0.126	0.056	0.084	0.107	-0.024	0.057	0.089	0.011	0.159*	0.169**	0.139*	1			
Gear-log	-0.118	0.139*	0.036	-0.284***	0.362***	-0.044	-0.544***	0.234***	-0.117	-0.292***	0.003	-0.139*	1		
FmSize-log	-0.202**	-0.240***	0.289***	0.076	-0.044	0.109	-0.169**	0.310***	-0.035	0.058	0.245***	0.093	-0.043	1	
FmAge-log	-0.110	-0.170**	0.041	0.010	-0.585***	0.169**	0.260***	0.077	-0.002	0.298***	0.099	0.226***	-0.332***	0.502***	1

Notes: ***, ** and * indicate correlation is significant at 1%, 5% and 10% levels, respectively. ROE, TQ and EVA-log are the dependent variables. Variables are defined as follows: return on equity (ROE), Tobin's Q (TQ), log form of economic value added (EVA-log), board size (BdSize), sponsor-directors' shareholding squared ($SdSh^2$), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), size of audit committee squared ($SizeaudC^2$), frequency of the audit committee meetings (AudcM), asset tangibility (Asttang), log form of debt-equity ratio (Gear-log), log form of firm size (FmSize-log), and finally, log form of firm age (FmAge-log).

Table 15: Estimations of Pearson's correlation among internal corporate governance mechanisms and non-equity stakeholders

Variables	DeR	BrR	EmR	$SoeR^2$	BdSize	$SdSh^2$	InstSh	PubSh	INEDs	CeoCom	$SizeaudC^2$	AudcM	Asttang	Gear-log	FmSize-log	FmAge-log
DeR	1															
BrR	0.704***	1														
EmR	0.432***	0.433***	1													
$SoeR^2$	0.495***	0.494***	0.385***	1												
BdSize	0.053	0.059	0.055	0.055	1											
$SdSh^2$	-0.154*	-0.162*	-0.147*	-0.191**	0.072	1										
InstSh	-0.202***	-0.218***	-0.107	-0.166**	-0.022	-0.177**	1									
PubSh	0.339***	0.346***	0.313***	0.310***	0.127	-0.547***	-0.222***	1								
INEDs	-0.061	-0.060	-0.019	-0.084	-0.275***	0.248***	0.188**	-0.226***	1							
CeoCom	-0.189**	-0.192**	-0.138*	-0.235***	-0.137*	-0.052	0.083	0.292***	0.191**	1						
$SizeaudC^2$	-0.108	-0.118	-0.116	-0.074	0.309***	-0.335***	0.325***	0.134	-0.129	0.002	1					
AudcM	-0.090	-0.093	-0.114	-0.045	0.207**	0.048	-0.017	-0.261***	0.081	-0.239***	0.062	1				
Asttang	-0.050	-0.038	-0.023	-0.085	0.107	-0.024	0.057	0.089	0.011	0.159**	0.169**	0.139*	1			
Gear-log	0.044	0.051	0.058	0.057	-0.28$***	0.361***	-0.044	-0.544***	0.234***	-0.117	-0.292***	0.003	-0.139*	1		
FmSize-log	-0.103	-0.101	-0.063	-0.094	0.076	-0.044	0.108	-0.169**	0.310***	-0.035	0.058	0.245***	0.093	-0.043	1	
FmAge-log	-0.015	0.019	0.052	-0.013	0.010	-0.585***	0.168**	0.259***	0.077	-0.002	0.298***	0.099	0.227***	-0.332***	0.502***	1

Notes: ***, ** and * indicate correlation is significant at 1%, 5% and 10% levels, respectively. DeR, BrR, EmR and $SoeR^2$ are the mediating variables but work as dependent variables in the regression model 2. Variables are defined as follows: depositors (DeR), borrowers (BrR), employees (EmR), society (SoeR), society squared ($SoeR^2$). All other variables are defined in Table 14.

6.4.2 Results of Pearson's Correlation among Internal Corporate Governance Mechanisms and Non-Equity Stakeholders

Table 15 reports low degrees of a significant positive correlation between PubSh and DeR, BrR, EmR and $SoeR^2$. These results indicate that banks with high general public ownership tend to increase the positive attitudes of non-equity stakeholders (depositors, borrowers, employees and society) towards the sampled banks to a low degree and *vice-versa.*

In contrast, there are low degrees of significant negative correlation of $SdSh^2$ and CeoCom with DeR, BrR, EmR and $SoeR^2$. These results indicate that as the proportion of sponsor-directors' ownership and the volume of CEOs' compensation increase, negative attitudes of non-equity stakeholders (depositors, borrowers, employees and society) towards the sampled banks also increase at a low rate or *vice-versa.*

6.4.3 Results of Pearson's Correlation among Internal Corporate Governance Mechanisms, Non-Equity Stakeholders and Shareholder Value

The results of the Pearson's correlation among internal corporate governance mechanisms, non-equity stakeholders and shareholder value are presented in Tables 16–19. In this subsection, this study determines the coefficients of correlation of regression models 3a, 3b, 3c and 3d, which examine: (1) the effect of internal corporate governance mechanisms and depositors on shareholder value; (2) the effect of internal corporate governance mechanisms and borrowers on shareholder value; (3) the effect of internal corporate governance mechanisms and employees on shareholder value; and (4) the effect of internal corporate governance mechanisms and society on shareholder value, respectively. The tables report that there is a significant correlation between four non-equity stakeholders and shareholder value, as measured by ROE, TQ and EVA-log. The tables also show that the coefficients of correlation of the relationship between internal corporate governance mechanisms and shareholder value after incorporating four non-equity stakeholders in the Pearson's correlation matrix are the same as those for the relationship between internal corporate governance mechanisms and shareholder value without incorporating non-equity stakeholders in the matrix. The detailed results are not described here for the sake of brevity.

Table 16: Estimations of Pearson's correlation among internal corporate governance mechanisms, depositors and shareholder value

Variables	ROE	TQ	EVA-log	BdSize	$SdSh^2$	InstSh	PubSh	INEDs	CeoCom	$SizeaudC^2$	AudcM	DeR	Asttang	Gear-log	FmSize-log	FmAge-log
ROE	1															
TQ	0.266***	1														
EVA-log	0.368***	0.143*	1													
BdSize	0.071	-0.119	0.126	1												
$SdSh^2$	0.174**	0.102	0.197**	0.072	1											
InstSh	-0.161*	-0.138*	-0.107	-0.022	-0.177**	1										
PubSh	0.123	-0.213**	0.027	0.126	-0.547***	-0.222***	1									
INEDs	-0.035	-0.205**	0.029	-0.275***	0.248***	0.188**	-0.226***	1								
CeoCom	0.042	-0.104	-0.027	-0.137*	-0.052	0.084	0.292***	0.191**	1							
$SizeaudC^2$	-0.068	-0.182**	-0.057	0.309***	-0.335***	0.325***	0.134	-0.130	0.002	1						
AudcM	-0.221***	-0.079	0.021	0.207**	0.048	-0.017	-0.261***	0.081	-0.239***	0.062	1					
DeR	0.246***	0.155*	0.149*	0.053	-0.153*	-0.202**	0.339***	-0.061	-0.189**	-0.106	-0.089	1				
Asttang	0.185**	0.078	0.141	0.113	-0.003	0.073	0.071	0.030	0.104	-0.156*	0.169*	-0.017	1			
Gear-log	-0.118	0.139*	0.036	-0.284***	0.362***	-0.044	-0.544***	0.234***	-0.117	-0.292***	0.003	0.044	-0.095	1		
FmSize-log	-0.202**	-0.240***	0.288***	0.076	-0.044	0.109	-0.169**	0.310***	-0.035	0.058	0.245***	-0.103	0.089	-0.043	1	
FmAge-log	-0.110	-0.170**	0.041	0.010	-0.585***	0.169**	0.260*	0.077	-0.002	0.298***	0.099	-0.015	0.210**	0.332***	0.502***	1

Notes: ***, ** and * indicate correlation is significant at 1%, 5% and 10% levels, respectively. ROE, TQ and EVA-log are the dependent variables. DeR is the mediating variable. All independent variables are defined in Table 14.

Table 17: Estimations of Pearson's correlation among internal corporate governance mechanisms, borrowers and shareholder value

Variables	ROE	TQ	EVA-log	BdSize	$SdSh^2$	InstSh	PubSh	INEDs	CeoCom	$SizeaudC^2$	AudcM	BrR	Asttang	Gear-log	FmSize-log	FmAge-log
ROE	1															
TQ	0.266***	1														
EVA-log	0.368***	0.143*	1													
BdSize	0.071	-0.119	0.126	1												
$SdSh^2$	0.174**	0.102	0.197**	0.072	1											
InstSh	-0.161**	-0.138*	-0.107	-0.022	-0.177**	1										
PubSh	0.123	-0.213**	0.027	0.126	-0.547***	-0.222***	1									
INEDs	-0.035	-0.205**	0.029	-0.275***	0.248***	0.188**	-0.226***	1								
CeoCom	0.042	-0.104	-0.027	-0.137*	-0.052	0.084	0.292***	0.191**	1							
$SizeaudC^2$	-0.068	-0.182**	-0.057	0.309***	-0.335***	0.325***	0.134	-0.130	0.002	1						
AudcM	-0.221***	-0.080	0.021	0.207**	0.048	-0.017	-0.261***	0.081	-0.239***	0.062	1					
BrR	0.251***	0.151*	0.145*	0.060	-0.164*	-0.214***	0.346***	-0.060	-0.192**	-0.118	-0.093	1				
Asttang	0.185**	0.078	0.141	0.113	-0.003	0.073	0.071	0.030	0.104	-0.156*	0.169*	-0.017	1			
Gear-log	-0.118	0.139*	0.036	-0.284***	0.362***	-0.044	-0.544***	0.234***	-0.117	-0.292***	0.003	0.044	-0.095	1		
FmSize-log	-0.202**	-0.240***	0.288***	0.076	-0.044	0.109	-0.169**	0.310***	-0.035	0.058	0.245***	-0.103	0.089	-0.043	1	
FmAge-log	-0.110	-0.170**	0.041	0.010	-0.585***	0.169**	0.260***	0.077	-0.002	0.298***	0.099	-0.015	0.210**	0.332***	0.502***	1

Notes: ***, ** and * indicate correlation is significant at 1%, 5% and 10% levels, respectively. ROE, TQ and EVA-log are the dependent variables. BrR is the mediating variable. All independent variables are defined in Table 14.

Table 18: Estimations of Pearson's correlation among internal corporate governance mechanisms, employees and shareholder value

Variables	ROE	TQ	EVA-log	BdSize	$SdSh^2$	InstSh	PubSh	INEDs	CeoCom	$SizeaudC^2$	AudcM	EmR	Asttang	Gear-log	FmSize-log	FmAge-log
ROE	1															
TQ	0.266***	1														
EVA-log	0.368***	0.143*	1													
BdSize	0.071	-0.119	0.126	1												
$SdSh^2$	0.174**	0.102	0.197**	0.072	1											
InstSh	-0.161**	-0.138*	-0.107	-0.022	-0.177**	1										
PubSh	0.123	-0.213**	0.027	0.126	-0.547***	-0.222***	1									
INEDs	-0.035	-0.205**	0.029	-0.275***	0.248***	0.188**	-0.226***	1								
CeoCom	0.042	-0.104	-0.027	-0.137*	-0.052	0.084	0.292***	0.191**	1							
$SizeaudC^2$	-0.068	-0.182**	-0.057	0.309***	-0.335***	0.325***	0.134	-0.130	0.002	1						
AudcM	-0.221***	-0.079	0.021	0.207**	0.048	-0.017	-0.261***	0.081	-0.239***	0.062	1					
EmR	0.247***	-0.151*	0.178**	0.055	-0.147*	0.107	0.313***	-0.019	-0.138*	-0.116	-0.114	1				
Asttang	0.189**	0.078	0.141*	0.113	-0.003	0.073	0.071	0.012	0.030	0.104	0.157*	0.165**	1			
Gear-log	-0.118	0.139*	0.036	-0.284***	0.362***	-0.044	-0.544***	0.234***	-0.117	-0.292***	0.003	0.058	-0.095	1		
FmSize-log	-0.202**	-0.240***	0.288***	0.076	-0.044	0.109	-0.169**	0.310***	-0.035	0.058	0.245***	-0.064	0.089	-0.043	1	
FmAge-log	-0.110	-0.170**	0.041	0.010	-0.585***	0.169**	0.260*	0.077	-0.002	0.298***	0.099	0.051	0.210**	0.332***	0.502***	1

Notes: ***, ** and * indicate correlation is significant at 1%, 5% and 10% levels, respectively. ROE, TQ and EVA-log are the dependent variables. EmR is the mediating variable. All independent variables are defined in Table 14.

Table 19: Estimations of Pearson's correlation among internal corporate governance mechanisms, society and shareholder value

Variables	ROE	TQ	EVA-log	BdSize	$SdSh^2$	InstSh	PubSh	INEDs	CeoCom	$SizeaudC^2$	AudcM	$SoeR^2$	Asttang	Gear-log	FmSize-log	FmAge-log
ROE	1															
TQ	0.266***	1														
EVA-log	0.368***	0.143*	1													
BdSize	0.071	-0.119	0.126	1												
$SdSh^2$	0.174**	0.102	0.197**	0.072	1											
InstSh	-0.161**	-0.138*	-0.107	-0.022	-0.177**	1										
PubSh	0.123	-0.213**	0.027	0.126	-0.547***	-0.222***	1									
INEDs	-0.035	-0.205**	0.029	-0.275***	0.248***	0.188**	-0.226***	1								
CeoCom	0.042	-0.104	-0.027	-0.137*	-0.052	0.084	0.292***	0.191**	1							
$SizeaudC^2$	-0.068	-0.182**	-0.057	0.309***	-0.335***	0.325***	0.134	-0.130	0.002	1						
AudcM	-0.221***	-0.079	0.021	0.207**	0.048	-0.017	-0.261***	0.081	-0.239***	0.062	1					
$SoeR^2$	-0.144*	0.174**	0.143*	0.056	-0.192**	-0.166**	0.310***	-0.084	-0.235***	-0.074	-0.055	1				
Asttang	0.113	0.064	0.140*	0.098	-0.102	0.056	0.081	0.012	0.161*	0.172**	0.139*	-0.069	1			
Gear-log	-0.125	0.139*	0.036	-0.284***	0.362***	-0.044	-0.444***	0.234***	-0.117	-0.292***	0.003	0.051	-0.139*	1		
FmSize-log	-0.202**	-0.240***	0.278***	0.076	-0.044	0.109	-0.169**	0.310***	-0.035	0.058	0.245***	-0.106	0.093	-0.043	1	
FmAge-log	-0.079	-0.170**	0.006	0.010	-0.525***	0.169**	0.260***	0.077	-0.002	0.288***	0.099	0.045	0.226***	0.332***	0.502***	1

Notes: ***, ** and * indicate correlation is significant at 1%, 5% and 10% levels, respectively. ROE, TQ and EVA-log are the dependent variables. $SoeR^2$ is the mediating variable. All independent variables are defined in Table 14.

6.5 TESTING FOR PANEL DATA

This section reports the results of testing for the panel data used in this study. These include the results of the multicollinearity test, the Hausman test and the Breusch-Pagan Lagrange Multiplier (LM) test. The results of the heteroscedasticity and autocorrelation tests are also presented. These tests are conducted to find out about the nature of panel data used in this study and to select an appropriate model for this study.

6.5.1 Results of the Multicollinearity Test

As has been stated before, a key assumption of multiple regression analysis is that there is an absence of multicollinearity between the predictor variables, i.e. there should be no high degree of correlation between two or more independent variables (Gujarati, 2003). In order to verify the presence of a multicollinearity problem, this study uses the variance inflation factor (VIF) and tolerance statistics (TOL) (see Table 20).

Table 20: Estimations of variance inflation factor (VIF) and tolerance statistics (TOL)

Variables	Regression Model 1		Regression Model 2		Regression Model 3a		Regression Model 3b		Regression Model 3c		Regression Model 3d	
	VIF	TOL	VIF	TOL	VIF	TOL	VIF	TOL	VIF	TOL	VIF	TOL
BdSize	1.58	0.64	1.58	0.64	1.59	0.62	1.65	0.61	1.68	0.60	1.66	0.60
$SdSh^2$	3.18	0.32	3.18	0.32	3.19	0.31	3.41	0.29	3.44	0.30	3.44	0.30
InstSh	1.60	0.63	1.60	0.63	1.60	0.63	1.85	0.54	1.90	0.50	1.88	0.53
PubSh	3.17	0.32	3.17	0.32	3.68	0.27	3.71	0.27	3.79	0.26	3.75	0.27
INEDs	1.96	0.51	1.96	0.51	2.02	0.50	2.09	0.48	2.04	0.49	2.04	0.49
CeoCom	1.38	0.72	1.38	0.72	1.54	0.66	1.50	0.67	1.56	0.64	1.65	0.61
$SizeaudC^2$	1.52	0.66	1.52	0.66	1.53	0.65	1.60	0.62	1.66	0.60	1.63	0.61
AudcM	1.37	0.73	1.37	0.73	1.37	0.73	1.32	0.76	1.33	0.75	1.33	0.75
Asttang	1.19	0.84	1.19	0.84	1.19	0.84	1.19	0.84	1.19	0.84	1.19	0.84
Gear-log	1.78	0.56	1.78	0.56	1.90	0.53	1.78	0.56	1.97	0.51	1.94	0.51
FmSize-log	1.82	0.55	1.82	0.55	1.83	0.55	1.81	0.55	2.37	0.42	2.37	0.42
FmAge-log	2.69	0.37	2.69	0.37	2.72	0.37	2.69	0.37	2.73	0.37	2.75	0.36
DeR	--	--	--	--	1.48	0.67	--	--	--	--	--	--
BrR	--	--	--	--	--	--	1.52	0.66	--	--	--	--
EmR	--	--	--	--	--	--	--	--	1.37	0.73	--	--
$SoeR^2$	--	--	--	--	--	--	--	--	--	--	1.63	0.61
Average VIF	1.90	--	1.90	--	1.98	--	2.10	--	2.11	--	2.12	--

Notes: Variables are defined as follows: variance inflation factor (VIF), tolerance statistics (TOL), board size (BdSize), sponsor-directors' shareholding squared ($SdSh^2$), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), size of audit committee squared ($SizeaudC^2$), frequency of the audit committee meetings (AudcM), asset tangibility (Asttang), log form of debt-equity ratio (Gear-log), log form of firm size (FmSize-log), log form of firm age (FmAge-log), depositors (DeR), borrowers (BrR), employees (EmR), and finally, society squared ($SoeR^2$).

Table 20 shows that VIF for all explanatory variables ranges from 1.19 to 3.86, while TOL for all explanatory variables ranges from 0.26 to 0.84. As suggested by Gujarati (2003), TOL close to 1 suggests there is a small problem of multicollinearity, while statistics close to 0 indicates that there is a danger of multicollinearity. VIF statistics below the value of 10 imply the absence of a severe multicollinearity problem. Therefore, the results of TOL and VIF provide evidence that there is no severe multicollinearity problem between two or more independent variables in this study.

6.5.2 Results of the Hausman Specification Test

As has been stated before, choosing an appropriate model between the fixed-effects and random-effects models for panel data analysis is important. Following a number of prior studies (e.g. Amran, 2010; Wahba & Elsayed, 2015) and as suggested by Gujarati (2003), the present study conducts the Hausman Specification test in order to decide between them.

Table 21: Estimations of Hausman Specification test

Models	Dependent variables	Chi^2	$Prob>Chi^2$	H_0	Conclusion
Model 1	ROE	17.43	0.4256	Not rejected	Random-effects model
	TQ	17.09	0.3134	Not rejected	Random-effects model
	EVA-log	9.67	0.8832	Not rejected	Random-effects model
Model 2	DeR	13.89	0.6087	Not rejected	Random-effects model
	BrR	9.32	0.8998	Not rejected	Random-effects model
	EmR	12.45	0.7722	Not rejected	Random-effects model
	$SoeR^2$	18.49	0.3589	Not rejected	Random-effects model
Model 3a	ROE	20.40	0.2027	Not rejected	Random-effects model
	TQ	16.57	0.4142	Not rejected	Random-effects model
	EVA-log	8.02	0.9661	Not rejected	Random-effects model
Model 3b	ROE	12.37	0.7769	Not rejected	Random-effects model
	TQ	14.85	0.4624	Not rejected	Random-effects model
	EVA-log	6.30	0.9909	Not rejected	Random-effects model
Model 3c	ROE	20.80	0.2102	Not rejected	Random-effects model
	TQ	16.16	0.4417	Not rejected	Random-effects model
	EVA-log	11.16	0.8873	Not rejected	Random-effects model
Model 3d	ROE	9.99	0.9042	Not rejected	Random-effects model
	TQ	16.16	0.4417	Not rejected	Random-effects model
	EVA-log	5.67	0.9952	Not rejected	Random-effects model

Notes: Variables are defined as follows: return on equity (ROE), Tobin's Q (TQ) and log form of economic value added (EVA-log).

Table 21 shows p-values of Chi-Square ($Prob>chi^2$) in the Hausman Specification test for all models are not significant at the 5% level, suggesting that the models fail to reject the null hypothesis that the random-effects model is appropriate. These results,

therefore, suggest that the random-effects model is appropriate for the panel data used in the current study.

6.5.3 Results of the Breusch-Pagan Lagrangian Multiplier (B-P LM) Test for the Random-Effects Model

This study also conducts the Breusch-Pagan Lagrangian Multiplier (B-P LM) test to validate whether or not the random-effects model is appropriate for the panel datasets used in this study.

Table 22: Estimations of Breusch-Pagan Lagrangian Multiplier test

Models	Dependent variables	Chi^2	$Prob>Chi^2$	H_0	Conclusion
Model 1	ROE	35.08	0.0061	Rejected	Random-effects model
	TQ	54.06	0.0000	Rejected	Random-effects model
	EVA-log	77.15	0.0000	Rejected	Random-effects model
Model 2	DeR	171.69	0.0000	Rejected	Random-effects model
	BrR	170.01	0.0000	Rejected	Random-effects model
	EmR	188.92	0.0000	Rejected	Random-effects model
	$SoeR^2$	176.74	0.0000	Rejected	Random-effects model
Model 3a	ROE	35.09	0.0061	Rejected	Random-effects model
	TQ	54.07	0.0001	Rejected	Random-effects model
	EVA-log	76.93	0.0000	Rejected	Random-effects model
Model 3b	ROE	35.10	0.0061	Rejected	Random-effects model
	TQ	54.08	0.0001	Rejected	Random-effects model
	EVA-log	77.12	0.0000	Rejected	Random-effects model
Model 3c	ROE	35.01	0.0062	Rejected	Random-effects model
	TQ	53.57	0.0001	Rejected	Random-effects model
	EVA-log	76.85	0.0000	Rejected	Random-effects model
Model 3d	ROE	35.12	0.0059	Rejected	Random-effects model
	TQ	54.29	0.0001	Rejected	Random-effects model
	EVA-log	77.33	0.0000	Rejected	Random-effects model

Notes: Variables are defined as follows: return on equity (ROE), Tobin's Q (TQ), log form of economic value added (EVA-log), depositors (DeR), borrowers (BrR), employees (EmR), and finally, society squared ($SoeR^2$).

As shown in Table 22, the p-values of Chi-Square ($Prob>chi^2$) in the B-P LM test for all models is significant at 5% (i.e. $p<0.05$), rejecting the null hypothesis that the OLS pooled regression model is appropriate. These results suggest that pooled OLS regression is not appropriate; instead, the random-effects model is appropriate for the panel data used for this study. This study, therefore, employs the random-effects model to examine the relationship between the variables, as both tests (Hausman Specification and B-P LM tests) favour it.

6.5.4 Results of the Homoscedasticity Test

As has been stated before, one of the most important aspects of panel data analysis is the heteroscedasticity problem that can affect the estimation of the random-effects model (Wahba & Elsayed, 2015). This means that the variance of the errors is identical throughout all levels of the independent variables. This study checks for the presence of a heteroscedasticity problem by conducting the Breusch-Pagan/Cook-Weisberg test.

Table 23: Estimations of the Breusch-Pagan/Cook-Weisberg test for heteroskedasticity

Models	Dependent variables	Prob>Chi^2	H_0	Conclusion
Model 1	ROE	0.5128	Not rejected	Homoscedasticity
	TQ	0.0059	Rejected	Heteroskedasticity
	EVA-log	0.9492	Not rejected	Homoscedasticity
Model 2	DeR	0.2774	Not rejected	Homoscedasticity
	BrR	0.5080	Not rejected	Homoscedasticity
	EmR	0.4598	Not rejected	Homoscedasticity
	SoeR^2	0.6028	Not rejected	Homoscedasticity
Model 3a	ROE	0.6015	Not rejected	Homoscedasticity
	TQ	0.0200	Rejected	Heteroskedasticity
	EVA-log	0.4462	Not rejected	Homoscedasticity
Model 3b	ROE	0.6182	Not rejected	Homoscedasticity
	TQ	0.0157	Rejected	Heteroskedasticity
	EVA-log	0.3653	Not rejected	Homoscedasticity
Model 3c	ROE	0.5219	Not rejected	Homoscedasticity
	TQ	0.0016	Rejected	Heteroskedasticity
	EVA-log	0.5476	Not rejected	Homoscedasticity
Model 3d	ROE	0.4346	Not rejected	Homoscedasticity
	TQ	0.0166	Rejected	Heteroskedasticity
	EVA-log	0.4175	Not rejected	Homoscedasticity

Notes: All variables are defined in Table 22.

The results presented in Table 23 show that the p-values of the dependent variables ROE and EVA-log in all models are greater than 0.05. Thus, the models fail to reject the null hypothesis (H_0), indicating that there is no problem of heteroscedasticity: i.e. the models are homoscedastic. However, the p-values of the dependent variable TQ in all models are less than 0.05, indicating that the models with TQ dependent variables are not free from the heteroscedasticity problem. Although, and as has been stated earlier, an insignificant heteroscedasticity problem has little impact on significance tests (Berry & Feldman, 1985), this study uses robust standard errors as one of the remedies when models suffer from heteroscedasticity problem (as suggested by Gujarati, 2003). This is

because the use of robust standard errors does not change the coefficient estimates, but they do change the standard errors and significance tests (Williams, 2015).

6.5.5 Results of the Autocorrelation Test

Another important aspect of panel data analysis is the serial correlation (autocorrelation) problems that can also affect the estimation of the random-effects model (Wahba & Elsayed, 2015). As has been mentioned earlier, autocorrelation takes place when residuals are correlated. If the model is affected by an autocorrelation problem, the result of the estimated regression model cannot be accepted. This study conducts the Wooldridge test and Durbin-Watson *d* test to check for first-order autocorrelation problem. The results are presented in Tables 24 and 25.

Table 24: Estimations of the Wooldridge test for autocorrelation

Models	Dependent variables	F- statistics	P-value	H_0	Conclusion
Model 1	ROE	16.469	0.0004	Rejected	Autocorrelation
	TQ	2.164	0.1524	Not rejected	No autocorrelation
	EVA-log	2.197	0.1495	Not rejected	No autocorrelation
Model 2	DeR	44.121	0.0000	Rejected	Autocorrelation
	BrR	46.876	0.0000	Rejected	Autocorrelation
	EmR	6.861	0.0141	Rejected	Autocorrelation
	$SoeR^2$	5.229	0.0298	Rejected	Autocorrelation
Model 3a	ROE	6.979	0.0133	Rejected	Autocorrelation
	TQ	2.323	0.1388	Not rejected	No autocorrelation
	EVA-log	1.821	0.1880	Not rejected	No autocorrelation
Model 3b	ROE	19.556	0.0002	Rejected	Autocorrelation
	TQ	2.627	0.1163	Not rejected	No autocorrelation
	EVA-log	2.081	0.1602	Not rejected	No autocorrelation
Model 3c	ROE	25.148	0.0000	Rejected	Autocorrelation
	TQ	34.299	0.0000	Rejected	Autocorrelation
	EVA-log	0.447	0.5092	Not rejected	No autocorrelation
Model 3d	ROE	12.555	0.0017	Rejected	Autocorrelation
	TQ	2.059	0.1642	Not rejected	No autocorrelation
	EVA-log	3.024	0.0948	Not rejected	No autocorrelation

Notes: Variables are defined in Table 22.

Table 24 shows that the Wooldridge test results for some of the models reject the null hypothesis that there is no autocorrelation (as p-values are less than 0.05), indicating the models are affected by autocorrelation. In particular, autocorrelation exists in the 1, 3a, 3b and 3d models with dependent variables ROE. Also, this problem exists in the model 3c with dependent variable TQ and in the model 2 with dependent variables DeR, BrR, EmR and $SoeR^2$.

The results presented in Table 25 show that the Durbin-Watson *d* statistics are less than 2, indicating there is sufficient evidence of positive autocorrelation in all datasets. Therefore, to remove/reduce the autocorrelation problem, this study uses the random-effects GLS regression model with AR(1) disturbance.

Table 25: Estimations of the Durbin-Watson *d* test for the first-order autocorrelation

Models	Dependent variables	Durbin-Watson *d* Statistics	Conclusion
Model 1	ROE	1.135085	Positive autocorrelation
	TQ	0.638733	Positive autocorrelation
	EVA-log	0.640964	Positive autocorrelation
Model 2	DeR	0.234737	Positive autocorrelation
	BrR	0.216273	Positive autocorrelation
	EmR	0.418672	Positive autocorrelation
	$SoeR^2$	0.743519	Positive autocorrelation
Model 3a	ROE	1.269738	Positive autocorrelation
	TQ	0.656354	Positive autocorrelation
	EVA-log	0.665620	Positive autocorrelation
Model 3b	ROE	1.263185	Positive autocorrelation
	TQ	0.659206	Positive autocorrelation
	EVA-log	0.662920	Positive autocorrelation
Model 3c	ROE	1.135654	Positive autocorrelation
	TQ	0.557054	Positive autocorrelation
	EVA-log	0.764577	Positive autocorrelation
Model 3d	ROE	1.258458	Positive autocorrelation
	TQ	0.603338	Positive autocorrelation
	EVA-log	0.634335	Positive autocorrelation

Notes: Variables are defined in Table 22.

The next section presents and discusses the multivariate regression results.

6.6 EMPIRICAL RESULTS: MULTIVARIATE REGRESSION ANALYSES

This section presents and discusses the multivariate regression results. In particular, this section seeks to achieve three key objectives. Firstly, it examines the direct relationship between internal corporate governance mechanisms and shareholder value in the sampled banks. Secondly, it examines the direct relationship between internal corporate governance mechanisms and non-equity stakeholders in the sampled banks. Thirdly, it examines the effect of internal corporate governance mechanisms and non-equity stakeholders on shareholder value

6.6.1 Random-Effects GLS Estimations: Direct Relationship between Internal Corporate Governance Mechanisms and Shareholder Value

This subsection presents the random-effects GLS regression results for the direct effect of internal corporate governance mechanisms on shareholder value. In particular, this subsection presents the findings of regression model 1 to test the first nine hypotheses (i.e. H_1-H_9). As has been stated earlier, internal corporate governance mechanisms are the independent variables, while shareholder value is the dependent variable, which is measured by three alternative methods, namely an accounting return-based method (denoted by ROE), a market-based method (denoted by TQ) and a value-based method (denoted by EVA-log).

The results of regression model 1 regarding the direct relationship between internal corporate governance mechanisms and shareholder value, as measured by ROE, TQ and EVA-log, are presented in Table 26. As shown in Table 26, p-values in all cases of the Wald chi^2 test for regression model 1 are less than 0.05, indicating the goodness-of-fit of regression model 1, because all the coefficients in the model are different from zero.

6.6.1.1 Relationship between board size and shareholder value

To begin with, the coefficient for BdSize, the first internal corporate governance variable being examined, to ROE is statistically insignificant for the study period. This result, therefore, rejects hypothesis one (H_1), that there is a statistically significant relationship between board size and shareholder value, as measured by ROE. This result

suggests that larger or smaller boards (board size) do not make any contribution to enhancing accounting return-based shareholder value in the banking sector in Bangladesh.

Table 26: Estimations of the random-effects GLS regression of the direct relationship between internal corporate governance mechanisms and shareholder value

	Regression Model 1 (All bank years)		
	Dependent variable: ROE	**Dependent variable: TQ**	**Dependent variable: EVA-log**
Wald chi^2	84.34	164.72	73.07
Prob > chi^2	0.0000	0.0000	0.0000
No. of observations	145	145	145
Independent variables:			
BdSize	-.0284 (-0.27)	-.0003 (-0.27)	-.0023 (-0.28)
$SdSh^2$	.0005 (1.09)	-3.34e-06 (-0.74)	.0001 (2.41)**
InstSh	-.1424(-3.17)***	-.0009 (-2.04)**	-.0029 (-0.83)
PubSh	-.0006 (-0.02)	-.0007 (-2.46)**	.0088 (3.48)***
INEDs	.0651 (1.28)	.0012 (2.56)**	-.0001 (-0.02)
CeoCom	.2001 (1.38)	.0038 (2.83)***	.0015 (0.13)
ExaudC	.4742 (0.42)	-.0166 (-1.58)	.1385 (1.58)
$SizeaudC^2$	.0692 (1.34)	-.0007 (-1.39)	.0039 (0.96)
AudcM	-1.4587(-2.70)***	-.0072 (-1.44)	.0328 (0.78)
Control variables:			
Asttang	116.2496 (2.75)***	.9807 (2.49)**	3.9698 (1.21)
Gear-log	-2.1800 (-1.14)	.0093 (0.52)	.4568 (3.07)***
FmSize-log	.4123 (0.31)	.0084 (0.69)	.6119 (6.01)***
FmAge-log	.1607 (0.28)	-.0012 (-0.22)	-.0091 (-0.21)
_cons	8.9032 (2.50)**	-.1332 (-2.81)***	-1.4695 (-2.07)**
Time (year) dummies	Yes	Yes	Yes

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: return on equity (ROE), Tobin's Q (TQ), log form of economic value added (EVA-log), board size (BdSize), sponsor-directors' shareholding squared ($SdSh^2$), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), presence of independent audit committee (ExaudC), size of audit committee squared ($SizeaudC^2$), frequency of the audit committee meetings (AudcM), asset tangibility (Asttang), log form of debt-equity ratio (Gear-log), log form of firm size (FmSize-log), and finally, log form of firm age (FmAge-log).

Empirically, the result is in line with that of a number of prior Bangladeshi studies conducted by Ahmed (2010), Muttakin, 2012 and Sobhan (2014), as well as many international studies (e.g. Eisenberg *et al.*, 1998; Ho & Williams, 2003; Mangena & Chamisa, 2008; Guest, 2009; Ntim, 2009; Orazalin *et al.*, 2015). For example, Ahmed (2010) and Sobhan (2014) find an insignificant relationship between board size and ROE using a sample of 25 listed commercial banks in Bangladesh for the year 2003–2008 and a sample consisting of 91 non-financial companies in Bangladesh, respectively.

Similarly, Ho & Williams (2003) and Ntim (2009) find a statistically insignificant relationship between board size and firms' financial performance using a sample of 84 and 500 South African firms, respectively. Farhat (2014) also finds the same result, using a sample of all FTSE non-financial firms listed on the London Stock Exchange for the period 2005–2010. These results, however, differ from those of many prior studies that document a statistically significant positive relationship between board size and accounting return-based shareholder value (e.g. Muttakin, 2012; Rouf, 2012; Haniffa & Hudaib, 2006; Al-Amarneh, 2014; Mangena & Tauringana, 2008; Romano & Guerrini, 2014; Gaur *et al*., 2015; Nath *et al.*, 2015).

In line with ROE, BdSize does not have a statistically significant effect on TQ for the study period. The result, therefore, rejects hypothesis one (H_1), that there is a statistically significant relationship between board size and shareholder value, as measured by TQ. This result indicates that the market value of the sampled bank is not explained by the large or small boards of the banks.

The result is empirically consistent with that of many prior studies (e.g. Ahmed, 2010; Yammeesri & Herath, 2010; Al-Saidi, 2010; Ştefănescu, 2011; Dedu & Chitan, 2013; Sobhan, 2014) that find an insignificant or no relationship between board size and shareholder value, as measured by TQ. For example, Bangladeshi studies conducted by Ahmed (2010) and Sobhan (2014) find a statistically insignificant effect of board size on TQ, using samples of 25 listed commercial banks for the period 2003–2008 and 91 non-financial companies in Bangladesh, respectively. Similarly, using the Romanian banking institutions listed on the Bucharest Stock Exchange, Dedu & Chitan (2013) find that board size does not significantly influence banks' financial performance for the period 2004–2011.

Similar to ROE and TQ, the coefficient of BdSize to EVA-log is statistically insignificant for the study period. This result, therefore, rejects hypothesis one (H_1), that there is a statistically significant relationship between board size and shareholder value, as measured by EVA. This result also implies that board size (larger or smaller boards) is unable to influence shareholder value (using a value-based approach) in the banking sector in Bangladesh.

6.6.1.2 Relationship between sponsor-directors' shareholding and shareholder value

$SdSh^2$ is found to have a statistically insignificant relationship with ROE for the study period. This result thus rejects hypothesis two (H_2), that there is a statistically significant relationship between the proportion of sponsor-directors' shareholding and shareholder value, as measured by ROE. This result indicates that sponsor-directors' ownership does not give rise to accounting return-based shareholder value in the banking sector in Bangladesh. Empirically, the result is similar to that of some prior studies. For example, Ahmed (2010) documents evidence using a sample of 25 listed banks in Bangladesh that the proportion of sponsor-directors' ownership is not a powerful governance mechanism that affects banks' ROE. Using a sample of listed companies in Botswana, Mollah *et al.* (2012) also reveal an insignificant relationship between the variables.

The result, however, contrasts with that of a number of previous studies that report either a significant positive or negative relationship between sponsor-directors' ownership and firms' financial performance based on accounting returns. A number of studies (e.g. Wruck, 1988; Kaplan & Minton, 1994; Mehran, 1995; Gorton & Schmid, 1996; Hiraki *et al*., 2003; Welch, 2003; Krivogorsky, 2006; Kapopoulos & Lazaretou, 2007; Mangena & Tauringana, 2008; Chu, 2011) report that the proportion of sponsor-directors' ownership enhances firms' financial performance based on accounting returns. For example, Mehran (1995) and Mangena & Tauringana (2008) report a positive relationship between sponsor-directors' equity ownership and firms' financial performance using, respectively, a sample of 72 listed firms for the period 2002–2004 and 153 randomly selected manufacturing firms for the period 1979–1980. In contrast, Imam & Malik (2007) and Farooque *et al.* (2010) suggest a negative association between sponsor-directors' ownership and the financial performance of non-financial firms in Bangladesh. Similarly, Haniffa & Hudaib (2006) and Muttakin & Ullah (2012) find a significant negative relationship, using a sample of Malaysian companies and a sample of 30 listed commercial banks in Bangladesh, respectively.

$SdSh^2$ is also found to have a statistically insignificant relationship with TQ for the study period. This result thus rejects hypothesis two (H_2), that there is a statistically significant relationship between the proportion of sponsor-directors' shareholding and

shareholder value, as measured by TQ. The result suggests that the proportion of sponsor-directors' ownership does not affect the market value of the sampled banks in Bangladesh.

The result contrasts with that of a number of previous studies (e.g. Mehran, 1995; Krivogorsky, 2006; Kapopoulos & Lazaretou, 2007; Mangena & Tauringana, 2008) that report a positive relationship between sponsor-directors' ownership and TQ. For example, using 153 randomly selected manufacturing firms over the period 1979–1980, Mehran (1995) documents evidence that TQ is positively related to sponsor-directors' (managerial) equity ownership. Also, using a sample of 72 listed firms in Zimbabwe for the period 2002–2004, Mangena & Tauringana (2008) reveal a positive relationship between sponsor-directors' ownership and TQ. The result also contrasts with that of some prior studies (e.g. Morck *et al.*, 1988; McConnell & Servaes, 1990; Sanda *et al.*, 2005; Haniffa & Hudaib, 2006) that find sponsor-directors' shareholding as a damaging variable for firms' financial performance, as measured by TQ. For example, using a cross-sectional sample of 371 Fortune 500 US firms in 1980, Morck *et al.* (1988) find a statistically significant negative relationship for sponsor-directors' ownership at a moderate level (e.g. 5%-25%) with TQ. Similarly, Sanda *et al.* (2005) also report a similar result taking a sample of 93 Nigerians listed firms for the period 1996–1999. The study of Haniffa & Hudaib (2006) also finds similar results using a sample of 347 Malaysian listed firms for the period 1996–2000.

Contrary to TQ and ROE, $SdSh^2$ is statistically significantly and positively related to EVA-log for the study period. This result thus fails to reject hypothesis two (H_2), that there is a statistically significant relationship between the proportion of sponsor-directors' shareholding and shareholder value, as measured by EVA. This result indicates that the sampled banks in Bangladesh with a higher proportion of sponsor-directors' shareholding have been able to enhance value-based shareholder value for the study period.

6.6.1.3 Relationship between institutional shareholding and shareholder value

This study finds a statistically significant 1% negative relationship between InstSh and ROE for the study period. This result, therefore, fails to reject hypothesis

three (H_3), that there is a statistically significant relationship between institutional shareholding and shareholder value, as measured by ROE. This result indicates that a higher proportion of institutional shareholding results in lower accounting return-based shareholder value in the banking sector in Bangladesh.

Empirically, Navissi & Naiker (2006) and Mollah *et al.* (2012) support the same conclusion. These studies indicate that institutional ownership is a damaging variable for firms, as it significantly diminishes shareholder value. For example, using all firms listed on the Botswanan Stock Market for the period 2000–2007, Mollah *et al*. (2012) find that institutional ownership negatively affects firms' financial performance and value. However, these results contrast with those of a number of prior empirical studies (e.g. Lehmann & Weigand, 2000; Steiner, 1996; Black, 1998; Ho, 2005; Xu & Wang, 1999) that provide evidence of a statistically significant positive relationship between institutional shareholding and accounting return-based shareholder value. For example, Xu & Wang (1999) and Steiner (1996) find that institutional ownership has a positive effect on firms' financial performance. On the contrary, and of particular relevance to the present study, Ahmed (2010) finds a statistically insignificant relationship between institutional ownership and ROE, using a sample of 25 listed banking firms in Bangladesh for the period 2003–2008.

Consistent with ROE, Table 26 reports that the relationship between InstSh and TQ is negative and statistically significant (5%) for the study period. This result, therefore, fails to reject hypothesis three (H_3), that there is a statistically significant relationship between institutional shareholding and shareholder value, as measured by TQ. The result suggests that, as the proportion of institutional shareholding increases, so market-based shareholder value decreases. The result contradicts that of many prior studies. For example, Mollah *et al.* (2012) find an insignificant relationship using a sample of all the firms listed on the Botswanan Stock Market. Similarly, Ahmed (2010) also finds that institutional shareholding has a statistically insignificant relationship with TQ, using a sample of 25 listed banking firms in Bangladesh.

However, and in contrast to ROE and TQ, the coefficient for InstSh is statistically insignificant in its relationship to EVA-log for the study period. This result, therefore, rejects hypothesis three (H_3), that there is a statistically significant relationship between

the proportion of institutional shareholding and shareholder value, as measured by EVA. The result suggests that the proportion of institutional shareholding in the banking sector in Bangladesh does not have any role in changing value-based shareholder value.

6.6.1.4 Relationship between general public shareholding and shareholder value

With regard to PubSh to ROE, Table 26 reports a statistically insignificant coefficient, thus rejects hypothesis four (H_4), that there is a statistically significant relationship between the proportion of general public shareholding and shareholder value, as measured by ROE. This result suggests that the proportion of general public shareholding does not have any effect on accounting return-based shareholder value for the sampled banks. The result substantiates a number of previous empirical studies (e.g. Leech & Leahy, 1991; Mollah *et al.*, 2012) that find that general public ownership has an insignificant association with firms' financial performance based on accounting returns, the proxy for shareholder value. For example, using all the firms listed on the Botswanan Stock Market for the period 2000–2007, Mollah *et al.* (2012) suggest an insignificant association between general public shareholding and firms' accounting return-based financial performance. The result also lends support to that of a prior Bangladeshi study conducted by Ahmed (2010). Using a sample of 25 commercial banks listed on the Dhaka Stock Exchange for the study period 2003–2008, he finds that general public shareholding has an insignificant relationship with ROE.

With regard to PubSh to TQ, Table 26 shows a statistically significant negative coefficient, thus fails to reject hypothesis four (H_4), that there is a statistically significant relationship between the proportion of general public shareholding and shareholder value, as measured by TQ. This result suggests that, as the proportion of general public shareholding increases, so market-based shareholder value decreases. The result contradicts prior studies conducted by Ahmed (2010) and Mollah *et al. (*2012). For example, and of particular relevance to this study, using a sample of 25 listed commercial banks on the Dhaka Stock Exchange for the study period 2003–2008, Ahmed (2010) finds that the proportion of general public shareholding has an insignificant negative relationship with TQ.

In contrast to ROE and TQ, the coefficient for PubSh is positive and statistically significant in relation to EVA-log for the study period. This result thus fails to reject hypothesis four (H_4), that there is a statistically significant relationship between the proportion of general public shareholding and shareholder value, as measured by EVA. The result suggests that a higher proportion of general public shareholding enhances value-based shareholder value in the banking sector in Bangladesh.

6.6.1.5 Relationship between independent non-executive directors and shareholder value

Regarding the relationship of INEDs to ROE, the regression coefficient is seen as statistically insignificant for the study period, therefore, rejects hypothesis five (H_5), that there is a statistically significant relationship between the proportion of independent non-executive directors and shareholder value, as measured by ROE. This result suggests that the proportion of independent non-executive directors does not have an effect on accounting return-based shareholder value.

Empirically, the result is similar to that of Ahmed (2010), who finds no significant effect of INEDs on ROE for 25 listed banks in Bangladesh for the period 2003–2008. The result, however, contrasts with a number of prior studies (e.g. Haniffa & Hudaib, 2006; Pombo & Gutiérrez, 2011; Rouf, 2012; Shiah-Hou & Cheng, 2012; Chen, 2014; Sobhan, 2014). For example, taking into consideration a sample of an average of 335 firms per year for the period 1996–2006, Pombo & Gutiérrez (2011) find the ratio of outside directors has a positive effect on accounting return-based financial performance. Similarly, taking a sample of S&P 500 companies for the period 2002–2006, Shiah-Hou & Cheng (2012) find that outside directors' experience has a positive effect on firms' accounting return-based financial performance. A study conducted by Sobhan (2014) also reports a positive effect of independent non-executive directors on ROE, using a sample of 91 listed non-financial companies in Bangladesh. In contrast, using a sample of 480 outside directors from 125 large publicly trading Korean companies, Lee *et al*. (2004) find that independent non-executive directors have a negative effect on firms' financial performance and value.

As regards TQ, the regression coefficient for the INEDs is positive and statistically significant for the study period. This result, therefore, fails to reject hypothesis five (H_5), that there is a statistically significant relationship between independent non-executive directors and shareholder value, as measured by TQ. This result indicates that the inclusion of a higher number of independent non-executive directors on the board makes a positive impression on the market; consequently, market-based shareholder value increases in the banking sector in Bangladesh.

The result supports a number of prior empirical studies and also contradicts others. For example, using a sample of the 311 UK-listed firms during 1994–1996, Weir *et al*. (2002) find that the proportion of independent non-executive directors positively affects TQ. Similarly, taking a sample of S&P 500 companies over the period 2002–2006, Shiah-Hou & Cheng (2012) find that outside directors' experience contributes positively to TQ. The result is also similar to a number of recent studies, for example, Muttakin (2012), Sobhan (2014) and Farhat (2014). The result, however, contrasts with many prior studies (e.g. Ntim, 2009; Ahmed, 2010; Volonté, 2015) that find a negative or no relationship between independent non-executive directors and TQ. For example, using a sample of 500 listed South African firms, Ntim (2009) finds no significant relationship between non-executive directors and TQ. Similarly, Ahmed (2010) validates the same result as Ntim (2009) using 25 listed commercial banks in Bangladesh for the study period 2003–2008.

Contrary to TQ, but similar to ROE, the regression coefficient for INEDs to EVA-log is statistically insignificant for the study period. The result, therefore, rejects hypothesis five (H_5), that there is a statistically significant relationship between the proportion of independent non-executive directors and shareholder value, as measured by EVA. This result suggests that a higher or lower proportion of independent non-executive directors on the board does not contribute to increasing or decreasing value-based shareholder value.

6.6.1.6 Relationship between CEOs' compensation and shareholder value

In terms of CeoCom with ROE, the regression coefficient is seen as statistically insignificant for the study period. This result, therefore, rejects hypothesis six (H_6), that

there is a statistically significant relationship between CEOs' compensation and shareholder value, as measured by ROE. The result suggests that an increase or decrease in CEOs' compensation does not have any effect on accounting return-based shareholder value.

The result is empirically similar to the prior Bangladeshi study carried out by Ahmed (2010), who finds an insignificant association between CEOs' compensation and banks' financial performance, as measured by ROE, using a sample of 25 listed Bangladeshi commercial banks for the study period 2003–2008. In contrast, a number of prior studies suggest a positive relationship between CEOs' compensation and firms' accounting return-based financial performance (e.g. Barro & Barro, 1990; Aigbe *et al*., 1997; Kato & Kubo, 2006). For example, Aigbe *et al*. (1997) find a significant positive relationship between CEOs' pay and banks' accounting profit-based financial performance. Similarly, using ten-year panel data on the cash compensation (salary and bonuses) of the CEOs of 51 Japanese firms for the period 1986–1995, Kato & Kubo (2006) also find that CEOs' compensation has a significant positive effect on firms' accounting profit-based financial performance.

Contrary to ROE, the regression coefficient of CeoCom to TQ is positive and statistically significant for the study period. This result, therefore, fails to reject hypothesis six (H_6), that there is a statistically significant relationship between CEOs' compensation and shareholder value, as measured by TQ. Theoretically, this finding indicates that the market perceives a higher level of CEOs' compensation as more effective; consequently, there is a positive effect on market-based shareholder value.

Empirically, the result is similar to that of the study conducted by Bulan *et al.* (2010). Using a sample comprising all 917 manufacturing firms represented in both ExecuComp and Compustat for the period 1992–2003, the study finds that higher levels of CEO incentives lead to increased productivity and, hence, higher TQ. In contrast, Ahmed (2010) and Ozkan (2011) find no convincing evidence that CEOs' compensation affects TQ. For example, using 25 listed commercial banks in Bangladesh for the period 2003–2008, Ahmed (2010) finds an insignificant relationship between CEOs' compensation and TQ. Similarly, Ozkan (2011) also finds the same result using a panel

dataset of the 390 UK non-financial firms in the FTSE All-Share Index for the period 1999–2005.

Similar to ROE, but contrary to TQ, Table 26 reports that CeoCom has an insignificant effect on EVA-log, therefore, rejects hypothesis six (H_6), that there is a statistically significant relationship between CEOs' compensation and shareholder value, as measured by EVA. This result indicates that CEOs' compensation is a non-contributory bank governance mechanism for value-based shareholder value because a higher or lower level of CEOs' compensation is unable to enhance real economic value for shareholders of the sampled banks in Bangladesh.

6.6.1.7 Relationship between the presence of the independent audit committee and shareholder value

With reference to ExaudC to ROE, the regression coefficient is seen to be statistically insignificant for the study period, meaning that the presence of an independent audit committee does not add to accounting return-based shareholder value. This result, therefore, rejects hypothesis seven (H_7), that there is a statistically significant relationship between the presence of an independent audit committee and shareholder value, as measured by ROE.

This finding is not empirically surprising, as it is consistent with a previous empirical study conducted by Al-Matari *et al*. (2014), who find an insignificant effect from the existence of an independent audit committee on accounting return, the proxy for accounting return-based shareholder value. However, the result does not support that of Dar *et al.* (2011), who find a significant negative relationship between the presence of an independent audit committee and ROE, using a sample of selected 11 oil and gas firms listed on the Karachi Stock Exchange for the period 2004–2011. In contrast, Dey (2008) finds the presence of an independent audit committee having a significant positive effect on shareholder value, as measured by ROE.

Consistent with ROE, the regression coefficient for ExaudC to TQ is also statistically insignificant for the study period. This result, therefore, rejects hypothesis seven (H_7), that there is a statistically significant relationship between the presence of the independent audit committee and shareholder value, as measured by TQ. The result

suggests that the presence of an independent audit committee in the sampled banks in Bangladesh fails to influence their market perception. Consequently, establishing an internal control system within the banks by setting up an independent audit committee has been unable to enhance market-based shareholder value.

This finding is not also empirically unexpected, as it is consistent with some prior empirical studies. For example, taking a sample of 146 companies listed on the Saudi Stock Market (TADWAUL) for the year 2010, Al-Matari *et al.* (2012a) find that the independent audit committee has an insignificant effect on TQ. By contrast, the result does not support that of Al-Matari *et al*. (2014), who find the presence of an independent audit committee exerting a positive effect on shareholder value, as measured by TQ.

In line with ROE and TQ, Table 26 also shows that ExaudC has an insignificant effect on EVA-log. This result, therefore, rejects hypothesis seven (H_7), that there is a statistically significant relationship between the presence of an independent audit committee and shareholder value, as measured by EVA. This result indicates that the presence of an independent audit committee in the banking companies in Bangladesh does not add economic value for the shareholders.

6.6.1.8 Relationship between the size of the audit committee and shareholder value

Regarding $SizeaudC^2$ to ROE, the regression coefficient is found to be statistically insignificant for the study period, indicating an insignificant effect on ROE from the size of the audit committee. Also, the relationship is insignificant with TQ and EVA-log. These results, therefore, reject hypothesis eight (H_8), that there is a statistically significant relationship between the size of the audit committee and shareholder value, as measured by ROE, TQ and EVA.

Empirically, the result in relation to ROE is in line with a number of prior studies. For example, Wei (2007), Mohd (2011), Ghabayen (2012) and Al-Matari *et al.* (2014) find an insignificant or no effect on ROE from the size of the audit committee. In relation to TQ, the result is similar to the study of Nuryanah & Islam (2011). The result, however, contrasts with that of another group of prior studies (e.g. Kyereboah-Coleman, 2007; Bauer *et al.*, 2009; Reddy *et al.*, 2010; Swamy, 2011; Obiyo & Lenee, 2011; Al-Matari *et*

al., 2012a), who find a significant positive effect exerted on TQ, the proxy for market-based shareholder value, by the size of the audit committee.

6.6.1.9 Relationship between the frequency of the audit committee meetings and shareholder value

As regards AudcM to ROE, the regression coefficient is negative and statistically significant for the study period, therefore, fails to reject hypothesis nine (H_9), that there is a statistically significant relationship between the frequency of the audit committee meetings and shareholder value, as measured by ROE. This result indicates that a high frequency of the audit committee meetings negatively affects accounting return-based shareholder value. Empirically, the result is in line with that of Hsu & Petchsakulwong (2010), who find that the frequency of the audit committee meetings negatively affects ROE. However, the result does not support that of a number of prior studies that report a positive association between the frequency of the audit committee meetings and accounting return-based shareholder value (e.g. Kyereboah-Coleman, 2007; Khanchel, 2007; Kang & Kim, 2011).

Contrary to ROE, the regression results show that the coefficient for AudcM in relation to TQ is statistically insignificant. These results, therefore, reject hypothesis nine (H_9), that there is a statistically significant relationship between the frequency of the audit committee meetings and shareholder value, as measured by TQ. The result suggests that the number of audit committee meetings does not influence market-based shareholder value. Empirically, the result supports that of some prior studies (e.g. Ahmed, 2010; Al-Matari *et al.*, 2012a, 2014) that show the frequency of the audit committee meetings having an insignificant effect on TQ. For example, and of particular relevance to this study, Ahmed (2010) suggests that TQ does not have a statistically significant relationship with the frequency of the audit committee meetings, taking a sample of 25 listed commercial banks in Bangladesh for the period 2003–2008. However, the result disagrees with that of the study of Kyereboah-Coleman (2007), who suggests the frequency of the audit committee meetings positively influence firms' TQ, employing a sample of 103 listed firms from South Africa, Nigeria, Kenya and Ghana for the period 1997–2001.

In contrast to ROE, but similar to TQ, the regression coefficient for AudcM to EVA-log is statistically insignificant, therefore, rejects hypothesis nine (H_9), that there is a statistically significant relationship between the frequency of the audit committee meetings and shareholder value, as measured by EVA. This result suggests that the number of audit committee meetings hold in the listed commercial banks in Bangladesh does not add real economic value for shareholders.

6.6.1.10 Relationship between control variables and shareholder value

With respect to the control variables, Table 26 shows that asset tangibility (Asttang) has a statistically significant relationship with shareholder value, as measured by ROE and TQ. Empirically, the result contrasts with a prior study conducted by Muritala (2012), who documents that asset tangibility has an insignificant effect on firms' financial performance, as measured by ROE. By contrast, Table 26 reports that there is a statistically insignificant relationship between asset tangibility and shareholder value, as measured by EVA-log.

Debt-equity ratio (Gear-log) is found to have an insignificant relationship with ROE and TQ. Empirically, the result related to TQ is consistent with that of a previous Bangladeshi study by Ahmed (2010), who conducted a study on 25 listed banks for the period 2003–2008. However, the result contradicts that of Muttakin (2012), who finds a positive relationship between debt-equity ratio and TQ in 155 listed non-financial companies in Bangladesh for the period 2005–2009. In contrast, Table 26 reports that the debt-equity ratio is positively and significantly related to EVA-log, the proxy for value-based shareholder value. Panel *Q* of Table 12 shows that the average sampled banks are less geared. The regression results, therefore, suggest that the sampled banks with a low gearing do not have an effect on accounting-return based and market-based shareholder value; however, they do have a positive effect on value-based shareholder value.

With reference to firm size (FmSize-log), Table 26 shows that there is a statistically insignificant relationship with ROE and TQ. The result related to ROE is consistent with that of the studies of Ntim (2009) and Ahmed (2010), who suggest an insignificant relationship between these two variables for 500 listed South African companies and 25 listed banking companies in Bangladesh, respectively. However,

Orazalin *et al.* (2015) find a significant negative relationship to ROE, using a sample of the 20 largest Russian companies in the oil and gas industry for the study period 2009–2012. The result in relation to TQ supports Muttakin (2012), who report an insignificant relationship between firm size and TQ. The result, however, contrasts with those of Ntim (2009), Ahmed (2010) and Muttakin (2012), who find a significant negative relationship between firm size and TQ. On the contrary, firm size positively influences EVA-log, suggesting that large banks contribute positively to value-based shareholder value.

Theoretically, an insignificant effect on ROE by firm size is unexpected. This is because ROE should be higher, as the size of banks is large. An insignificant effect for larger banks on market-based shareholder value also indicates that the sampled banks have failed to utilise their total assets effectively to impress the market. However, the evidence indicates that the larger banks create greater economic value for shareholders, as compared to the smaller banks, as suggested by the result related to EVA-log.

Regarding firm age (FmAge-log), there is no convincing evidence that it has an effect on shareholder value, regardless of the measures used. These results indicate that older banks have failed to enhance accounting return-based, market-based and value-based shareholder value (denoted by ROE, TQ and EVA-log, respectively). Theoretically, an insignificant relationship between bank age and shareholder value suggests that older banks have failed to exploit the benefits of their extensive learning and experience to enhance value for shareholders. The result lends support to that of Muttakin (2012), who employs a sample of 155 listed non-financial companies in Bangladesh for the period 2005–2009.

Overall, and as with prior studies, the findings suggest that some of the internal corporate governance mechanisms influence shareholder value positively or negatively, while some others appear to have no impact on shareholder value for the sampled banks in Bangladesh for the chosen study period.

6.6.2 Random-Effects GLS Estimations: Direct Relationship between Internal Corporate Governance Mechanisms and Non-Equity Stakeholders

This subsection presents the results for random-effects GLS regression relating to the direct relationship between internal corporate governance mechanisms and non-

equity stakeholders. In particular, the subsection presents and discusses the findings of regression model 2 to test the second nine hypotheses (i.e. H_{10}-H_{18}).

The results of regression model 2 about the direct relationship between internal corporate governance mechanisms and non-equity stakeholders are presented in Table 27. As shown in Table 27, p-values in all cases of the Wald chi^2 test for regression model 2 are less than 0.05, where internal corporate governance mechanisms are the independent variables and non-equity stakeholders are the dependent variables, as represented by depositors (DeR), borrowers (BrR), employees (EmR) and society ($SoeR^2$). These results indicate the goodness-of-fit of regression model 2 because all the coefficients in the model are different from zero.

6.6.2.1 Relationship between board size and non-equity stakeholders

Table 27 shows that the regression coefficients for BdSize on DeR, BrR, EmR and $SoeR^2$ are statistically insignificant for the study period. These results, therefore, reject hypothesis ten (H_{10}), that there is a statistically significant relationship between board size and non-equity stakeholders.

Theoretically, the result suggests that there is no convincing evidence that the board size of Bangladeshi banks explains the attitude of depositors, borrowers, employees and society towards the sampled banks. These results do not support the neo-institutional and legitimating viewpoints that argue a larger board ensures the presence of diverse expertise and experience, which promotes higher corporate efficiency and transparency. Consequently, greater managerial monitoring and conformity to corporate regulations and norms are ensured, thereby developing a positive attitude on the part of depositors, borrowers, employees and society towards the sampled banks.

These results are in line with some prior studies and contrast with others. For example, Lindgreen *et al*. (2010) find an insignificant effect for board size on CSR activities/disclosures, the proxy for non-equity stakeholders. On the contrary, taking a sample of the 20 largest UK companies, Mackenzie (2007) suggests there is a positive relationship between corporate boards and CSR activities. Ntim & Soobaroyen (2013) and Jizi *et al*. (2014) claim similar results in their studies using a sample of large

Table 27: Estimations of random-effects GLS regression for the direct relationship between internal corporate governance mechanisms and non-equity stakeholders

	Regression Model 2 (All bank years)			
	Dependent variable: DeR	**Dependent variable: BrR**	**Dependent variable: EmR**	**Dependent variable: $SoeR^2$**
Wald chi^2	74.85	80.08	58.49	69.64
Prob > chi^2	0.0000	0.0000	0.0000	0.0000
No. of observations	145	145	145	145
Independent variables:				
BdSize	1565.141 (1.30)	1635.882 (1.56)	.0965 (1.60)	.0811 (1.13)
$SdSh^2$	1.0376 (0.18)	1.2764 (0.26)	.0002 (0.66)	-.0001 (-0.38)
InstSh	254.2546 (0.49)	122.3256 (0.27)	.0385 (1.49)	.0205 (0.67)
PubSh	1657.006(4.41)***	1434.984 (4.38)***	.0810 (4.31)***	.0923 (4.14)***
INEDs	933.8782 (1.60)	827.2972 (1.62)	.0429 (1.47)	.0416 (1.20)
CeoCom	-6449.825(-3.86)***	-5544.041 (-3.80)***	-.2549 (-3.05)***	-.4058 (-4.09)***
ExaudC	-40334.18(-3.10)***	-35769.6 (-3.15)***	-1.6887 (-2.59)***	-2.1950 (-2.84)***
$SizeaudC^2$	-968.6418 (-1.63)	-965.6563 (-1.86)*	-.0628 (-2.11)**	-.0462 (-1.31)
AudcM	-8024.745 (-1.29)	-7790.486 (-1.44)	-.4243 (-1.37)	-.2617 (-0.71)
Control variables:				
Asttang	117921.2 (0.24)	139460.1 (0.33)	6.2164 (0.26)	-4.7730 (-0.17)
Gear-log	35903.58 (1.63)	34257.46 (1.78)*	2.3229 (2.10)**	2.2915 (1.75)*
FmSize-log	-15546.84 (-1.03)	-18188.09 (-1.38)	-.6581 (-0.87)	-.7426 (-0.83)
FmAge-log	-4589.274 (-0.70)	-225.1221 (-0.04)	.1405 (0.43)	-.4048 (-1.05)
_cons	288859 (4.42)***	283139.9 (4.59)***	6.6712 (2.65)***	15.0127 (3.24)***
Time (year) dummies	Yes	Yes	Yes	Yes

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: depositors (DeR), borrowers (BrR), employees (EmR), society squared ($SoeR^2$), board size (BdSize), sponsor-directors' shareholding squared ($SdSh^2$), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), presence of independent audit committee (ExaudC), size of audit committee squared ($SizeaudC^2$), frequency of the audit committee meetings (AudcM), asset tangibility (Asttang), log form of debt-equity ratio (Gear-log), log form of firm size (FmSize-log), and finally, log form of firm age (FmAge-log).

South African listed corporations for the period 2002–2009 and a sample of large US commercial banks for the period 2009–20011, respectively.

6.6.2.2 Relationship between sponsor-directors' shareholding and non-equity stakeholders

Table 27 reports that the regression coefficients for $SdSh^2$ on DeR, BrR, EmR and $SoeR^2$ are statistically insignificant for the study period, therefore, reject hypothesis eleven (H_{11}), that there is a statistically significant relationship between sponsor-directors' shareholding and non-equity stakeholders. These results suggest that the proportion of sponsor-directors' ownership is not a corporate governance mechanism for the banking sector in Bangladesh that contributes to explaining the state of minds of depositors, borrowers, employees and society about the sampled banks. Empirically, the result contradicts that of Johnson & Greening (1999), Florou (2008) and Jia & Zhang (2013), who find sponsor-directors' ownership is positively related to CSR activities, the proxy for non-equity stakeholders.

6.6.2.3 Relationship between institutional shareholding and non-equity stakeholders

As for BdSize and $SdSh^2$, Table 27 shows that the regression coefficients of InstSh on DeR, BrR, EmR and $SoeR^2$ are insignificant, thus rejecting hypothesis twelve (H_{12}). These results suggest that institutional shareholders for the sampled banks in Bangladesh do not have any involvement in developing a positive attitude on the part of depositors, borrowers, employees and society towards the sampled banks. Unlike the developed economies in North America and Europe, institutional investors in Bangladesh are inactive and have failed to put greater pressure on the banks' management to take decisions in favour of non-equity stakeholders. Empirically, these results contrast with those of Teoh & Shiu (1990), Johnson & Greening (1999), Cox *et al*. (2004), Sethi (2005), Oh *et al*. (2011) and Harjoto & Jo, (2011), who all find institutional investors having a positive effect on CSR practices, the proxy for non-equity stakeholders.

6.6.2.4 Relationship between general public shareholding and non-equity stakeholders

Table 27 reveals that the regression coefficients for PubSh on DeR, BrR, EmR and $SoeR^2$ are statistically significant (1%) for the study period. Therefore, these results fail to reject hypothesis thirteen (H_{13}), that there is a statistically significant relationship between the proportion of general public shareholding and non-equity stakeholders, as represented by depositors, borrowers, employees and society.

This study finds a piece of convincing evidence that general public shareholding has a positive effect on non-equity stakeholders in the sampled banks for the study period. Notionally, these results suggest that with an increase in the proportion of general public ownership, relationships with depositors, borrowers, employees and society also increase; indicating that general public shareholding is a contributory mechanism for enhancing the positive attitude of non-equity stakeholders towards the sampled banks. This study also finds earlier that general public shareholding constitutes a diffused pattern of ownership. Theoretically, the statistically significant positive result can be explained by the fact that a large percentage of individuals are involved with the sampled banks because of their ownership; thus, they may have increased their attachment with their banks through their interests; consequently, the relationship with non-equity stakeholders has increased.

These results, however, contrast with the tenets of agency theory, which argues that there is an agency problem between bank management and public shareholding, where a typically dispersed pattern leads to the bank management concentrating less on the benefits for depositors, borrowers, employees and society. Consequently, a higher proportion of general public ownership may negatively affect the relationship with non-equity stakeholders. These results also contradict the legitimating viewpoint, which argues that general public shareholders do not have pecuniary and critical resources (e.g. thoughts and competencies), or that they may have them, but that they cannot utilise these resources to make the corporate management be oriented towards non-equity stakeholders, as they are a small group of shareholders. This means that they are unable to dominate corporate decision-making in terms of investments to boost the relationship with non-equity stakeholders, because of their insignificant individual stake in corporate ownership. Consequently, there may not be any significant effect from the proportion of

general public shareholding on the attitude of non-equity stakeholders towards the sampled banks.

6.6.2.5 Relationship between independent non-executive directors and non-equity stakeholders

INEDs is found to be related in a statistically insignificant way to DeR, BrR, EmR and $SoeR^2$ for the study period. Therefore, the findings reject hypothesis fourteen (H_{14}), that there is a statistically significant relationship between the proportion of independent non-executive directors and non-equity stakeholders. The findings indicate that the inclusion of independent non-executive directors on the board of the sampled banks in Bangladesh does not add value in developing positive attitudes in depositors, borrowers, employees and society towards the sampled banks. The result is empirically in line with Zhang *et al*. (2011), who find outside independent directors do not have a significant effect on customer satisfaction, one of the non-equity stakeholders.

However, the result opposes the inference of resource dependency theory, which postulates that the inclusion of independent non-executive directors is a source of a number of critical resources and information. They are expected to be more conversant about the varying demands of diverse stakeholders and may feel free to support costly decisions, such as those that involve compliance issues. These inferences suggest that the presence of non-executive directors will have a positive effect on non-equity stakeholders. The result also contrasts with neo-institutional theory, which assumes a positive relationship between independent non-executive directors and non-equity stakeholders.

6.6.2.6 Relationship between CEOs' compensation and non-equity stakeholders

Table 27 shows that the coefficient estimations of the relationship between CeoCom and DeR, BrR, EmR and $SoeR^2$ are negative and statistically significant (1%) for the study period. These results, therefore, fail to reject hypothesis fifteen (H_{15}), that there is a statistically significant relationship between CEOs' compensation and non-equity stakeholders. These results suggest that there is convincing evidence that, with an

increase in CEOs' compensation, negative attitudes among depositors, borrowers, employees and society towards the sampled banks grow.

Empirically, these results are consistent with those of Stanwick & Stanwick (2001), Coombs & Gilley (2005), Russo & Harrison (2005), Cai *et al*. (2011), Fabrizi *et al*. (2014) and Rekker *et al*. (2014), who find that CEOs' compensation levels are negatively associated with CSR activities, the proxy for non-equity stakeholders. However, these results go against the tenets of agency theory that suggest aligning CEOs' interests with those of all stakeholders, by paying lucrative and attractive compensation. The theory assumes that CEOs with high compensation will be motivated extrinsically towards protecting and caring for the interests of non-equity stakeholders; consequently, a positive relationship between CEOs' compensation and non-equity stakeholders would be expected.

6.6.2.7 Relationship between attributes of the audit committee and non-equity stakeholders

The results with reference to various attributes of the sampled banks' audit committee, such as the presence of the independent audit committee (ExaudC), the size of the audit committee ($SizeaudC^2$) and the frequency of the audit committee meetings (AudcM) are presented in Table 27. The results show that the coefficient estimations of the relationships for ExaudC with DeR, BrR, EmR and $SoeR^2$ are negative and statistically significant (1%) for the study period. Therefore, these results fail to reject hypothesis sixteen (H_{16}). These results provide credible evidence that the presence of the independent audit committee is a damaging corporate governance mechanism for the banking sector in Bangladesh, as it promotes negative attitudes in depositors, borrowers, employees and society towards the sampled banks.

Meanwhile, the relationships between $SizeaudC^2$ and DeR, BrR, EmR and $SoeR^2$ are mixed for the study period. The results show that there are insignificant relationships between $SizeaudC^2$ and DeR and $SoeR^2$, suggesting that the size of the audit committee of the sampled banks does not explain the attitudes of depositors and society for the study period. On the contrary, there are statistically significant relationships (5%) between $SizeaudC^2$ and BrR and EmR, indicating that the size of the audit committee

prompts a negative attitude in borrowers and employees towards the sampled banks. These results, therefore, reject hypothesis seventeen (H_{17}) in the case depositors and society; however, they fail to reject hypothesis seventeen (H_{17}) in the case of borrowers and employees. AudcM is found to have no relationship with DeR, BrR, EmR and SoeR[2] for the study period, therefore, rejects hypothesis eighteen (H_{18}). These results provide no credible evidence that the frequency of the audit committee meetings in the sampled banks has a role in explaining the attitude of depositors, borrowers, employees and society towards the sampled banks.

It is evident that the presence of an independent audit committee and the size of the audit committee are mechanisms found to play a damaging role in developing positive mindsets in non-equity stakeholders in relation to the sampled banks in Bangladesh. Theoretically, the negative results suggest that there may have been excessive supervision by the audit committee on the banks' management and that this may have hampered executives' plans, leading to a negative association between the attributes of the audit committee and non-equity stakeholders.

6.6.2.8 Relationship between control variables and non-equity stakeholders

Regarding control variables, Table 27 shows that asset tangibility (Asttang), firm size (FmSize-log) and firm age (FmAge-log) do not have a statistically significant relationship with any of the non-equity stakeholders being examined. These results suggest that the sampled banks have failed to exploit their assets to develop a relationship with depositors, borrowers, employees and society. Similarly, older banks have failed to enhance their association with non-equity stakeholders. In contrast, the results show that the debt-equity ratio (Gear-log) is statistically significant and positively related to borrowers, employees and society. This result implies that the high debt-equity ratio of the sampled banks strengthens their relationship with borrowers, employees and society; however, it does not add value in developing a relationship with depositors.

6.6.3 Random-Effects GLS Estimations: Effect of Internal Corporate Governance Mechanisms and Non-Equity Stakeholders on Shareholder Value

This subsection presents the results of the random-effects GLS regression for the effect of internal corporate governance mechanisms on shareholder value, when the attitude of non-equity stakeholders is brought into consideration. As before, internal corporate governance mechanisms are the independent variables and shareholder value is the dependent variable. Four non-equity stakeholders (depositors, borrowers, employees and society) are incorporated into regression models 3a-3d as mediating variables. These mediating variables will eventually function as predictors of shareholder value, along with internal corporate governance mechanisms and control variables. Therefore, the effect of internal corporate governance mechanisms and each of the four mediating variables on shareholder value is examined separately.

6.6.3.1 Effect of internal corporate governance mechanisms and depositors on shareholder value

Table 28 shows that the p-values in all cases of the Wald chi^2 test for regression model 3a, which includes three dependent variables REO, TQ and EVA as proxies for shareholder value, are less than 0.05. These results indicate the goodness-of-fit of the model, because all the coefficients in the model are different from zero.

As shown in Table 28, after controlling for the effect of internal corporate governance mechanisms being tested, the regression coefficients of DeR on ROE, TQ and EVA-log are found to be positive and statistically significant (1%), therefore, fail to reject hypothesis nineteen (H_{19}). These results suggest that positive attitudes of depositors towards the sampled banks in Bangladesh enhance accounting return-based shareholder value, market-based shareholder value and value-based shareholder value.

Table 28 also reveals that the regression coefficients of BdSize and $SizeaudC^2$ along with DeR are statistically insignificant for ROE, TQ and EVA-log. These results indicate that shareholder value, regardless of the measures used for it, is not explained in a significant way by board size and the size of the audit committee while considering the attitudes of depositors of the sampled banks in Bangladesh. Meanwhile, the results show

that the regression coefficients of $SdSh^2$ and ExaudC together with DeR are statistically insignificant for ROE and TQ, but the coefficients for EVA-log are positive and statistically significant for the study period. These results suggest that accounting return-based and market-based shareholder value are not explained in a significant way by sponsor-directors' ownership and the presence of the independent audit committee while allowing for the attitudes of depositors of the sampled banks in Bangladesh. However, these two mechanisms, along with the attitudes of depositors, contribute positively to enhancing value-based shareholder value.

Table 28: Estimations of the random-effects GLS regression of internal corporate governance mechanisms, depositors and shareholder value

	Regression model 3a (All bank years)		
	Dependent variable: ROE	**Dependent variable: TQ**	**Dependent variable: EVA-log**
Wald chi^2	85.73	164.72	74.12
Prob > chi^2	0.0000	0.0000	0.0000
No. of observations	145	145	145
Independent variables:			
BdSize	-.0392 (-0.37)	-.0003 (-0.27)	-.0030 (-0.37)
$SdSh^2$	.0005 (1.08)	-3.34e-06 (-0.74)	.0001 (2.41)**
InstSh	-.1442(-3.22)***	-.0009 (-2.04)**	-.0030 (-0.87)
PubSh	-.0121 (-0.35)	-.0007 (-2.29)**	.0080 (2.97)***
INEDs	.0586 (1.15)	.0012 (2.53)**	-.0005 (-0.13)
CeoCom	.2447 (1.60)	.0038 (2.68)***	.0045 (0.38)
ExaudC	.7534 (0.64)	-.0166 (-1.52)	.1578 (1.74)*
$SizeaudC^2$	.0759 (1.46)	-.0007 (-1.38)	.0043 (1.07)
AudcM	-1.4032 (-2.59)***	-.0072 (-1.43)	.0367 (0.87)
Mediating variable:			
DeR	6.92e-06 (2.92)***	6.83e-10 (3.01)***	4.79e-07 (2.82)***
Control variables:			
Asttang	115.4333 (2.74)***	.9807 (2.49)**	3.9133 (1.20)
Gear-log	-2.4285 (-1.26)	.0093 (0.52)	.4396 (2.93)***
FmSize-log	.5199 (0.40)	.0084 (0.69)	.6194 (6.08)***
FmAge-log	.1924 (0.34)	-.0012 (-0.22)	-.0069 (-0.16)
_cons	6.9036 (4.39)***	-.1330 (-2.80)***	-1.6079 (-3.16)***
Time (year) dummies	Yes	Yes	Yes

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: return on equity (ROE), Tobin's Q (TQ), log form of economic value added (EVA-log), board size (BdSize), sponsor-directors' shareholding squared ($SdSh^2$), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), presence of independent audit committee (ExaudC), size of audit committee squared ($SizeaudC^2$), frequency of the audit committee meetings (AudcM), depositors (DeR), asset tangibility (Asttang), log form of debt-equity ratio (Gear-log), log form of firm size (FmSize-log), and finally, log form of firm age (FmAge-log).

Table 28 also reports that InstSh with DeR influences ROE and TQ negatively, but it has an insignificant influence on EVA-log. These results suggest that the proportion of institutional shareholding adversely affects accounting return-based and

market-based shareholder value, but the same variable affects value-based shareholder value insignificantly, when the attitude of depositors is brought into consideration. Similarly, AudcM with DeR affects ROE negatively, but the same mechanism has an insignificant effect on TQ and EVA-log. These results suggest that the frequency of the audit committee meetings have an adverse effect on accounting return-based shareholder value; however, there is no evidence that the same mechanism explains market-based and value-based shareholder value in a significant way while taking into consideration the attitude of depositors.

PubSh with DeR is found to have an insignificant effect on ROE, a negative impact on TQ and a positive impact on EVA-log. These results suggest that general public shareholding together with the attitude of depositors is an insignificant explanatory factor for accounting return-based shareholder value, but that the mechanism positively affects value-based and negatively affects market-based shareholder value while taking into account the attitude of depositors. The regression coefficients of INEDs and CeoCom along with DeR in relation to TQ are found to be positive and statistically significant, but these two mechanisms are statistically insignificant in relation to ROE and EVA-log. These results suggest that a high number of independent non-executive directors on the board and a higher level of CEOs' compensation are found to have a positive impact on the market-based shareholder value together with the attitude of depositors, although there is no evidence that these two mechanisms significantly predict the accounting return-based and value-based shareholder value.

Regarding the control variables, asset tangibility (Asttang) is found to have a significant positive impact on accounting return-based and market-based shareholder value, but it has an insignificant impact on value-based shareholder value when the attitude of depositors is taken into account. Debt-equity ratio (Gear-log) and firm size (FmSize-log) along with the attitude of depositors explain value-based shareholder value positively, but these two same control variables have an insignificant impact on accounting return-based and market-based shareholder value. In contrast, firm age (FmAge-log) together with the attitude of depositors is found to have an insignificant impact on shareholder value, regardless of the measures used.

6.6.3.2 Effect of internal corporate governance mechanisms and borrowers on shareholder value

Table 29 shows that p-values in all cases of the Wald chi^2 test for regression model 3b are less than 0.05, indicating the goodness-of-fit of the model because all the coefficients in the model are different from zero.

Table 29: Estimations of the random-effects GLS regression of internal corporate governance mechanisms, borrowers and shareholder value

	Regression Model 3b (All bank years)		
	Dependent variable: ROE	**Dependent variable: TQ**	**Dependent variable: EVA-log**
Wald chi^2	85.63	164.73	73.90
Prob > chi^2	0.0000	0.0000	0.0000
No. of observations	145	145	145
Independent variables:			
BdSize	-.0409 (-0.39)	-.0003 (-0.27)	-.0030 (-0.38)
SdSh^2	.0005 (1.07)	-3.34e-06 (-0.73)	.0001 (2.40)**
InstSh	-.1434 (-3.20)***	-.0009 (-2.04)**	-.0029 (-0.85)
PubSh	-.0115 (-0.33)	-.0007 (-2.29)**	.0081 (3.00)***
INEDs	.0588 (1.15)	.0012 (2.54)**	-.0005 (-0.12)
CeoCom	.2425 (1.59)	.0038 (2.68)***	.0041 (0.35)
ExaudC	.7479 (0.64)	-.0167 (-1.53)	.1559 (1.72)*
SizeaudC^2	.0766 (1.46)	-.0007 (-1.38)	.0043 (1.07)
AudcM	-1.3991 (-2.58)***	-.0072 (-1.43)	.0366 (0.87)
Mediating variable:			
BrR	7.65e-06 (2.89)***	2.76e-09 (3.03)***	4.88e-07 (2.73)***
Control variables:			
Asttang	115.1824 (2.73)***	.9811 (2.49)**	3.9018 (1.19)
Gear-log	-2.4421 (-1.26)	.0094 (0.52)	.4401 (2.93)***
FmSize-log	.5515 (0.42)	.0083 (0.68)	.6208 (6.07)***
FmAge-log	.16245 (0.29)	-.0012 (-0.22)	-.0089 (-0.20)
_cons	6.7365 (4.38)***	-.1330 (-2.78)***	-1.608 (-3.15)***
Time (year) dummies	Yes	Yes	Yes

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. BrR denotes borrowers. The remaining variables are defined in Table 28.

Table 29 shows that, after controlling for the effect of internal corporate governance mechanisms in the analysis, the regression coefficients for BrR on ROE, TQ and EVA-log are found to be statistically significant (1%) and positive. These results suggest that there is enough evidence that the positive mindset of borrowers towards the sampled banks is useful in increasing accounting return-based shareholder value, market-based shareholder value and value-based shareholder value, therefore, fail to reject hypothesis nineteen (H_{19}).

Table 29 also reports that the regression coefficients of BdSize and $SizeaudC^2$ together with BrR are statistically insignificant in relation to ROE, TQ and EVA-log. These results indicate that any form of shareholder value is insignificantly explained by board size and audit committee size along with the attitude of borrowers of the sampled banks. The results show that the regression coefficients of $SdSh^2$ and ExaudC along with BrR to ROE and TQ are statistically insignificant, but the coefficients to EVA-log are positive and statistically significant for the study period. These results suggest that sponsor-directors' ownership and the presence of the independent audit committee in the sampled banks do not have a significant impact on accounting return-based and market-based shareholder value when the attitude of borrowers is brought into consideration. However, when the attitude of borrowers is considered, the results suggest that the value-based shareholder value increases due to a higher proportion of sponsor-directors' ownership and the presence of the independent audit committee in the sampled banks in Bangladesh.

InstSh with BrR explains ROE and TQ negatively, but it is an insignificant explanation for EVA-log. These results suggest that the higher proportion of institutional shareholding adversely affects accounting return-based and market-based shareholder value, but the same variable has an insignificant effect on value-based shareholder value, when the attitude of borrowers is brought into consideration. Similarly, AudcM with BrR explains ROE negatively, but the mechanism has an insignificant influence on TQ and EVA-log. These results suggest that there the frequency of the audit committee meetings have an adverse effect on the accounting return-based shareholder value; however, there is evidence that the same mechanism exerts an insignificant influence on market-based and value-based shareholder value, when the attitude of borrowers is considered.

As shown in Table 29, PubSh with BrR has an insignificant effect on ROE but a negative impact on TQ and a positive impact on EVA-log. These results suggest that general public shareholding has an insignificant effect on accounting return-based shareholder value but that the same mechanism positively affects value-based and negatively affects the market-based shareholder value when the attitude of borrowers is considered. The regression coefficients of INEDs and CeoCom along with BrR in relation to TQ are found to be positive and statistically significant, but these two

mechanisms are statistically insignificant in relation to ROE and EVA-log. These results suggest that a higher proportion of independent non-executive directors on the board and a higher level of CEOs' compensation contribute to an increase in market-based shareholder value; however, there is no evidence that the same factors have any significant explanatory role for accounting return-based and value-based shareholder value when the attitude of borrowers are taken into consideration.

Regarding the control variables, asset tangibility (Asttang) has a significant positive impact on accounting return-based and market-based shareholder value, but it has an insignificant impact on value-based shareholder value, when the attitude of borrowers is considered. Debt-equity ratio (Gear-log) and firm size (FmSize-log), along with the attitude of borrowers, only explain value-based shareholder value positively; these two control variables do not have any significant effect on shareholder value based on accounting returns or the market. In contrast, firm age (FmAge-log) is found to have no significant impact on shareholder value, when the attitude of borrowers is considered, regardless of the measures used.

6.6.3.3 Effect of internal corporate governance mechanisms and employees on shareholder value

Table 30 shows that the p-values in all cases of the Wald chi^2 test for regression model 3c are less than 0.05. These results indicate the goodness-of-fit of the regression model 3c, because all the coefficients in the model are different from zero.

As shown in Table 30, after controlling for the effect of internal corporate governance mechanisms being examined, the regression coefficients of EmR to ROE, TQ and EVA-log are found to be positive and statistically significant, therefore, fail to reject hypothesis nineteen (H_{19}). These results suggest that the positive attitude of employees towards the sampled banks in Bangladesh contributes to enhancing accounting return-based shareholder value, market-based shareholder value and value-based shareholder value.

Table 30 also reveals that the regression coefficients for BdSize and $SizeaudC^2$ with EmR are statistically insignificant in relation to ROE, TQ and EVA-log. These

results indicate that shareholder value is not predicted by the board size and audit committee size of the sampled banks in Bangladesh, when the attitude of employees is brought into consideration. The results show that the regression coefficients of $SdSh^2$ and ExaudC with EmR in relation to ROE and TQ are statistically insignificant, but that their coefficients in relation to EVA-log are positive and statistically significant for the study period. These results suggest that accounting return-based and market-based shareholder value are not explained in a significant way by sponsor-directors' ownership and the presence of an independent audit committee in the sampled banks in Bangladesh while taking into consideration the attitude of employees. However, these two mechanisms are found to add economic value for shareholders, when the attitude of employees is considered.

Table 30: Estimations of the random-effects GLS regression of internal corporate governance mechanisms, employees and shareholder value

	Regression Model 3c (All bank years)		
	Dependent variable: ROE	**Dependent variable: TQ**	**Dependent variable: EVA-log**
Wald chi^2	85.39	165.30	74.42
Prob > chi^2	0.0000	0.0000	0.0000
No. of observations	145	145	145
Independent variables:			
BdSize	-.0400 (-0.38)	-.0003 (-0.34)	-.0033 (-0.41)
$SdSh^2$	.0005 (1.05)	-3.47e-06 (-0.76)	.0001 (2.37)**
InstSh	-.1470 (-3.26)***	-.0009 (-2.09)**	-.0033 (-0.94)
PubSh	-.0103 (-0.30)	-.0008 (-2.48)**	.0079 (2.95)***
INEDs	.0599 (1.17)	.0012 (2.47)**	-.0005 (-0.13)
CeoCom	.2307 (1.54)	.0040 (2.87)***	.0042 (0.36)
ExaudC	.6772 (0.58)	-.0154 (-1.43)	.15685 (1.75)*
$SizeaudC^2$	.0768 (1.46)	-.0006 (-1.28)	.0045 (1.12)
AudcM	-1.4077 (-2.60)***	-.0069 (-1.37)	.0374 (0.89)
Mediating variable:			
EmR	115.5025 (2.74)***	.0007 (2.51)**	.0109 (2.94)***
Control variables:			
Asttang	.4914 (0.37)	.9763 (2.49)**	3.9023 (1.19)
Gear-log	.1438 (0.25)	.0076 (0.42)	.4316 (2.86)***
FmSize-log	.4914 (0.37)	.0089 (0.73)	.6191 (6.09)***
FmAge-log	.1438 (0.25)	-.0013 (-0.24)	-.0106 (-0.24)
_cons	8.1014 (4.46)***	-.1379 (-2.84)***	-1.5419 (-3.12)***
Time (year) dummies	Yes	Yes	Yes

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. EmR denotes employees. The remaining variables are defined in Table 28.

Table 30 shows that InstSh with EmR has a negative explanatory effect on ROE and TQ, but the same variables have an insignificant effect on EVA-log. These results suggest that the proportion of institutional shareholding adversely affects accounting return-based and market-based shareholder value when combined with the attitude of employees, but that this mechanism has an insignificant effect on value-based shareholder value. Similarly, AudcM along with EmR negatively influences ROE, but the same combination has an insignificant effect on TQ and EVA-log. These results suggest that the intensity of the audit committee meetings has an adverse effect on accounting return-based shareholder value; however, there is no evidence that the mechanism explains market-based and value-based shareholder value in any significant way when also considering the attitude of employees.

Table 30 reports that PubSh has an insignificant effect on ROE along with EmR but a negative impact on TQ and a positive impact on EVA-log. These results suggest that general public shareholding has no significant effect on accounting return-based shareholder value, but that the mechanism positively affects value-based and negatively affects the market-based shareholder value, when the attitude of employees is considered. The coefficients of INEDs and CeoCom together with EmR are found to be positively and statistically significantly related to TQ, but these two mechanisms have a statistically insignificant relation to ROE and EVA-log. These results suggest that the inclusion of independent non-executive directors on the sampled banks' board and paying a higher level of compensation to CEOs give rise to higher market-based shareholder value; however, the evidence indicates that these mechanisms do not influence accounting return-based and value-based shareholder value in a significant way while considering the attitude of employees of the sampled banks.

As for the control variables, asset tangibility (Asttang) with the attitude of employees has a significant positive impact on accounting return-based and market-based shareholder value, but an insignificant effect on value-based shareholder value. Debt-equity ratio (Gear-log) and firm size (FmSize-log) together with the attitude of employees is able to positively explain value-based shareholder value, but these two control variables do not exert a significant influence on accounting return-based and market-based shareholder value, when considered with the attitude of employees. On the

contrary, when the attitude of employees is considered, firm age (FmAge-log) is found to have no significant impact on shareholder value, regardless of the measures used for shareholder value.

6.6.3.4 Effect of internal corporate governance mechanisms and society on shareholder value

As shown in Table 31, the p-values in all cases of the Wald chi^2 test for regression model 3d are less than 0.05, indicating the goodness-of-fit of the model because all the coefficients in the model are different from zero.

Table 31: Estimations of the random-effects GLS regression of internal corporate governance mechanisms, society and shareholder value

	Regression Model 3d (All bank years)		
	Dependent variable: ROE	**Dependent variable: TQ**	**Dependent variable: EVA-log**
Wald chi^2	84.92	164.82	73.16
Prob > chi^2	0.0000	0.0000	0.0000
No. of observations	145	145	145
Independent variables:			
BdSize	-.0346 (-0.33)	-.0002 (-0.25)	-.0025 (-0.30)
SdSh^2	.0005 (1.11)	-3.37e-06 (-0.74)	.0001 (2.42)**
InstSh	-.1439(-3.20)***	-.0008 (-2.03)**	-.0029 (-0.84)
PubSh	-.0076 (-0.22)	-.0007 (-2.24)**	.0086 (3.20)***
INEDs	.0619 (1.21)	.0012 (2.56)**	-.0002 (-0.04)
CeoCom	.2307 (1.50)	.0037 (2.60)***	.0025 (0.20)
ExaudC	.6402 (0.55)	-.0171 (-1.58)	.1438 (1.59)
SizeaudC^2	.0727 (1.40)	-.0007 (-1.41)	.0040 (0.98)
AudcM	-1.4389 (-2.66)***	-.0072 (-1.45)	.0335 (0.80)
Mediating variable:			
SoeR^2	.0756 (2.60)***	.0002 (2.21)**	.0024 (2.25)**
Control variables:			
Asttang	116.6106 (2.76)***	.9795 (2.49)**	3.9813 (1.21)
Gear-log	-2.3533 (-1.21)	.0098 (0.55)	.4513 (3.00)***
FmSize-log	.4685 (0.36)	.0082 (0.67)	.6137 (6.02)***
FmAge-log	.1913 (0.34)	-.0012 (-0.24)	-.0081 (-0.18)
_cons	7.7678 (4.44)***	-.1295 (-2.78)***	-1.5057 (-2.09)**
Time (year) dummies	Yes	Yes	Yes

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. SoeR^2 denotes society squared. The remaining variables are defined in Table 28.

As shown in Table 31, after controlling for the effect of internal corporate governance mechanisms being examined, the regression coefficients of SoeR^2 to ROE, TQ and EVA-log are all found to be positive and statistically significant, therefore, fail to reject hypothesis nineteen (H_{19}). These results suggest that the positive mindset of

society towards the sampled banks enhances accounting return-based shareholder value, market-based shareholder value and value-based shareholder value.

Table 31 also reveals that the regression coefficients for BdSize, ExaudC and $SizeaudC^2$ are statistically insignificant with $SoeR^2$ in relation to ROE, TQ and EVA-log. These results indicate that shareholder value is not explained in a significant way by board size, the presence of the independent audit committee and audit committee size, when the attitude of society is brought into the consideration. The results also show that the regression coefficients of $SdSh^2$ together with $SoeR^2$ in relation to ROE and TQ are statistically insignificant, but that the regression coefficients in relation to EVA-log are positive and statistically significant for the study period. These results suggest that when the attitude of society is considered, sponsor-directors' ownership does not have a significant effect on accounting return-based and market-based shareholder value for the sampled banks in Bangladesh. However, the mechanism does positively explain value-based shareholder value, when the attitude of society is considered.

Table 31 also reports that the regression coefficient for InstSh along with $SoeR^2$ is statistically significant and negatively related to ROE and TQ but insignificantly related to EVA-log. These results suggest that institutional shareholding has a negative explanatory effect on accounting return-based and market-based shareholder value, but an insignificant effect on value-based shareholder value, when the attitude of society is considered. Similarly, the coefficient for AudcM on ROE is statistically significant and negative, but it is insignificantly related to TQ and EVA-log. These results indicate that the frequency of the audit committee meetings explains accounting return-based shareholder value in negative terms, but there is no evidence that the mechanism explains market-based and value-based shareholder value in any significant way, when the attitude of society is considered.

Table reports a statistically significant negative coefficient for PubSh on TQ and a positive coefficient on EVA-log but an insignificant coefficient on ROE. These mean that general public shareholding negatively affects market-based shareholder value, but positively explains value-based shareholder value and insignificantly affect accounting return-based shareholder value, when the attitude of society is considered. When the

attitude of society is brought into the consideration, the results suggest that the inclusion of a higher number of independent non-executive directors (INEDs) on the board of the sampled banks in Bangladesh and paying a higher amount of compensation to the banks' CEOs (CeoCom) result in higher market-based shareholder value. However, evidence indicates that these mechanisms do not explain accounting return-based and value-based shareholder value in a significant way, when taking into account the attitude of society.

Relative to the control variables, asset tangibility (Asttang) is found to have a significant positive effect on accounting return-based and market-based shareholder value, but it has an insignificant effect on value-based shareholder value, when the attitude of society is considered. Debt-equity ratio (Gear-log) and firm size (FmSize-log) have a positive impact on value-based shareholder value, but these two control variables do not have a significant influence on accounting return-based and market-based shareholder value, when the attitude of society is brought into consideration. On the contrary, when the attitude of society is considered, firm age (FmAge-log) is found to have no significant impact on shareholder value, regardless of the measures used for shareholder value.

The next section presents and discusses the empirical results relating to the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value.

6.7 EMPIRICAL RESULTS – MEDIATING EFFECT OF NON-EQUITY STAKEHOLDERS ON THE RELATIONSHIP BETWEEN INTERNAL CORPORATE GOVERNANCE MECHANISMS AND SHAREHOLDER VALUE

This section concentrates on determining the mediating effect of non-equity stakeholders (NESHs) on the relationship between internal corporate governance mechanisms (ICGMs) and shareholder value (SHV). Specifically, it seeks to ascertain whether NESHs mediate the relationship between ICGMs and SHV. This study has determined the mediating effect of each of four NESHs (depositors, borrowers, employees and society) on the relationship between ICGMs and SHV in isolation.

As has been pointed out in chapter five, this study has followed the "three-step approach" of Baron & Kenny (1986) to determine the mediating effect of NESHs on the relationship between ICGMs and SHV. According to the approach, three criteria are to be met. Firstly, ICGMs are to be related to SHV in a statistically significant way (step 1). The results are presented in Table 26. Secondly, ICGMs are to be related to NESHs in a statistically significant way (step 2). These results are presented in Table 27. Finally, NESHs are to be statistically significant in relation to SHV after controlling for the effect of ICGMs (step 3). These results are presented in Tables 28–31. According to this approach, mediation is possible or likely; if ICGMs are no longer statistically significant in predicting SHV when NESHs are controlled for, the results support *full mediation*. If ICGMs remain statistically significant in predicting SHV, the results support *partial mediation.* If any of the three criteria fails to be met (from step 1 to step 3), this indicates that there is no mediating effect from NESHs on the relationship between ICGMs and SHV. The summary results of the mediating effect of four non-equity stakeholders are presented in Tables 32–43.

6.7.1 Mediating Effect of Depositors on the Relationship between Internal Corporate Governance Mechanisms and Shareholder Value

With reference to shareholder value measured by ROE, Table 32 shows that there is no mediating effect of depositors on the relationship between internal corporate governance mechanisms and accounting return-based shareholder value. This is because

the relationship between the variables fails to meet one or more criteria of the "three-step approach" suggested by Baron & Kenny (1986).

Table 32: Summary results of the mediating effect of depositors on the relationship between internal corporate governance mechanisms and ROE

Estimations of the random-effect GLS regression of the relationship between ICGMs and ROE (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and DeR (Model 2)		Estimations of the random-effect GLS regression of ICGMs and DeR predicting ROE (Model 3a)		Conclusion (mediation or not)
BdSize→ROE	-.0284 (-0.27)	BdSize→DeR	1565.141 (1.30)	BdSize and DeR→ROE	-.0392 (-0.37)	No mediation
$SdSh^2$→ROE	.0005 (1.09)	$SdSh^2$→DeR	1.0376 (0.18)	$SdSh^2$ and DeR→ROE	.0005 (1.08)	No mediation
InstSh→ROE	-.1424 (-3.17)***	InstSh→DeR	254.2546 (0.49)	InstSh and DeR→ROE	-.1442 (-3.22)***	No mediation
PubSh→ROE	-.0006 (-0.02)	PubSh→DeR	1657.006 (4.41)***	PubSh and DeR→ROE	-.0121 (-0.35)	No mediation
INEDs→ROE	.065 (1.28)	INEDs→DeR	933.8782 (1.60)	INEDs and DeR→ROE	.0586 (1.15)	No mediation
CeoCom→ROE	.2001 (1.38)	CeoCom→DeR	-6449.835 (-3.86)***	CeoCom and DeR→ROE	.2447 (1.60)	No mediation
ExaudC→ROE	.4742 (0.42)	ExaudC→DeR	-40334.18 (-3.10)***	ExaudC and DeR→ROE	.7534 (0.64)	No mediation
$SizeaudC^2$→ROE	.0692 (1.34)	$SizeaudC^2$→DeR	-968.6418 (-1.63)	$SizeaudC^2$ and DeR→ROE	.0759 (1.46)	No mediation
AudcM→ROE	-1.4587 (-2.70)***	AudcM→DeR	-8024.745 (-1.29)	AudcM and DeR→ROE	-1.4032 (-2.59)***	No mediation
Asttang→ROE	116.2496 (2.75)***	Asttang→DeR	117921.2 (0.24)	Asttang and DeR→ROE	115.4333 (2.74)***	No mediation
Gear-log→ROE	-2.1800 (-1.14)	Gear-log→DeR	35903.58 (1.63)	Gear-log and DeR→ROE	-2.4285 (-1.26)	No mediation
FmSize-log→ ROE	.4123 (0.31)	FmSize-log→DeR	-5546.84 (-1.03)	FmSize-log and DeR→ROE	.5199 (0.40)	No mediation
FmAge-log→ ROE	.1607 (0.28)	FmAge-log→DeR	-589.274 (-0.70)	FmAge-log and DeR→ROE	.1924 (0.34)	No mediation
DeR predicting ROE after controlling for the effect of ICGMs				6.92e-06 (2.92)***		

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: internal corporate governance mechanisms (ICGMs) include: board size (BdSize), sponsor-directors' shareholding squared ($SdSh^2$), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), presence of independent audit committee (ExaudC), size of audit committee squared ($SizeaudC^2$), frequency of the audit committee meetings (AudcM). Asset tangibility (Asttang), log form of debt-equity ratio (Gear-log), log form of firm size (FmSize-log), log form of firm age (FmAge-log), return on equity (ROE), and finally, depositors(DeR).

For example, BdSize, $SdSh^2$, PubSh, INEDs, CeoCom, ExaudC and $SizeaudC^2$ variables have a statistically insignificant relationship to ROE, suggesting that it fails to meet the criterion for step 1. The InstSh and AudcM variables are related in a statistically significant way with ROE; however, the variables are statistically insignificant in predicting DeR, indicating that the test fails to meet the criterion for step 2.

Table 33: Summary results of the mediating effect of depositors on the relationship between internal corporate governance mechanisms and TQ

Estimations of the random-effect GLS regression of the relationship between ICGMs and TQ (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and DeR (Model 2)		Estimations of the random-effect GLS regression of ICGMs and DeR predicting TQ (Model 3a)		Conclusion (mediation or not)
BdSize→TQ	-.0003 (-0.27)	BdSize→DeR	1565.141 (1.30)	BdSize and DeR→TQ	-.0003 (-0.27)	No mediation
$SdSh^2$→TQ	-3.34e-06 (-0.74)	$SdSh^2$→DeR	1.0376 (0.18)	$SdSh^2$ and DeR→TQ	-3.34e-06 (-0.74)	No mediation
InstSh→TQ	-.0009 (-2.04)**	InstSh→DeR	254.2546 (0.49)	InstSh and DeR→TQ	-.0009 (-2.04)**	No mediation
PubSh→TQ	-.0007 (-2.46)**	PubSh→DeR	1657.006 (4.41)***	PubSh and DeR→TQ	-.0007 (-2.29)**	**Partial mediation**
INEDs→TQ	.0012 (2.56)**	INEDs→DeR	933.8782 (1.60)	INEDs and DeR→TQ	.0012 (2.53)**	No mediation
CeoCom→TQ	.0038 (2.83)***	CeoCom→DeR	-6449.825 (-3.86)***	CeoCom and DeR→TQ	.0038 (2.68)***	**Partial mediation**
ExaudC→TQ	-.0166 (-1.58)	ExaudC→DeR	-40334.18 (-3.10)***	ExaudC and DeR→TQ	-.0166 (-1.52)	No mediation
$SizeaudC^2$→TQ	-.0007 (-1.39)	$SizeaudC^2$→DeR	-968.6418 (-1.63)	$SizeaudC^2$ and DeR→TQ	-.0007 (-1.38)	No mediation
AudcM→TQ	-.0072 (-1.44)	AudcM→DeR	-8024.745 (-1.29)	AudcM and DeR→TQ	-.0072 (-1.43)	No mediation
Asttang→TQ	.9807 (2.49)**	Asttang→DeR	117921.2 (0.24)	Asttang and DeR→TQ	.9807 (2.49)**	No mediation
Gear-log→TQ	.0093 (0.52)	Gear-log→DeR	35903.58 (1.63)	Gear-log and DeR→TQ	.0093 (0.52)	No mediation
FmSize-log→TQ	.0084 (0.69)	FmSize-log→DeR	-546.84 (-1.03)	FmSize-log and DeR→TQ	.0084 (0.69)	No mediation
FmAge-log→TQ	-.0012 (-0.22)	FmAge-log→DeR	-89.274 (-0.70)	FmAge-log and DeR→TQ	-.0012 (-0.22)	No mediation
				DeR predicting TQ after controlling for the effect of ICGMs	6.83e-10 (3.01)***	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: depositors (DeR) and Tobin's Q (TQ). The remaining variables are defined in Table 32.

With reference to shareholder value measured by TQ, Table 33 reports that PubSh and CeoCom are statistically significant. Both variables are also related in a statistically significant way with DeR, and DeR has a statistically significant relationship to TQ after controlling for the effect of ICGMs (which include PubSh and CeoCom). Since both variables remain in a statistically significantly related to TQ when the effect of DeR is considered, the results suggest that the relationship of public shareholding and CEOs' compensation with market-based shareholder value is partially mediated by depositors.

However, there is no mediating effect of DeR on the relationship between the remaining ICGMs and TQ because the relationships fail to meet one or more criteria for

the "three-step approach" suggested by Baron & Kenny (1986). For example, InstSh and INEDs are statistically significantly related to TQ; however, both are insignificantly related to DeR, indicating that the result fails to meet the criterion for step 2. BdSize, $SdSh^2$, ExaudC, $SizeaudC^2$ and AudcM are statistically insignificantly related to TQ, indicating that the relationships fail to meet the criterion for step 1.

Table 34: Summary results of the mediating effect of depositors on the relationship between internal corporate governance mechanisms and EVA-log

Estimations of the random-effect GLS regression of the relationship between ICGMs and EVA-log (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and DeR (Model 2)		Estimations of the random-effect GLS regression of ICGMs and DeR predicting EVA-log (Model 3a)		Conclusion (mediation or not)
BdSize→EVA-log	-.0023 (-0.28)	BdSize→DeR	1565.141 (1.30)	BdSize and DeR→EVA-log	-.0030 (-0.37)	No mediation
$SdSh^2$→EVA-log	.0001 (2.41)**	$SdSh^2$→DeR	1.0376 (0.18)	$SdSh^2$ and DeR→EVA-log	.0001 (2.41)**	No mediation
InstSh→EVA-log	-.0029 (-0.83)	InstSh→DeR	254.2546 (0.49)	InstSh and DeR→EVA-log	-.0030 (-0.87)	No mediation
PubSh→EVA-log	.0088 (3.48)***	PubSh→DeR	1657.006 (4.41)***	PubSh and DeR→EVA-log	.0080 (2.97)***	**Partial mediation**
INEDs→EVA-log	-.0001 (-0.02)	INEDs→DeR	933.8782 (1.60)	INEDs and DeR→EVA-log	-.0005 (-0.13)	No mediation
CeoCom→EVA-log	.0015 (0.13)	CeoCom→DeR	-6449.82 (-3.86)***	CeoCom and DeR→EVA-log	.0045 (0.38)	No mediation
ExaudC→EVA-log	.1385 (1.58)	ExaudC→DeR	-40334.18 (-3.10)***	ExaudC and DeR→EVA-log	.1578 (1.74)*	No mediation
$SizeaudC^2$→EVA-log	.0039 (0.96)	$SizeaudC^2$→DeR	-968.6418 (-1.63)	$SizeaudC^2$ and DeR→EVA-log	.0043 (1.07)	No mediation
AudcM→EVA-log	.0328 (0.78)	AudcM→DeR	-8024.745 (-1.29)	AudcM and DeR→EVA-log	.0367 (0.87)	No mediation
Asttang→EVA-log	3.9698 (1.21)	Asttang→DeR	117921.2 (0.24)	Asttang and DeR→EVA-log	3.9133 (1.20)	No mediation
Gear-log→EVA-log	.4568 (3.07)***	Gear-log→DeR	35903.58 (1.63)	Gear-log and DeR→EVA-log	.4396 (2.93)***	No mediation
FmSize-log→EVA-log	.6119 (6.01)***	FmSize-log →DeR	-5546.84 (-1.03)	FmSize-log and DeR→EVA-log	.6194 (6.08)***	No mediation
FmAge-log→EVA-log	-.0091 (-0.21)	FmAge-log →DeR	-589.274 (-0.70)	FmAge-log and DeR→EVA-log	-.0069 (-0.16)	No mediation
DeR predicting EVA-log after controlling for the effect of ICGMs					4.79e-07 (2.82)***	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: depositors (DeR) and log form of economic value added (EVA-log). The remaining variables are defined in Table 32.

With regards to shareholder value measured by EVA-log, Table 34 reports that the relationship with PubSh is statistically significant. The variable is also related in a statistically significant way to DeR, and DeR remains statistically significant as a predictor for EVA-log after controlling for the effect of ICGMs (which include PubSh). Finally, since PubSh is still statistically significantly related to EVA-log while taking

into account the effect of DeR, this suggests that the relationship between public shareholding and economic value-based shareholder value is partially mediated by depositors.

However, there is no mediating effect of depositors on the relationship between the remaining ICGMs and EVA-log because the tests fail to meet one or more criteria for the "three-step approach" suggested by Baron & Kenny (1986). For example, BdSize, InstSh, INEDs, CeoCom, ExaudC, $SizeaudC^2$ and AudcM are related in a statistically insignificant way to EVA-log, suggesting that the criterion for step 1 has not been met. $SdSh^2$ is statistically significantly related to EVA-log; however, the variable has a statistically insignificant relationship with DeR, suggesting that the criterion for step 2 has not been met.

6.7.2 Mediating Effect of Borrowers on the Relationship between Internal Corporate Governance Mechanisms and Shareholder Value

With reference to shareholder value measured by ROE, Table 35 reports similar results to those of DeR and ROE. That is, there is no mediating effect of borrowers on the relationship between internal corporate governance mechanisms and accounting return-based shareholder value. This is because the relationship between variables fails to meet one or more criteria for the "three-step approach" suggested by Baron & Kenny (1986). For example, BdSize, $SdSh^2$, PubSh, INEDs, CeoCom, ExaudC and $SizeaudC^2$ variables have a statistically insignificant relationship to ROE; this suggests that the relationships have failed to meet the criterion for step 1. The InstSh and AudcM variables are statistically significantly related to ROE; however, both variables have a statistically insignificant relationship with BrR, indicating that the criterion for step 2 has not been met.

Table 35: Summary results of the mediating effect of borrowers on the relationship between internal corporate governance mechanisms and ROE

Estimations of the random-effect GLS regression of the relationship between ICGMs and ROE (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and BrR (Model 2)		Estimations of the random-effect GLS regression of ICGMs and BrR predicting ROE (Model 3b)		Conclusion (mediation or not)
BdSize→ROE	-.0284 (-0.27)	BdSize→BrR	1635.882 (1.56)	BdSize and BrR→ROE	-.0409 (-0.39)	No mediation
$SdSh^2$→ROE	.0005 (1.09)	$SdSh^2$→BrR	1.2764 (0.26)	$SdSh^2$ and BrR→ROE	.0005 (1.07)	No mediation
InstSh→ROE	-.1424 (-3.17)***	InstSh→BrR	122.3256 (0.27)	InstSh and BrR→ROE	-.1434 (-3.20)***	No mediation
PubSh→ROE	-.0006 (-0.02)	PubSh→BrR	1434.984 (4.38)***	PubSh and BrR→ROE	-.0115 (-0.33)	No mediation
INEDs→ROE	.0651 (1.28)	INEDs→BrR	827.2972 (1.62)	INEDs and BrR→ROE	.0588 (1.15)	No mediation
CeoCom→ROE	.2001 (1.38)	CeoCom→BrR	-5544.041 (-3.80)***	CeoCom and BrR→ROE	.2425 (1.59)	No mediation
ExaudC→ROE	.4742 (0.42)	ExaudC→BrR	-35769.6 (-3.15)***	ExaudC and BrR→ROE	.7479 (0.64)	No mediation
$SizeaudC^2$→ROE	.0692 (1.34)	$SizeaudC^2$→BrR	-965.6563 (-1.86)*	$SizeaudC^2$ and BrR→ROE	.0766 (1.46)	No mediation
AudcM→ROE	-1.4587 (-2.70)***	AudcM→BrR	-7790.486 (-1.44)	AudcM and BrR→ROE	-1.3991 (-2.58)***	No mediation
Asttang→ROE	116.2496 (2.75)***	Asttang→BrR	139460.1 (0.33)	Asttang and BrR→ROE	115.1824 (2.73)***	No mediation
Gear-log→ROE	-2.1800 (-1.14)	Gear-log→BrR	34257.46 (1.78)*	Gear-log and BrR→ROE	-2.4421 (-1.26)	No mediation
FmSize-log→ROE	.4123 (0.31)	FmSize-log→BrR	-8188.09 (-1.38)	FmSize-log and BrR→ROE	.5515 (0.42)	No mediation
FmAge-log→ROE	.1607 (0.28)	FmAge-log→BrR	-25.1221 (-0.04)	FmAge-log and BrR→ROE	.16245 (0.29)	No mediation
BrR predicting ROE after controlling for the effect of ICGMs					7.65e-06 (2.89)***	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: borrowers (BrR) and return on equity (ROE). The remaining variables are defined in Table 32.

With regards to shareholder value measured by TQ, Table 36 reveals that PubSh and CeoCom are statistically significant in predicting TQ. Both variables are also statistically significantly related to BrR, and BrR is statistically significantly related to TQ after controlling for the effect of ICGMs (which include PubSh and CeoCom). Since both variables are still statistically significantly related to TQ when the effect of BrR is taken into consideration, the results suggest that the relationships between public shareholding and CEOs' compensation and market-based shareholder value are partially mediated by borrowers. However, there is no mediating effect of BrR on the relationship between the remaining ICGMs and TQ, because one or more criteria for the "three-step approach" suggested by Baron & Kenny (1986) are not met. For example, InstSh and

INEDs are statistically significantly related to TQ; however, both variables are insignificantly related to BrR, indicating that the criterion for step 2 has not been met. BdSize, $SdSh^2$, ExaudC, $SizeaudC^2$ and AudcM are related in a statistically insignificant way with TQ, indicating that the criterion for step 1 has not been met.

Table 36: Summary results of the mediating effect of borrowers on the relationship between internal corporate governance mechanisms and TQ

Estimations of the random-effect GLS regression of the relationship between ICGMs and TQ (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and BrR (Model 2)		Estimations of the random-effect GLS regression of ICGMs and BrR predicting TQ (Model 3b)		Conclusion (mediation or not)
BdSize→TQ	-.0003 (-0.27)	BdSize→BrR	1635.882 (1.56)	BdSize and BrR→TQ	-.0003 (-0.27)	No mediation
$SdSh^2$→TQ	-3.34e-06 (-0.74)	$SdSh^2$→BrR	1.2764 (0.26)	$SdSh^2$ and BrR→TQ	-3.34e-06 (-0.73)	No mediation
InstSh→TQ	-.0009 (-2.04)**	InstSh→BrR	122.3256 (0.27)	InstSh and BrR→TQ	-.0009 (-2.04)**	No mediation
PubSh→TQ	-.0007 (-2.46)**	PubSh→BrR	1434.984 (4.38)***	PubSh and BrR→TQ	-.0007 (-2.29)**	**Partial mediation**
INEDs→TQ	.0012 (2.56)**	INEDs→BrR	827.2972 (1.62)	INEDs and BrR→TQ	.0012 (2.54)**	No mediation
CeoCom→TQ	.0038 (2.83)***	CeoCom→BrR	-5544.041 (-3.80)***	CeoCom and BrR→TQ	.0038 (2.68)***	**Partial mediation**
ExaudC→TQ	-.0166 (-1.58)	ExaudC→BrR	-35769.6 (-3.15)***	ExaudC and BrR→TQ	-.0167 (-1.53)	No mediation
$SizeaudC^2$→TQ	-.0007 (-1.39)	$SizeaudC^2$→BrR	-965.6563 (-1.86)*	$SizeaudC^2$ and BrR→TQ	-.0007 (-1.38)	No mediation
AudcM→TQ	-.0072 (-1.44)	AudcM→BrR	-7790.486 (-1.44)	AudcM and BrR→TQ	-.0072 (-1.43)	No mediation
Asttang→TQ	.9807 (2.49)**	Asttang→BrR	139460.1 (0.33)	Asttang and BrR→TQ	.9811 (2.49)**	No mediation
Gear-log→TQ	.0093 (0.52)	Gear-log→BrR	34257.46 (1.78)*	Gear-log and BrR→TQ	.0094 (0.52)	No mediation
FmSize-log→TQ	.0084 (0.69)	FmSize-log→BrR	-18188.09 (-1.38)	FmSize-log and BrR→TQ	.0083 (0.68)	No mediation
FmAge-log→TQ	-.0012 (-0.22)	FmAge-log→BrR	-225.1221 (-0.04)	FmAge-log and BrR→TQ	-.0012 (-0.22)	No mediation
BrR predicting TQ after controlling for the effect of ICGMs					2.76e-09 (3.03)***	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: borrowers (BrR) and Tobin's Q (TQ). The remaining variables are defined in Table 32.

Regarding shareholder value measured by EVA-log, Table 37 reports that its relationship with PubSh is statistically significant. The same variable is also statistically significantly related to BrR, and BrR remains statistically significant in predicting EVA-log after controlling for the effect of ICGMs (which include PubSh). Finally, since PubSh is still statistically significantly related to EVA-log when the effect of BrR is

taken into account, this suggests that the relationship between public shareholding and economic value-based shareholder value is partially mediated by borrowers.

Table 37: Summary results of the mediating effect of borrowers on the relationship between internal corporate governance mechanisms and EVA-log

Estimations of the random-effect GLS regression of the relationship between ICGMs and EVA-log (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and BrR (Model 2)		Estimations of the random-effect GLS regression of ICGMs and BrR predicting EVA-log (Model 3b)		Conclusion (mediation or not)
BdSize→EVA-log	-.0023 (-0.28)	BdSize→BrR	1635.882 (1.56)	BdSize and BrR→EVA-log	-.0030 (-0.38)	No mediation
$SdSh^2$→EVA-log	.0001 (2.41)**	$SdSh^2$→BrR	1.2764 (0.26)	$SdSh^2$ and BrR→EVA-log	.0001 (2.40)**	No mediation
InstSh→EVA-log	-.0029 (-0.83)	InstSh→BrR	122.3256 (0.27)	InstSh and BrR→EVA-log	-.0029 (-0.85)	No mediation
PubSh→EVA-log	.0088 (3.48)***	PubSh→BrR	1434.984 (4.38)***	PubSh and BrR→EVA-log	.0081 (3.00)***	**Partial mediation**
INEDs→EVA-log	-.0001 (-0.02)	INEDs→BrR	827.2972 (1.62)	INEDs and BrR→EVA-log	-.0005 (-0.12)	No mediation
CeoCom→EVA-log	.0015 (0.13)	CeoCom→BrR	-5544.041 (-3.80)***	CeoCom and BrR→EVA-log	.0041 (0.35)	No mediation
ExaudC→EVA-log	.1385 (1.58)	ExaudC→BrR	-35769.6 (-3.15)***	ExaudC and BrR→EVA-log	.1559 (1.72)*	No mediation
$SizeaudC^2$→EVA-log	.0039 (0.96)	$SizeaudC^2$→BrR	-965.6563 (-1.86)*	$SizeaudC^2$ and BrR→EVA-log	.0043 (1.07)	No mediation
AudcM→EVA-log	.0328 (0.78)	AudcM→BrR	-7790.486 (-1.44)	AudcM and BrR→EVA-log	.0366 (0.87)	No mediation
Asttang→EVA-log	3.9698 (1.21)	Asttang→BrR	139460.1 (0.33)	Asttang and BrR→EVA-log	3.9018 (1.19)	No mediation
Gear-log→EVA-log	.4568 (3.07)***	Gear-log→BrR	34257.46 (1.78)*	Gear-log and BrR→EVA-log	.4401 (2.93)***	**Partial mediation**
FmSize-log→EVA-log	.6119 (6.01)***	FmSize-log→BrR	-8188.09 (-1.38)	FmSize-log and BrR→EVA-log	.6208 (6.07)***	No mediation
FmAge-log→EVA-log	-.0091 (-0.21)	FmAge-log→BrR	-25.1221 (-0.04)	FmAge-log and BrR→EVA-log	-.0089 (-0.20)	No mediation
BrR predicting EVA-log after controlling for the effect of ICGMs					4.88e-07 (2.73)***	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: borrowers (BrR) and log form of economic value added (EVA-log). The remaining variables are defined in Table 32.

However, there is no mediating effect of BrR on the relationship between the remaining ICGMs and EVA-log because one or more criteria for the "three-step approach" suggested by Baron & Kenny (1986) fail to be met. For example, BdSize, InstSh, INEDs, CeoCom, ExaudC, $SizeaudC^2$ and AudcM have a statistically insignificant relationship to EVA-log, indicating that the criterion for step 1 has not been met. While $SdSh^2$ is statistically significantly related to EVA-log, the same variable has a

statistically insignificant relationship with BrR, indicating that the analysis fails to meet the criterion for step 2.

6.7.3 Mediating Effect of Employees on the Relationship between Internal Corporate Governance Mechanisms and Shareholder Value

Table 38 shows that there is no mediating effect of employees on the relationship between internal corporate governance mechanisms and accounting return-based shareholder value. This is because the relationship between the variables fails to meet all the criteria for the "three-step approach" suggested by Baron & Kenny (1986).

Table 38: Summary results of the mediating effect of employees on the relationship between internal corporate governance mechanisms and ROE

Estimations of the random-effect GLS regression of the relationship between ICGMs and ROE (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and EmR (Model 2)		Estimations of the random-effect GLS regression of ICGMs and EmR predicting ROE (Model 3c)		Conclusion (mediation or not)
BdSize→ROE	-.0284 (-0.27)	BdSize→EmR	.0965 (1.60)	BdSize and EmR→ROE	-.0400 (-0.38)	No mediation
$SdSh^2$→ROE	.0005 (1.09)	$SdSh^2$→EmR	.0002 (0.66)	$SdSh^2$ and EmR→ROE	.0005 (1.05)	No mediation
InstSh→ROE	-.1424 (-3.17)***	InstSh→EmR	.0385 (1.49)	InstSh and EmR→ROE	-.1470 (-3.26)***	No mediation
PubSh→ROE	-.0006 (-0.02)	PubSh→EmR	.0810 (4.31)***	PubSh and EmR→ROE	-.0103 (-0.30)	No mediation
INEDs→ROE	.0651 (1.28)	INEDs→EmR	.0429 (1.47)	INEDs and EmR→ROE	.0599 (1.17)	No mediation
CeoCom→ROE	.2001 (1.38)	CeoCom→EmR	-.2549 (-3.05)***	CeoCom and EmR→ROE	.2307 (1.54)	No mediation
ExaudC→ROE	.4742 (0.42)	ExaudC→EmR	-1.6887 (-2.59)***	ExaudC and EmR→ROE	.6772 (0.58)	No mediation
$SizeaudC^2$→ROE	.0692 (1.34)	$SizeaudC^2$→EmR	-.0628 (-2.11)**	$SizeaudC^2$ and EmR→ROE	.0768 (1.46)	No mediation
AudcM→ROE	-1.4587 (-2.70)***	AudcM→EmR	-.4243 (-1.37)	AudcM and EmR→ROE	-1.4077 (-2.60)***	No mediation
Asttang→ROE	116.2496 (2.75)***	Asttang→EmR	6.2164 (0.26)	Asttang and EmR→ROE	115.5025 (2.74)***	No mediation
Gear-log→ROE	-2.1800 (-1.14)	Gear-log→EmR	2.3229 (2.10)**	Gear-log and EmR→ROE	-2.4591 (-1.26)	No mediation
FmSize-log→ROE	.4123 (0.31)	FmSize-log→EmR	-.6581 (-0.87)	FmSize-log and EmR→ROE	.4914 (0.37)	No mediation
FmAge-log→ROE	.1607 (0.28)	FmAge-log→EmR	.1405 (0.43)	FmAge-log and EmR→ROE	.1438 (0.25)	No mediation
EmR predicting ROE after controlling for the effect of ICGMs					115.5025 (2.74)***	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: employees (EmR) and return on equity (ROE). The remaining variables are defined in Table 32.

For example, BdSize, $SdSh^2$, PubSh, INEDs, CeoCom, ExaudC and $SizeaudC^2$ variables have a statistically insignificant relationship to ROE, suggesting that the tests fail to meet the criterion for step 1. The InstSh and AudcM variables are statistically significantly related to ROE; however, both variables have a statistically insignificant relationship to EmR, indicating that the criterion for step 2 fails to be satisfied.

Table 39: Summary results of the mediating effect of employees on the relationship between internal corporate governance mechanisms and TQ

Estimations of the random-effect GLS regression of the relationship between ICGMs and TQ (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and EmR (Model 2)		Estimations of the random-effect GLS regression of ICGMs and EmR predicting TQ (Model 3c)		Conclusion (mediation or not)
BdSize→TQ	-.0003 (-0.27)	BdSize→EmR	.0965 (1.60)	BdSize and EmR→TQ	-.0003 (-0.34)	No mediation
$SdSh^2$→TQ	-3.34e-06 (-0.74)	$SdSh^2$→EmR	.0002 (0.66)	$SdSh^2$ and EmR→TQ	-3.47e-06 (-0.76)	No mediation
InstSh→TQ	-.0009 (-2.04)**	InstSh→EmR	.0385 (1.49)	InstSh and EmR→TQ	-.0009 (-2.09)**	No mediation
PubSh→TQ	-.0007 (-2.46)**	PubSh→EmR	.0810 (4.31)***	PubSh and EmR→TQ	-.0008 (-2.48)**	**Partial mediation**
INEDs→TQ	.0012 (2.56)**	INEDs→EmR	.0429 (1.47)	INEDs and EmR→TQ	.0012 (2.47)**	No mediation
CeoCom→TQ	.0038 (2.83)***	CeoCom→EmR	-.2549 (-3.05)***	CeoCom and EmR→TQ	.0040 (2.87)***	**Partial mediation**
ExaudC→TQ	-.0166 (-1.58)	ExaudC→EmR	-1.6887 (-2.59)***	ExaudC and EmR→TQ	-.0154 (-1.43)	No mediation
$SizeaudC^2$→TQ	-.0007 (-1.39)	$SizeaudC^2$→EmR	-.0628 (-2.11)**	$SizeaudC^2$ and EmR→TQ	-.0006 (-1.28)	No mediation
AudcM→TQ	-.0072 (-1.44)	AudcM→EmR	-.4243 (-1.37)	AudcM and EmR→TQ	-.0069 (-1.37)	No mediation
Asttang→TQ	.9807 (2.49)**	Asttang→EmR	6.2164 (0.26)	Asttang and EmR→TQ	.9763 (2.49)**	No mediation
Gear-log→TQ	.0093 (0.52)	Gear-log→EmR	2.3229 (2.10)**	Gear-log and EmR→TQ	.0076 (0.42)	No mediation
FmSize-log→TQ	.0084 (0.69)	FmSize-log→EmR	-.6581 (-0.87)	FmSize-log and EmR→TQ	.0089 (0.73)	No mediation
FmAge-log→TQ	-.0012 (-0.22)	FmAge-log→EmR	.1405 (0.43)	FmAge-log and EmR→TQ	-.0013 (-0.24)	No mediation
EmR predicting TQ after controlling for the effect of ICGMs					.0007 (2.51)**	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: employees (EmR) and Tobin's Q (TQ). The remaining variables are defined in Table 32.

Taking into account shareholder value measured by TQ, Table 39 reports that, PubSh and CeoCom are statistically significant in predicting TQ. Both variables are also statistically significantly related to EmR, and EmR is statistically significantly related to TQ after controlling for the effect of ICGMs (which include PubSh and CeoCom). Since PubSh and CeoCom are still statistically significantly related to TQ while considering the

effect of EmR, the results suggest that the relationship of public shareholding and CEOs' compensation with market-based shareholder value is partially mediated by employees.

However, there is no mediating effect of EmR on the relationship between the remaining ICGMs and TQ, because one or more criteria for the "three-step approach" suggested by Baron & Kenny (1986) fail to be met. For example, InstSh and INEDs are statistically significantly related to TQ; however, both are insignificantly related to EmR, indicating the relationship fails to meet the criterion for step 2. BdSize, $SdSh^2$, ExaudC, $SizeaudC^2$ and AudcM have a statistically insignificant relationship with TQ, indicating that the relationship fails to meet the criterion for step 1.

Table 40: Summary results of the mediating effect of employees on the relationship between internal corporate governance mechanisms and EVA-log

Estimations of the random-effect GLS regression of the relationship between ICGMs and EVA-log (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and EmR (Model 2)		Estimations of the random-effect GLS regression of ICGMs and EmR predicting EVA-log (Model 3c)		Conclusion (mediation or not)
BdSize→EVA-log	-.0023 (-0.28)	BdSize→EmR	.0965 (1.60)	BdSize and EmR→EVA-log	-.0033 (-0.41)	No mediation
$SdSh^2$→EVA-log	.0001 (2.41)**	$SdSh^2$→EmR	.0002 (0.66)	$SdSh^2$ and EmR→EVA-log	.0001 (2.37)**	No mediation
InstSh→EVA-log	-.0029 (-0.83)	InstSh→EmR	.0385 (1.49)	InstSh and EmR→EVA-log	-.0033 (-0.94)	No mediation
PubSh→EVA-log	.0088 (3.48)***	PubSh→EmR	.0810 (4.31)***	PubSh and EmR→EVA-log	.0079 (2.95)***	**Partial mediation**
INEDs→EVA-log	-.0001 (-0.02)	INEDs→EmR	.0429 (1.47)	INEDs and EmR→EVA-log	-.0005 (-0.13)	No mediation
CeoCom→EVA-log	.0015 (0.13)	CeoCom→EmR	-.2549 (-3.05)***	CeoCom and EmR→EVA-log	.0042 (0.36)	No mediation
ExaudC→EVA-log	.1385 (1.58)	ExaudC→EmR	-1.6887 (-2.59)***	ExaudC and EmR→EVA-log	.15685 (1.75)*	No mediation
$SizeaudC^2$→EVA-log	.0039 (0.96)	$SizeaudC^2$→EmR	-.0628 (-2.11)**	$SizeaudC^2$ and EmR→EVA-log	.0045 (1.12)	No mediation
AudcM→EVA-log	.0328 (0.78)	AudcM→EmR	-.4243 (-1.37)	AudcM and EmR→EVA-log	.0374 (0.89)	No mediation
Asttang→EVA-log	3.9698 (1.21)	Asttang→EmR	6.2164 (0.26)	Asttang and EmR→EVA-log	3.9023 (1.19)	No mediation
Gear-log→EVA-log	.4568 (3.07)***	Gear-log→EmR	2.3229 (2.10)**	Gear-log and EmR→EVA-log	.4316 (2.86)***	**Partial mediation**
FmSize-log→EVA-log	.6119 (6.01)***	FmSize-log→EmR	-.6581 (-0.87)	FmSize-log and EmR→EVA-log	.6191 (6.09)***	No mediation
FmAge-log→EVA-log	-.0091 (-0.21)	FmAge-log→EmR	.1405 (0.43)	FmAge-log and EmR→EVA-log	-.0106 (-0.24)	No mediation
EmR predicting EVA-log after controlling for the effect of ICGMs				.0109 (2.94)***		

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: employees (EmR) and log form of economic value added (EVA-log). The remaining variables are defined in Table 32.

With reference to EmR to EVA-log, Table 40 reports that the relationship with PubSh is statistically significant. The same variable is also statistically significantly related to EmR, and EmR remains statistically significant in predicting EVA-log after controlling for the effect of ICGMs (which include PubSh). Finally, since PubSh is still statistically significantly related to EVA-log when the effect of EmR is taken into account, this suggests that the relationship between public shareholding and value-based shareholder value is partially mediated by employees.

However, there is no mediating effect of EmR on the relationship between the remaining ICGMs and EVA-log because one or more criteria for the "three-step approach" suggested by Baron & Kenny (1986) are not met. For example, BdSize, InstSh, INEDs, CeoCom, ExaudC, $SizeaudC^2$ and AudcM exist in a statistically insignificant relationship to EVA-log, indicating that the criterion for step 1 has not been met. $SdSh^2$ is statistically significantly related to EVA-log; however, the variable has a statistically insignificant relationship to EmR, indicating that the relationship fails to meet the criterion for step 2.

6.7.4 Mediating Effect of Society on the Relationship between Internal Corporate Governance Mechanisms and Shareholder Value

As shown in Table 41, there is no mediating effect of society on the relationship between internal corporate governance mechanisms and accounting return-based shareholder value. This is because the relationship between the variables fails to meet all the criteria for the "three-step approach" suggested by Baron & Kenny (1986). For example, BdSize, $SdSh^2$, PubSh, INEDs, CeoCom, ExaudC and $SizeaudC^2$ variables are statistically insignificantly related to ROE, meaning that the variables fail to meet the criterion for step 1. The InstSh and AudcM variables are statistically significantly related to ROE; however, both variables are statistically insignificantly related to $SoeR^2$, indicating that the relationships fail to meet the criterion for step 2.

Table 41: Summary results of the mediating effect of society on the relationship between internal corporate governance mechanisms and ROE

Estimations of the random-effect GLS regression of the relationship between ICGMs and ROE (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and $SoeR^2$ (Model 2)		Estimations of the random-effect GLS regression of ICGMs and $SoeR^2$ predicting ROE (Model 3d)		Conclusion (mediation or not)
BdSize→ROE	-.0284 (-0.27)	BdSize→$SoeR^2$	.0811 (1.13)	BdSize and $SoeR^2$→ROE	-.0346 (-0.33)	No mediation
$SdSh^2$→ROE	.0005 (1.09)	$SdSh^2$→$SoeR^2$	-.0001 (-0.38)	$SdSh^2$ and $SoeR^2$→ROE	.0005 (1.11)	No mediation
InstSh→ROE	-.1424 (-3.17)***	InstSh→$SoeR^2$	.0205 (0.67)	InstSh and SoeR2→ROE	-.1439 (-3.20)***	No mediation
PubSh→ROE	-.0006 (-0.02)	PubSh→$SoeR^2$	.0923 (4.14)***	PubSh and $SoeR^2$→ROE	-.0076 (-0.22)	No mediation
INEDs→ROE	.0651 (1.28)	INEDs→$SoeR^2$	.0416 (1.20)	INEDs and $SoeR^2$→ROE	.0619 (1.21)	No mediation
CeoCom→ROE	.2001 (1.38)	CeoCom→$SoeR^2$	-.4058 (-4.09)***	CeoCom and $SoeR^2$→ROE	.2307 (1.50)	No mediation
ExaudC→ROE	.4742 (0.42)	ExaudC→$SoeR^2$	-2.1950 (-2.84)***	ExaudC and $SoeR^2$→ROE	.6402 (0.55)	No mediation
$SizeaudC^2$→ROE	.0692 (1.34)	$SizeaudC^2$→$SoeR^2$	-.0462 (-1.31)	$SizeaudC^2$ and $SoeR^2$→ROE	.0727 (1.40)	No mediation
AudcM→ROE	-1.4587 (-2.70)***	AudcM→$SoeR^2$	-.2617 (-0.71)	AudcM and $SoeR^2$→ROE	-1.4389 (-2.66)***	No mediation
Asttang→ROE	116.2496 (2.75)***	Asttang→$SoeR^2$	-4.7730 (-0.17)	Asttang and $SoeR^2$→ROE	116.6106 (2.76)***	No mediation
Gear-log→ROE	-2.1800 (-1.14)	Gear-log→$SoeR^2$	2.2915 (1.75)*	Gear-log and $SoeR^2$→ROE	-2.3533 (-1.21)	No mediation
FmSize-log→ROE	.4123 (0.31)	FmSize-log→$SoeR^2$	-.7426 (-0.83)	FmSize-log and $SoeR^2$→ROE	.4685 (0.36)	No mediation
FmAge-log→ROE	.1607 (0.28)	FmAge-log→$SoeR^2$	-.4048 (-1.05)	FmAge-log and $SoeR^2$→ROE	.1913 (0.34)	No mediation
$SoeR^2$ predicting ROE after controlling for the effect of ICGMs					.0756 (2.60)***	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5%, and 10% levels, respectively. Variables are defined as follows: society ($SoeR^2$) and return on equity (ROE). The remaining variables are defined in Table 32.

Regarding shareholder value, as measured by TQ, the results presented in Table 42 show that PubSh and CeoCom are statistically significant predictors of TQ. Both variables are also statistically significantly related to $SoeR^2$, and $SoeR^2$ is statistically significantly related to TQ after controlling for the effect of ICGMs (which include PubSh and CeoCom). Since both variables remain statistically significantly related to TQ when taking into consideration the effect of $SoeR^2$, the results suggest that the relationship of general public shareholding and CEOs' compensation with TQ is partially mediated by society.

Table 42: Summary results of the mediating effect of employees on the relationship between internal corporate governance mechanisms and TQ

Estimations of the random-effect GLS regression of the relationship between ICGMs and TQ (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and $SoeR^2$ (Model 2)		Estimations of the random-effect GLS regression of ICGMs and $SoeR^2$ predicting TQ (Model 3d)		Conclusion (mediation or not)
BdSize→TQ	-.0003 (-0.27)	BdSize→$SoeR^2$	.0811 (1.13)	BdSize and $SoeR^2$→TQ	-.0002 (-0.25)	No mediation
$SdSh^2$→TQ	-3.34e-06 (-0.74)	$SdSh^2$→$SoeR^2$	-.0001 (-0.38)	$SdSh^2$ and $SoeR^2$→TQ	-3.37e-06 (-0.74)	No mediation
InstSh→TQ	-.0009 (-2.04)**	InstSh→$SoeR^2$	.0205 (0.67)	InstSh and SoeR2→TQ	-.0008 (-2.03)**	No mediation
PubSh→TQ	-.0007 (-2.46)**	PubSh→$SoeR^2$	.0923 (4.14)***	PubSh and $SoeR^2$→TQ	-.0007 (-2.24)**	**Partial mediation**
INEDs→TQ	.0012 (2.56)**	INEDs→$SoeR^2$	.0416 (1.20)	INEDs and $SoeR^2$→TQ	.0012 (2.56)**	No mediation
CeoCom→TQ	.0038 (2.83)***	CeoCom→$SoeR^2$	-.4058 (-4.09)***	CeoCom and $SoeR^2$→TQ	.0037 (2.60)***	**Partial mediation**
ExaudC→TQ	-.0166 (-1.58)	ExaudC→$SoeR^2$	-2.1950 (-2.84)***	ExaudC and $SoeR^2$→TQ	-.0171 (-1.58)	No mediation
$SizeaudC^2$→TQ	-.0007 (-1.39)	$SizeaudC^2$→$SoeR^2$	-.0462 (-1.31)	$SizeaudC^2$ and $SoeR^2$→TQ	-.0007 (-1.41)	No mediation
AudcM→TQ	-.0072 (-1.44)	AudcM→$SoeR^2$	-.2617 (-0.71)	AudcM and $SoeR^2$→TQ	-.0072 (-1.45)	No mediation
Asttang→TQ	.9807 (2.49)**	Asttang→$SoeR^2$	-4.7730 (-0.17)	Asttang and $SoeR^2$→TQ	.9795 (2.49)**	No mediation
Gear-log→TQ	.0093 (0.52)	Gear-log→$SoeR^2$	2.2915 (1.75)*	Gear-log and $SoeR^2$→TQ	.0098 (0.55)	No mediation
FmSize-log→TQ	.0084 (0.69)	FmSize-log→$SoeR^2$	-.7426 (-0.83)	FmSize-log and $SoeR^2$→TQ	.0082 (0.67)	No mediation
FmAge-log→TQ	-.0012 (-0.22)	FmAge-log→$SoeR^2$	-.4048 (-1.05)	FmAge-log and $SoeR^2$→TQ	-.0012 (-0.24)	No mediation
$SoeR^2$ predicting TQ after controlling for the effect of ICGMs					.0002 (2.21)*	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: society ($SoeR^2$) and Tobin's Q (TQ). The remaining variables are defined in Table 32.

However, there is no mediating effect of society on the relationship between remaining the ICGMs and ROE because the relationships fail to meet one or more criteria for the "three-step approach" suggested by Baron & Kenny (1986). For example, InstSh and INEDs are statistically significantly related to TQ; however, both have an insignificant relationship with $SoeR^2$, indicating that the criterion for step 2 has not been met. BdSize, $SdSh^2$, ExaudC, $SizeaudC^2$ and AudcM have a statistically insignificant relationship with TQ, indicating that the relationship fails to meet the criterion for step 1.

Table 43: Summary results of the mediating effect of employees on the relationship between internal corporate governance mechanisms and EVA-log

Estimations of the random-effect GLS regression of the relationship between ICGMs and EVA-log (Model 1)		Estimations of the random-effect GLS regression of the relationship between ICGMs and $SoeR^2$ (Model 2)		Estimations of the random-effect GLS regression of ICGMs and $SoeR^2$ predicting EVA-log (Model 3d)		Conclusion (mediation or not)
BdSize→EVA-log	-.0023 (-0.28)	BdSize→$SoeR^2$	.0811 (1.13)	BdSize and $SoeR^2$→EVA-log	-.0025 (-0.30)	No mediation
$SdSh^2$→EVA-log	.0001 (2.41)**	$SdSh^2$→$SoeR^2$	-.0001 (-0.38)	$SdSh^2$ and $SoeR^2$→EVA-log	.0001 (2.42)**	No mediation
InstSh→EVA-log	-.0029 (-0.83)	InstSh→$SoeR^2$	.0205 (0.67)	InstSh and SoeR2→EVA-log	-.0029 (-0.84)	No mediation
PubSh→EVA-log	.0088 (3.48)***	PubSh→$SoeR^2$	.0923 (4.14)***	PubSh and $SoeR^2$→EVA-log	.0086 (3.20)***	**Partial mediation**
INEDs→EVA-log	-.0001 (-0.02)	INEDs→$SoeR^2$	.0416 (1.20)	INEDs and $SoeR^2$→EVA-log	-.0002 (-0.04)	No mediation
CeoCom→EVA-log	.0015 (0.13)	CeoCom→$SoeR^2$	-.4058 (-4.09)***	CeoCom and $SoeR^2$→EVA-log	.0025 (0.20)	No mediation
ExaudC→EVA-log	.1385 (1.58)	ExaudC→$SoeR^2$	-2.1950 (-2.84)***	ExaudC and $SoeR^2$→EVA-log	.1438 (1.59)	No mediation
$SizeaudC^2$→EVA-log	.0039 (0.96)	$SizeaudC^2$→$SoeR^2$	-.0462 (-1.31)	$SizeaudC^2$ and $SoeR^2$→EVA-log	.0040 (0.98)	No mediation
AudcM→EVA-log	.0328 (0.78)	AudcM→$SoeR^2$	-.2617 (-0.71)	AudcM and $SoeR^2$→EVA-log	.0335 (0.80)	No mediation
Asttang→EVA-log	3.9698 (1.21)	Asttang→$SoeR^2$	-4.7730 (-0.17)	Asttang and $SoeR^2$→EVA-log	3.9813 (1.21)	No mediation
Gear-log→EVA-log	.4568 (3.07)***	Gear-log→$SoeR^2$	2.2915 (1.75)*	Gear-log and $SoeR^2$→EVA-log	.4513 (3.00)***	**Partial mediation**
FmSize-log→EVA-log	.6119 (6.01)***	FmSize-log→$SoeR^2$	-.7426 (-0.83)	FmSize-log and $SoeR^2$→EVA-log	.6137 (6.02)***	No mediation
FmAge-log→EVA-log	-.0091 (-0.21)	FmAge-log→$SoeR^2$	-.4048 (-1.05)	FmAge-log and $SoeR^2$→EVA-log	-.0081 (-0.18)	No mediation
$SoeR^2$ predicting EVA-log after controlling for the effect of ICGMs					.0024 (2.25)**	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: society ($SoeR^2$) and log form of economic value added (EVA-log). The remaining variables are defined in Table 32.

As for shareholder value measured by EVA-log, Table 43 shows that the relationship with PubSh is statistically significant. The variable is also statistically significantly related to $SoeR^2$, and $SoeR^2$ remains statistically significant in predicting EVA-log after controlling for the effect of ICGMs (which include PubSh). Since PubSh is still statistically significantly related to EVA-log when the effect of $SoeR^2$ is taken into account, this suggests that the relationship between public shareholding and value-based shareholder value is partially mediated by society.

However, there is no mediating effect of society on the relationship between the remaining ICGMs and EVA-log because the relationships fail to meet one or more

criteria for the "three-step approach" suggested by Baron & Kenny (1986). For example, BdSize, InstSh, INEDs, CeoCom, ExaudC, $SizeaudC^2$ and AudcM are statistically insignificant in their relation to EVA-log, suggesting the criterion for step 1 has not been satisfied. $SdSh^2$ is statistically significantly related to EVA-log; however, the variable has a statistically insignificant relation to $SoeR^2$, suggesting that the relationship between variables fails to meet the criterion for step 2.

6.8 SUMMARY OF THE CHAPTER

This chapter has presented and discussed the empirical results of this study. Specifically, it has sought to achieve seven key objectives. Firstly, it aims to explain how outliers in different variables have been dealt with, because outliers may lead to incorrect conclusions in the correlation and regression results. In order to detect outliers, this study applied the box plot technique, which determined the presence of outliers in some variables, namely sponsor-directors' shareholding (SdSh), institutional shareholding (InstSh), CEOs' compensation (CeoCom), frequency of the audit committee meetings (AudcM), firm size (FmSize), debt-equity ratio (Gear), firm age (FmAge) and employees (EmR). Therefore, all the variables affected by outliers were winsorised at 5% and 95% levels in order to minimise the effect of outliers. Accordingly, the top and bottom 7 values of each of the variables affected by these extreme values were replaced by the 8th and 138th values, respectively (see section 6.1).

Secondly, the chapter has presented detailed descriptive statistics of all continuous variables. In this way, a detailed description of the continuous dependent, independent, mediating and control variables has been presented (see section 6.2).

Thirdly, this chapter has presented the results of the tests for the normality of the variables. The results suggest that a number of variables are normally distributed in their original form as the results of all the normality tests conducted failed to reject the null hypothesis (i.e. $p>0.05$). However, several other variables are not normally distributed, as the results of all normality tests conducted rejected the null hypothesis (i.e. $p< 0.05$). Thus, this study has transformed some of these variables into log form and others into squared form, in order to make them normally distributed (see section 6.3).

Fourthly, it has presented the results of the bivariate analysis using Pearson's correlation matrix for regression models 1–3d, which shows the correlation between various continuous dependent and independent variables. These results are presented in Tables 14–19, which reveal that every continuous variable is correlated with each other (see section 6.4).

Fifthly, section 6.5 has presented the results of the testing for the panel data used in this study. These tests are conducted to find out about the nature of the panel data used in this study and to select an appropriate model for analysing the relationships between variables. The results of TOL and VIF provide evidence that there is not a severe multicollinearity problem between two or more independent variables (see Table 20). The Hausman Specification test and the Breusch-Pagan Lagrangian Multiplier test both suggest employing the random-effects model examine the relationship between the variables (see Table 21 and 22).

Sixthly, it has presented the multivariate results in the three subsections. Subsection 6.6.1 has presented and discussed the results of the direct relationship between internal corporate governance mechanisms and shareholder value for which this study has tested the first nine hypotheses (i.e. H_1-H_9). The findings are tabularised in Table 26, which shows that the effect of each internal corporate governance mechanism on shareholder value is mixed. This means that some of the internal corporate governance mechanisms have a statistically significant effect on shareholder value; however, others do not. Subsection 6.6.2 has presented the results of the direct relationship between internal corporate governance mechanisms and non-equity stakeholders in the banking sector in Bangladesh. This study has tested further the second nine hypotheses (i.e. H_{10} -H_{18}) to assess the separate effect of each internal corporate governance mechanism on each non-equity stakeholder. The findings are presented in Table 27, which shows that none of the internal corporate governance mechanisms affects all non-equity stakeholders equally. Subsection 6.6.3 has presented the results of the effect of the internal corporate governance mechanisms and non-equity stakeholders on shareholder value. This study has tested one hypothesis (i.e. H_{19}) to examine the effect of non-equity stakeholders on shareholder value after controlling for the effect of internal corporate governance mechanisms. The findings are presented in Tables 28–31.

Finally, the chapter has presented the results of the mediating effect of four non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. In order to ascertain the mediating effect of non-equity stakeholders, this study has used Baron & Kenny's (1986) "three-step approach". The results are presented in Tables 32–43. The results suggest that the relationship between internal corporate governance mechanisms and accounting return-based shareholder value is not mediated by any of the non-equity stakeholders (depositors, borrowers, employees and society). In contrast, this study finds that all four non-equity stakeholders partially mediate the relationship between general public shareholding and both market-based and value-based shareholder value. All the non-equity stakeholders partially mediate the relationship between CEOs' compensation and only market-based shareholder value.

The next chapter presents the results of the series of robustness tests for the findings presented in this chapter.

CHAPTER SEVEN

ROBUSTNESS TESTS

7.0 OVERVIEW OF THE CHAPTER

This chapter presents the results of a series of tests to investigate whether the main findings of this study are robust and insensitive. Firstly, this study checks the robustness of the main inferences by analysing the uncertainty of the "three-step approach" suggested by the Baron & Kenny (1986) used in this study to determine the mediating effect of non-equity stakeholders and tests whether or not the main results are sensitive to an alternative method. Secondly, this study verifies the sensitivity of results to the alternative measurement of variables. Thirdly, it further confirms the insensitivity of results to the composite mediating effect of four non-equity stakeholders. Finally, this study draws a conclusion about the robustness of the findings by analysing the results of the assumptions for statistical tests. The remainder of the chapter is organised as follows: section 7.1 presents the results of a series of tests for robustness, while section 7.2 summarises the chapter.

7.1 ROBUSTNESS TESTS/SENSITIVITY ANALYSES

7.1.1 Sensitivity of Results to Alternative Method – Sobel Test

As has been stated in chapter five, the "three-step approach" suggested by Baron & Kenny (1986) is widely used to determine mediating effects. However, this approach may lead to Type II errors caused by missing some true mediation effects, because of the small sample size or other extraneous variables. Furthermore, this approach does not perform a significance test for the effect of internal corporate governance mechanisms (ICGMs) on shareholder value (SHV) through non-equity stakeholders (NESHs). Considering these limitations and following a number of prior studies (e.g. Luo *et al*., 2014; Henssen *et al*., 2014; Yu-Shu *et al*., 2015; Wahba & Elsayed, 2015), this study has conducted an alternative test, namely the Sobel test, to check the validity of the main

results of it. Table 44 presents the Sobel test results concerning the mediating effect of NESHs on the relationship between ICGMs and SHV. Path coefficients and their respective standard errors are not presented here for the sake of brevity.

With reference to the dependent variable ROE, the Sobel test results reported in Table 44 show that the p-values of the following corresponding relationships are insignificant (i.e. *p>0.05*): (i) ICGMs are predicting ROE through DeR; (ii) ICGMs are predicting ROE through BrR; (iii) ICGMs are predicting ROE through EmR; and (iv) ICGMs are predicting ROE through $SoeR^2$. These results suggest that key four non-equity stakeholders (depositors, borrowers, employees and society) associated with the sampled banks do not significantly mediate the relationship between internal corporate governance mechanisms and accounting return-based shareholder value. These results are consistent with the main findings of this study.

Table 44: Estimations of the Sobel test of the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value

(a) Mediating effects of DeR on the relationship between ICGMs and SHV

ICGMs predicting ROE through DeR			ICGMs predicting TQ through DeR			ICGMs predicting EVA-log through DeR		
ICGMs	**z-statistics**	**p-values**	**ICGMs**	**z-statistics**	**p-values**	**ICGMs**	**z-statistics**	**p-values**
BdSize	-0.3590	0.7195	BdSize	-1.2999	0.6402	BdSize	-0.3573	0.6396
$SdSh^2$	0.1819	0.8556	$SdSh^2$	-0.1789	0.8579	$SdSh^2$	0.1840	0.4270
InstSh	-0.4869	0.6263	InstSh	-0.4787	0.6321	InstSh	-0.4281	0.6657
PubSh	-0.3451	0.7301	PubSh	**-2.0343**	**0.0419**	PubSh	**2.4623**	**0.0138**
INEDs	0.9319	0.3514	INEDs	1.3521	0.1763	INEDs	-0.1289	0.5513
CeoCom	-1.4799	0.1389	CeoCom	**-2.2028**	**0.0276**	CeoCom	-0.3830	0.6491
ExaudC	-0.6308	0.5281	ExaudC	1.3679	0.1713	ExaudC	-1.5172	0.9353
$SizeaudC^2$	-1.0845	0.2782	$SizeaudC^2$	1.0521	0.2927	$SizeaudC^2$	-1.1881	0.8826
AudcM	1.1571	0.2473	AudcM	0.9588	0.3376	AudcM	-0.8936	0.8142

(b) Mediating effects of BrR on the relationship between ICGMs and SHV

ICGMs predicting ROE through BrR			ICGMs predicting TQ through BrR			ICGMs predicting EVA-log through BrR		
ICGMs	**z-statistics**	**p-values**	**ICGMs**	**z-statistics**	**p-values**	**ICGMs**	**z-statistics**	**p-values**
BdSize	-0.3769	0.6469	BdSize	-0.2615	0.7937	BdSize	-0.3658	0.7145
$SdSh^2$	0.2529	0.4001	$SdSh^2$	-0.2453	0.8062	$SdSh^2$	0.2588	0.3979
InstSh	-0.2706	0.6067	InstSh	-0.2693	0.7877	InstSh	-0.2587	0.6021
PubSh	-0.3314	0.6298	PubSh	**-2.0267**	**0.0427**	PubSh	**2.4769**	**0.0133**
INEDs	0.9378	0.1742	INEDs	1.3675	0.1715	INEDs	-0.1178	0.5469
CeoCom	-1.4667	0.9288	CeoCom	**-2.1901**	**0.0285**	CeoCom	-0.3511	0.6372
ExaudC	-0.6261	0.7344	ExaudC	1.3758	0.1689	ExaudC	-1.5073	0.9341
$SizeaudC^2$	-1.1499	0.8749	$SizeaudC^2$	1.1078	0.2680	$SizeaudC^2$	-0.9257	0.8227
AudcM	1.2567	0.1044	AudcM	1.0144	0.3104	AudcM	-0.7445	0.7717

Table 44: (Continued)

(c) Mediating effects of EmR on the relationship between ICGMs and SHV								
ICGMs predicting ROE through EmR			ICGMs predicting TQ through EmR			ICGMs predicting EVA-log through EmR		
ICGMs	**z-statistics**	**p-values**	**ICGMs**	**z-statistics**	**p-values**	**ICGMs**	**z-statistics**	**p-values**
BdSize	-0.3691	0.6439	BdSize	-0.3321	0.6301	BdSize	-0.3946	0.6534
$SdSh^2$	0.5571	0.2887	$SdSh^2$	-0.4984	0.6909	$SdSh^2$	0.6342	0.2630
InstSh	-1.3544	0.9122	InstSh	-1.2129	0.8874	InstSh	-0.7977	0.7875
PubSh	-0.2964	0.6165	PubSh	**-2.1510**	**0.0315**	PubSh	**2.4328**	**0.0150**
INEDs	0.9169	0.1796	INEDs	1.2639	0.1031	INEDs	-0.1338	0.5532
CeoCom	-1.3737	0.9152	CeoCom	**-2.0898**	**0.0366**	CeoCom	-0.3623	0.6414
ExaudC	-0.5703	0.7158	ExaudC	1.2509	0.1055	ExaudC	-1.4494	0.9264
$SizeaudC^2$	-1.2006	0.8850	$SizeaudC^2$	1.0939	0.1369	$SizeaudC^2$	-0.9869	0.8382
AudcM	1.2092	0.1132	AudcM	0.0222	0.4911	AudcM	-0.7463	0.7723

(d) Mediating effects of $SoeR^2$ on the relationship between ICGMs and SHV								
ICGMs predicting ROE through $SoeR^2$			ICGMs predicting TQ through $SoeR^2$			ICGMs predicting EVA-log through $SoeR^2$		
ICGMs	**z-statistics**	**p-values**	**ICGMs**	**z-statistics**	**p-values**	**ICGMs**	**z-statistics**	**p-values**
BdSize	-0.3353	0.6313	BdSize	-0.3083	0.6211	BdSize	-0.3693	0.6440
$SdSh^2$	-0.3598	0.6405	$SdSh^2$	0.3370	0.3680	$SdSh^2$	-0.3759	0.6465
InstSh	-0.6552	0.7438	InstSh	-0.6367	0.7378	Insights	-0.543203	0.7065
PubSh	-0.2167	0.5858	PubSh	**-2.1086**	**0.0485**	PubSh	**2.4459**	**0.0114**
INEDs	0.8576	0.1956	INEDs	1.0835	0.2769	INEDs	-0.0888	0.5354
CeoCom	-1.4066	0.9202	CeoCom	**-2.3243**	**0.0282**	CeoCom	-0.3653	0.6426
ExaudC	-0.5168	0.6974	ExaudC	1.3125	0.1673	ExaudC	-1.4648	0.9285
$SizeaudC^2$	-0.9613	0.8318	$SizeaudC^2$	0.9272	0.1769	$SizeaudC^2$	-0.8353	0.7982
AudcM	0.6868	0.2461	AudcM	0.6352	0.2627	AudcM	-0.5399	0.7054

Notes: Figures of z-statistics and their corresponding p-values are highlighted to indicate the significant mediating effect at 5 % level. Variables are defined as follows: depositors (DeR), borrowers (BrR), employees (EmR) and society squared ($SoeR^2$). Internal corporate governance mechanisms (ICGMs) include: board size (BdSize), sponsor-directors' shareholding squared ($SdSh^2$), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), presence of the independent audit committee (ExaudC), size of audit committee squared ($SizeaudC^2$) and frequency of the audit committee meetings (AudcM). Shareholder value (SHV) includes: return on equity (ROE), Tobin's Q, and finally, log form of economic value added (EVA-log).

In contrast, as far as the dependent variable TQ is concerned, the Sobel test results presented in Table 44 show that the p-values of the following corresponding relationships are significant ($p<0.05$): (i) PubSh are predicting TQ through DeR and CeoCom are predicting TQ through DeR; (ii) PubSh are predicting TQ through BrR and CeoCom are predicting TQ through BrR; (iii) PubSh are predicting TQ through EmR and CeoCom are predicting TQ through EmR; and (iv) PubSh are predicting TQ through $SoeR^2$ and CeoCom are predicting TQ through $SoeR^2$. These results indicate that the relationship between general public shareholding and market-based shareholder value and the relationship between CEOs' compensation and market-based shareholder value are significantly mediated by depositors, borrowers, employees and society. All the other remaining relationships between ICGMs and TQ are not mediated significantly by any of

four non-equity stakeholders as the p-values of the remaining corresponding relationships are insignificant (*p>0.05*). These results are also similar to the main findings of this study.

As regards the dependent variable EVA-log, the Sobel test results tabulated in Table 44 show that the p-values of the following corresponding relationships are significant (*p<0.05*): (i) PubSh are predicting EVA-log through DeR; (ii) PubSh are predicting EVA-log through BrR; (iii) PubSh are predicting EVA-log through EmR; and (iv) PubSh are predicting EVA-log through SoeR[2]. These results suggest that the relationship between general public shareholding and value-based shareholder value is significantly mediated by depositors, borrowers, employees and society. All the other remaining relationships between ICGMs and EVA-log are not significantly mediated by any of four non-equity stakeholders, as the p-values of the remaining corresponding relationships are insignificant (*p>0.05*). These results show consistency with the main findings of this study.

To sum-up, the Sobel test results confirm those of Baron & Kenny's (1986) "three-step approach" (see the section 6.7 of chapter 6), indicating that the results of this study presented in chapter 6 are robust and insensitive to the alternative model.

7.1.2 Sensitivity of Results to the Alternative Measurement of Variables

Following the studies of Chowdhury (2015) and Amran (2010), this study further checks the sensitivity of the main results to alternative measurements of two variables, namely FmSize-log and EmR.

7.1.2.1 Sensitivity of results to the alternative measurement of firm size

Firm size (FmSize-log) was initially operationalised by the logarithm of the total assets of each sampled bank. Following Ntim (2009), this is replaced with the logarithm of the total annual revenue earned by each sampled bank (FmSize-log_A). This study has re-run all the regressions (i.e. 1, 2 and 3a–3d) by replacing FmSize-log_A for the results (see the results in Appendices 10–15). Based on these results, this study assesses the sensitivity of the mediating effect of non-equity stakeholders on the relationship between

internal corporate governance mechanisms and shareholder value to the alternative measurement of FmSize-log_A (see Table 45).

The results presented in Appendices 10–15 are similar to the main results except in a few cases. When the variable "FmSize-log" is replaced with "FmSize-log_A", few sensitivities are noticed at the level of significance of one or two variable(s) in regression models 1 and 3a–3d. Firstly, Appendix 10 reports that $SdSh^2$ to EVA-log, which was originally 5% statistically significant, is now 1% significant. Secondly, Appendix 12 shows that InstSh to TQ, which was statistically 5% significant, is now 10% significant. Also, AudcM to ROE was statistically 1% significant, is now 5% significant. Thirdly, Appendix 13 reports that the AudcM to ROE and the mediating variable BrR to EVA-log, which were statistically 1% significant, is now 5% significant. Fourthly, Appendix 14 shows that PubSh to TQ, which was statistically 5% significant, is now 1% significant. Finally, AudcM to ROE was statistically 1% significant, but it is now 5% significant (see Appendix 15). All the remaining results are similar to the main findings.

Based on the results reported in Appendices 10–15, Table 45 summarises the results of the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. When FmSize-log is replaced with FmSize-log_A, the results reported in Table 45 show that no internal corporate governance mechanisms are predicting ROE through DeR, BrR, EmR and $SoeR^2$, suggesting that the relationship between internal corporate governance mechanisms and accounting return-based shareholder value is not mediated by any of four non-equity stakeholders (depositors, borrowers, employees and society). However, results reveal that, (1) PubSh is predicting TQ through DeR; PubSh is predicting TQ through BrR; PubSh is predicting TQ through EmR; and PubSh is predicting TQ through $SoeR^2$. These results suggest that the relationship between general public shareholding and market-based shareholder value is mediated by all four non-equity stakeholders (depositors, borrowers, employees and society). No other internal corporate governance mechanisms is predicting market-based shareholder value by any of four non-equity stakeholders as firm size is measured alternatively.

Table 45 also reports that, (2) CeoCom is predicting TQ through DeR; CeoCom is predicting TQ through BrR; CeoCom is predicting TQ through EmR; and CeoCom is

predicting TQ through $SoeR^2$. These results indicate that the relationship between CEOs' compensation and market-based shareholder value is mediated by all four non-equity stakeholders. Similarly, Table 45 shows that, (3) PubSh is predicting EVA-log through DeR; PubSh is predicting EVA-log through BrR; PubSh is predicting EVA-log through EmR; and PubSh is predicting EVA-log through $SoeR^2$. These results suggest that the relationship between general public shareholding and value-based shareholder value is mediated by all four non-equity stakeholders. No other internal corporate governance mechanisms are predicting value-based shareholder value by any of four non-equity stakeholders as firm size is measured in an alternative way. These results are consistent with the main findings of this study.

In short, when "firm size" is measured in an alternative way, a small number of changes in the level of statistical significance (e.g. from 5% to 1%, or from 1% to 5%) are observed in the relationship between variables (see Appendices 10–15). However, these changes do not have any impact on the results of the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. Overall, the results indicate that the main results are insensitive and robust.

Table 45: Summary results of the sensitivity to the alternative measurement of "firm size" for the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value

(a) Results of mediating effects of DeR on the relationship between ICGMs and SHV after measuring firm size alternatively

Relationship	Result	Relationship	Result	Relationship	Result
BdSize predicting ROE through DeR	No	BdSize predicting TQ through DeR	No	BdSize predicting EVA-log through DeR	No
$SdSh^2$ predicting ROE through DeR	No	$SdSh^2$ predicting TQ through DeR	No	$SdSh^2$ predicting EVA-log through DeR	No
InstSh predicting ROE through DeR	No	InstSh predicting TQ through DeR	No	InstSh predicting EVA-log through DeR	No
PubSh predicting ROE through DeR	No	PubSh predicting TQ through DeR	Yes	PubSh predicting EVA-log through DeR	Yes
INEDs predicting ROE through DeR	No	INEDs predicting TQ through DeR	No	INEDs predicting EVA-log through DeR	No
CeoCom predicting ROE through DeR	No	CeoCom predicting TQ through DeR	Yes	CeoCom predicting EVA-log through DeR	No
ExaudC predicting ROE through DeR	No	ExaudC predicting TQ through DeR	No	ExaudC predicting EVA-log through DeR	No
$SizeaudC^2$ predicting ROE through DeR	No	$SizeaudC^2$ predicting TQ through DeR	No	$SizeaudC^2$ predicting EVA-log through DeR	No
AudcM predicting ROE through DeR	No	AudcM predicting TQ through DeR	No	AudcM predicting EVA-log through DeR	No

Notes: "No" indicates particular ICGMs do not predict SHV through DeR; "Yes" indicates particular ICGMs predict SHV through DeR.

(b) Results of mediating effects of BrR on the relationship between ICGMs and SHV after measuring firm size alternatively

Relationship	Result	Relationship	Result	Relationship	Result
BdSize predicting ROE through BrR	No	BdSize predicting TQ through BrR	No	BdSize predicting EVA-log through BrR	No
$SdSh^2$ predicting ROE through BrR	No	$SdSh^2$ predicting TQ through BrR	No	$SdSh^2$ predicting EVA-log through BrR	No
InstSh predicting ROE through BrR	No	InstSh predicting TQ through BrR	No	InstSh predicting EVA-log through BrR	No
PubSh predicting ROE through BrR	No	PubSh predicting TQ through BrR	Yes	PubSh predicting EVA-log through BrR	Yes
INEDs predicting ROE through BrR	No	INEDs predicting TQ through BrR	No	INEDs predicting EVA-log through BrR	No
CeoCom predicting ROE through BrR	No	CeoCom predicting TQ through BrR	Yes	CeoCom predicting EVA-log through BrR	No
ExaudC predicting ROE through BrR	No	ExaudC predicting TQ through BrR	No	ExaudC predicting EVA-log through BrR	No
$SizeaudC^2$ predicting ROE through BrR	No	$SizeaudC^2$ predicting TQ through BrR	No	$SizeaudC^2$ predicting EVA-log through BrR	No
AudcM predicting ROE through BrR	No	AudcM predicting TQ through BrR	No	AudcM predicting EVA-log through BrR	No

Notes: "No" indicates particular ICGM does not predict SHV through BrR; "Yes" indicates particular ICGM predicts SHV through BrR.

Table 45: (Continued)

(c) Results of mediating effects of EmR on the relationship between ICGMs and SHV after measuring firm size alternatively

Relationship	Result	Relationship	Result	Relationship	Result
BdSize predicting ROE through EmR	No	BdSize predicting TQ through EmR	No	BdSize predicting EVA-log through EmR	No
$SdSh^2$ predicting ROE through EmR	No	$SdSh^2$ predicting TQ through EmR	No	$SdSh^2$ predicting EVA-log through EmR	No
InstSh predicting ROE through EmR	No	InstSh predicting TQ through EmR	No	InstSh predicting EVA-log through EmR	No
PubSh predicting ROE through EmR	No	PubSh predicting TQ through EmR	Yes	PubSh predicting EVA-log through EmR	Yes
INEDs predicting ROE through EmR	No	INEDs predicting TQ through EmR	No	INEDs predicting EVA-log through EmR	No
CeoCom predicting ROE through EmR	No	CeoCom predicting TQ through EmR	Yes	CeoCom predicting EVA-log through EmR	No
ExaudC predicting ROE through EmR	No	ExaudC predicting TQ through EmR	No	ExaudC predicting EVA-log through EmR	No
$SizeaudC^2$ predicting ROE through EmR	No	$SizeaudC^2$ predicting TQ through EmR	No	$SizeaudC^2$ predicting EVA-log through EmR	No
AudcM predicting ROE through EmR	No	AudcM predicting TQ through EmR	No	AudcM predicting EVA-log through EmR	No

Notes: "No" indicates particular ICGMs do not predict SHV through EmR; "Yes" indicates particular ICGMs predict SHV through EmR.

(d) Results of mediating effects of $SoeR^2$ on the relationship between ICGMs and SHV after measuring firm size alternatively

Relationship	Result	Relationship	Result	Relationship	Result
BdSize predicting ROE through $SoeR^2$	No	BdSize predicting TQ through $SoeR^2$	No	BdSize predicting EVA-log through $SoeR^2$	No
$SdSh^2$ predicting ROE through $SoeR^2$	No	$SdSh^2$ predicting TQ through $SoeR^2$	No	$SdSh^2$ predicting EVA-log through $SoeR^2$	No
InstSh predicting ROE through $SoeR^2$	No	InstSh predicting TQ through $SoeR^2$	No	InstSh predicting EVA-log through $SoeR^2$	No
PubSh predicting ROE through $SoeR^2$	No	PubSh predicting TQ through $SoeR^2$	Yes	PubSh predicting EVA-log through $SoeR^2$	Yes
INEDs predicting ROE through $SoeR^2$	No	INEDs predicting TQ through $SoeR^2$	No	INEDs predicting EVA-log through $SoeR^2$	No
CeoCom predicting ROE through $SoeR^2$	No	CeoCom predicting TQ through $SoeR^2$	Yes	CeoCom predicting EVA-log through $SoeR^2$	No
ExaudC predicting ROE through $SoeR^2$	No	ExaudC predicting TQ through $SoeR^2$	No	ExaudC predicting EVA-log through $SoeR^2$	No
$SizeaudC^2$ predicting ROE through $SoeR^2$	No	$SizeaudC^2$ predicting TQ through $SoeR^2$	No	$SizeaudC^2$ predicting EVA-log through $SoeR^2$	No
AudcM predicting ROE through $SoeR^2$	No	AudcM predicting TQ through $SoeR^2$	No	AudcM predicting EVA-log through $SoeR^2$	No

Notes: "No" indicates particular ICGMs do not predict SHV through $SoeR^2$; "Yes" indicates particular ICGMs predict SHV through $SoeR^2$. Variables are defined as follows: non-equity stakeholders (NESHs) include: depositors (DeR), borrowers (BrR), employees (EmR) and society squared ($SoeR^2$). Internal corporate governance mechanisms (ICGMs) include: board size (BdSize), sponsor-directors' shareholding squared ($SdSh^2$), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), presence of independent audit committee (ExaudC), size of audit committee squared ($SizeaudC^2$) and frequency of the audit committee meetings (AudcM). Shareholder value (SHV) includes: return on equity (ROE), Tobin's Q (TQ), and finally, log form of economic value added (EVA-log).

7.1.2.2 Sensitivity of results to the alternative measurement of employees

Initially, employees (EmR) were measured as the average level of revenue earned by each employee in the sampled banks. This measure is replaced with the average amount of net profit before tax earned by each employee (EmR_A). This study has re-run regression equations 2 and 3c[27] (see results in Appendices 16 and 17) and assesses the sensitivity of the mediating effect of the alternative measurement of employees on the relationship between internal corporate governance mechanisms and shareholder value.

The results presented in Appendices 16 and 17 are similar to the main results of this study except in two cases. First, when "EmR" is the dependent variable of internal corporate governance mechanisms in regression model 2 and it is replaced with "EmR_A" in the same regression model, Appendix 16 reports that $SizeaudC^2$ to EmR_A is statistically 10% significant, whereas it was 5% significant before the replacement of EmR. Second, when "EmR" is a mediating variable in regression model 3c and it is replaced with "EmR_A" in the same regression model, Appendix 17 reports that EmR_A to TQ is statistically 1% significant, which was 5% significant before the replacement of EmR.

Table 46 summarises the results of the mediating effect of EmR_A on the relationship between internal corporate governance mechanisms and shareholder value, based on the results reported in Table 26, along with Appendices 16 and 17. Results show that no internal corporate governance mechanisms is predicting ROE through EmR_A, suggesting that the relationship between internal corporate governance mechanisms and accounting return-based shareholder value is not mediated by employees as measured in an alternative way. However, Table 46 reveals that, (a) PubSh is predicting TQ through EmR_A; and (b) CeoCom is predicting TQ through EmR_A, suggesting that the relationship between general public shareholding and market-based shareholder value; and (b) the relationship between CEOs' compensation and market-based shareholder value are mediated by employees as measured alternatively. The

[27] The study re-runs only regression models 2 and 3c because the variable "employees" acts as a dependent variable in regression model 2 and mediating variable in regression model 3c. The variable is not included in the remaining regression models. Therefore, in all other cases, the results will remain the same.

relationship between the remaining internal corporate governance mechanisms and market-based shareholder value is not mediated by employees as measured alternatively.

Similarly, Table 46 reports that, PubSh is predicting EVA-log through EmR_A, indicating that the relationship between general public shareholding and value-based shareholder value is also mediated by employees as measured in an alternative way. No other internal corporate governance mechanisms are predicting value-based shareholder value by employees as measured alternatively. These results are similar to the original results of this study. Overall, these results indicate that the main results concerning the mediating effects of employees on the relationship between internal corporate governance mechanisms and shareholder value are insensitive and robust.

Table 46: Summary results of the sensitivity to the alternative measurement of "employees" for the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value

Relationship	Result	Relationship	Result	Relationship	Result
BdSize predicting ROE through EmR_A	No	BdSize predicting TQ through EmR_A	No	BdSize predicting EVA-log through EmR_A	No
$SdSh^2$ predicting ROE through EmR_A	No	$SdSh^2$ predicting TQ through EmR_A	No	$SdSh^2$ predicting EVA-log through EmR_A	No
InstSh predicting ROE through EmR_A	No	InstSh predicting TQ through EmR_A	No	InstSh predicting EVA-log through EmR_A	No
PubSh predicting ROE through EmR_A	No	PubSh predicting TQ through EmR_A	Yes	PubSh predicting EVA-log through EmR_A	Yes
INEDs predicting ROE through EmR_A	No	INEDs predicting TQ through EmR_A	No	INEDs predicting EVA-log through EmR_A	No
CeoCom predicting ROE through EmR_A	No	CeoCom predicting TQ through EmR_A	Yes	CeoCom predicting EVA-log through EmR_A	No
ExaudC predicting ROE through EmR_A	No	ExaudC predicting TQ through EmR_A	No	ExaudC predicting EVA-log through EmR_A	No
$SizeaudC^2$ predicting ROE through EmR_A	No	$SizeaudC^2$ predicting TQ through EmR_A	No	$SizeaudC^2$ predicting EVA-log through EmR_A	No
AudcM predicting ROE through EmR_A	No	AudcM predicting TQ through EmR_A	No	AudcM predicting EVA-log through EmR_A	No

Notes: "No" indicates particular ICGMs do not predict SHV through EmR_A; "Yes" indicates particular ICGMs predict SHV through EmR_A. The variables are defined in Table 45.

7.1.3 Sensitivity of Results to the Composite Mediating Effect of Non-Equity Stakeholders

As an alternative to the separate mediating effect of each of four non-equity stakeholders under analysis, the sensitivity of these results is assessed by showing their composite mediating effect on the relationship between internal corporate governance mechanisms and shareholder value in the banking sector in Bangladesh. To do so, this study uses a composite index value of the attitudes of four non-equity stakeholders (NESHs-Index) towards the sampled banks. This is the arithmetic average of the combined scores of the attitudes of depositors, borrowers, employees and society towards the sampled banks. The results are presented in Tables 47–49.

As shown in Table 47, the relationship between internal corporate governance mechanisms and ROE is not mediated by the NESHs-Index. This is because the relationship between variables fails to meet all criteria for the "three-step approach" suggested by Baron & Kenny (1986). With reference to shareholder value measured by TQ, Table 48 reports that the relationship with (a) PubSh and (b) CeoCom is partially mediated by NESHs-Index. However, there is no mediating effect of NESHs-Index on the relationship between the remaining internal corporate governance mechanisms and TQ.

With regards to shareholder value measured by EVA-log, Table 49 reports that the relationship with PubSh is partially mediated by NESHs-Index. However, there is no mediating effect of NESHs-Index on the relationship between the remaining internal corporate governance mechanisms and EVA-log. The overall results of the composite mediating effect of four non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value are consistent with the main results of this study.

Table 47: Summary results of the composite mediating effect of four non-equity stakeholders on the relationship between internal corporate governance mechanisms and ROE

Estimations of the random-effect GLS regression of the relationship between ICGMs and ROE		Estimations of the random-effect GLS regression of the relationship between ICGMs and NESHs-Index		Estimations of the random-effect GLS regression of ICGMs and NESHs-Index predicting ROE		Conclusion (mediation or not)
BdSize→ROE	-.0284 (-0.27)	BdSize→NESHs-Index	.0101 (1.29)	BdSize and NESHs-Index→ROE	-.0339 (-0.32)	No mediation
$SdSh^2$→ROE	.0005 (1.09)	$SdSh^2$→NESHs-Index	-6.64e-06 (-0.18)	$SdSh^2$ and NESHs-Index→ROE	.0005 (1.10)	No mediation
InstSh→ROE	-.1424(-3.17)***	InstSh→NESHs-Index	.0024 (0.73)	InstSh and NESHs-Index→ROE	-.1437(-3.20)***	No mediation
PubSh→ROE	-.0006 (-0.02)	PubSh→NESHs-Index	.0112 (4.60)***	PubSh and NESHs-Index→ROE	-.0067 (-0.19)	No mediation
INEDs→ROE	.0651 (1.28)	INEDs→NESHs-Index	.0045 (1.19)	INEDs and NESHs-Index→ROE	.0626 (1.23)	No mediation
CeoCom→ROE	.2001 (1.38)	CeoCom→NESHs-Index	-.0446(-4.11)***	CeoCom and NESHs-Index→ROE	.2243 (1.46)	No mediation
ExaudC→ROE	.4742 (0.42)	ExaudC→NESHs-Index	-.2486(-2.94)***	ExaudC and NESHs-Index→ROE	.6096 (0.52)	No mediation
$SizeaudC^2$→ROE	.0692 (1.34)	$SizeaudC^2$→NESHs-Index	-.0071 (-1.83)*	$SizeaudC^2$ and NESHs-Index→ROE	.0730 (1.39)	No mediation
AudcM→ROE	-1.4587(-2.70)***	AudcM→NESHs-Index	-.0286 (-0.71)	AudcM and NESHs-Index→ROE	-1.4431(-2.67)***	No mediation
Asttang→ROE	116.2496(2.75)***	Asttang→NESHs-Index	-.7260 (-0.23)	Asttang and NESHs-Index→ROE	116.6451(2.76)***	No mediation
Gear-log→ROE	-2.1800 (-1.14)	Gear-log→NESHs-Index	.2789 (1.94)*	Gear-log and NESHs-Index→ROE	-2.3319 (-1.20)	No mediation
FmSize-log→ROE	.4123 (0.31)	FmSize-log→NESHs-Index	-.1586 (-1.62)	FmSize-log and NESHs-Index→ROE	.4987 (0.38)	No mediation
FmAge-log→ROE	.1607 (0.28)	FmAge-log→NESHs-Index	-.0009 (-0.02)	FmAge-log and NESHs-Index→ROE	.1612 (0.28)	No mediation
NESHs-Index predicting ROE after controlling for the effect of IGCMs					.544757(2.47)**	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: internal corporate governance mechanisms (ICGMs) include: board size (BdSize), sponsor-directors' shareholding squared ($SdSh^2$), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), presence of independent audit committee (ExaudC), size of audit committee squared ($SizeaudC^2$) and frequency of the audit committee meetings (AudcM). Control variables include: asset tangibility (Asttang), log form of debt-equity ratio (Gear-log), log form of firm size (FmSize-log) and log form of firm age (FmAge-log). Return on equity (ROE), and finally, composite index value of four non-equity stakeholders (NESHs-Index).

Table 48: Summary results of the composite mediating effect of four non-equity stakeholders on the relationship between internal corporate governance mechanisms and TQ

Estimations of the random-effect GLS regression of the relationship between ICGMs and TQ		Estimations of the random-effect GLS regression of the relationship between ICGMs and NESHs-Index		Estimations of the random-effect GLS regression of ICGMs and NESHs-Index predicting TQ		Conclusion (mediation or not)
BdSize→TQ	-.0003 (-0.27)	BdSize→NESHs-Index	.0101 (1.29)	BdSize and NESHs-Index→TQ	-.0003 (-0.25)	No mediation
$SdSh^2$→TQ	-3.34e-06 (-0.74)	$SdSh^2$→NESHs-Index	-6.64e-06 (-0.18)	$SdSh^2$ and NESHs-Index→TQ	-3.36e-06 (-0.74)	No mediation
InstSh→TQ	-.0009 (-2.04)**	InstSh→NESHs-Index	.0024 (0.73)	InstSh and NESHs-Index→TQ	-.0008 (-2.03)**	No mediation
PubSh→TQ	-.0007 (-2.46)**	PubSh→NESHs-Index	.0112 (4.60)***	PubSh and NESHs-Index→TQ	-.0007 (-2.22)**	Partial mediation
INEDs→TQ	.0012 (2.56)**	INEDs→NESHs-Index	.0045 (1.19)	INEDs and NESHs-Index→TQ	.0012 (2.56)**	No mediation
CeoCom→TQ	.0038 (2.83)***	CeoCom→NESHs-Index	-.0446(-4.11)***	CeoCom and NESHs-Index→TQ	.0037 (2.61)***	Partial mediation
ExaudC→TQ	-.0166 (-1.58)	ExaudC→NESHs-Index	-.2486(-2.94)***	ExaudC and NESHs-Index→TQ	-.0171 (-1.57)	No mediation
$SizeaudC^2$→TQ	-.0007 (-1.39)	$SizeaudC^2$→NESHs-Index	-.0071 (-1.83)*	$SizeaudC^2$ and NESHs-Index→TQ	-.0007 (-1.40)	No mediation
AudcM→TQ	-.0072 (-1.44)	AudcM→NESHs-Index	-.0286 (-0.71)	AudcM and NESHs-Index→TQ	-.0075 (-1.45)	No mediation
Asttang→TQ	.9807 (2.49)**	Asttang→NESHs-Index	-.7260 (-0.23)	Asttang and NESHs-Index→TQ	.9793 (2.49)**	No mediation
Gear-log→TQ	.0093 (0.52)	Gear-log→NESHs-Index	.2789 (1.94)*	Gear-log and NESHs-Index→TQ	.0098 (0.54)	No mediation
FmSize-log→TQ	.0084 (0.69)	FmSize-log→NESHs-Index	-.1586 (-1.62)	FmSize-log and NESHs-Index→TQ	.0081 (0.66)	No mediation
FmAge-log→TQ	-.0012 (-0.22)	FmAge-log→NESHs-Index	-.0009 (-0.02)	FmAge-log and NESHs-Index→TQ	-.0012 (-0.22)	No mediation
				NESHs-Index predicting TQ after controlling for the effect of IGCMs	.0019 (2.18)**	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Tobin's Q (TQ). The remaining variables are defined in Table 47.

Table 49: Summary results of the composite mediating effect of four non-equity stakeholders on the relationship between internal corporate governance mechanisms and EVA-log

Estimations of the random-effect GLS regression of the relationship between ICGMs and EVA-log		Estimations of the random-effect GLS regression of the relationship between ICGMs and NESHs-Index		Estimations of the random-effect GLS regression of ICGMs and NESHs-Index predicting EVA-log		Conclusion (mediation or not)
BdSize→EVA-log	-.0023 (-0.28)	BdSize→NESHs-Index	.0101 (1.29)	BdSize and NESHs-Index→EVA-log	-.0024 (-0.29)	No mediation
$SdSh^2$→EVA-log	.0001 (2.41)**	$SdSh^2$→NESHs-Index	-6.64e-06 (-0.18)	$SdSh^2$ and NESHs-Index→EVA-log	.0001 (2.42)**	No mediation
InstSh→EVA-log	-.0029 (-0.83)	InstSh→NESHs-Index	.0024 (0.73)	InstSh and NESHs-Index→EVA-log	-.0029 (-0.83)	No mediation
PubSh→EVA-log	.0088 (3.48)***	PubSh→NESHs-Index	.0112 (4.60)***	PubSh and NESHs-Index→EVA-log	.0087 (3.20)***	Partial mediation
INEDs→EVA-log	-.0001 (-0.02)	INEDs→NESHs-Index	.0045 (1.19)	INEDs and NESHs-Index→EVA-log	-.0001 (-0.03)	No mediation
CeoCom→EVA-log	.0015 (0.13)	CeoCom→NESHs-Index	-.0446(-4.11)***	CeoCom and NESHs-Index→EVA-log	.0018 (0.15)	No mediation
ExaudC→EVA-log	.1385 (1.58)	ExaudC→NESHs-Index	-.2486(-2.94)***	ExaudC and NESHs-Index→EVA-log	.1406 (1.55)	No mediation
$SizeaudC^2$→EVA-log	.0039 (0.96)	$SizeaudC^2$→NESHs-Index	-.0071 (-1.83)*	$SizeaudC^2$ and NESHs-Index→EVA-log	.0039 (0.96)	No mediation
AudcM→EVA-log	.0328 (0.78)	AudcM→NESHs-Index	-.0286 (-0.71)	AudcM and NESHs-Index→EVA-log	.0330 (0.79)	No mediation
Asttang→EVA-log	3.9698 (1.21)	Asttang→NESHs-Index	-.7260 (-0.23)	Asttang and NESHs-Index→EVA-log	3.9758 (1.21)	No mediation
Gear-log→EVA-log	.4568 (3.07)***	Gear-log→NESHs-Index	.2789 (1.94)*	Gear-log and NESHs-Index→EVA-log	.4545 (3.01)***	Partial mediation
FmSize-log→EVA-log	.6119 (6.01)***	FmSize-log→NESHs-Index	-.1586 (-1.62)	FmSize-log and NESHs-Index→EVA-log	.6132 (5.97)***	No mediation
FmAge-log→EVA-log	-.0091 (-0.21)	FmAge-log→NESHs-Index	-.0009 (-0.02)	FmAge-log and NESHs-Index→EVA-log	-.0091 (-0.21)	No mediation
				NESHs-Index predicting EVA-log after controlling for the effect of IGCMs	.0083 (2.09)**	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate p-value is significant at 1%, 5% and 10% levels, respectively. Log form of economic value added (EVA-log). The remaining variables are defined in Table 47.

7.1.4 Testing Statistical Assumptions/Statistical Validity

This section attempts to confirm the robustness of the main findings of this study based on the results of assumptions for statistical tests. It attempts to validate the sampling procedure, statistical tests/models and the reliability of the measurement procedures employed in this study.

Firstly, this study adopted a purposive sampling technique in which it chose to examine the entire population (i.e. 30 listed commercial banks) that had a particular set of homogeneous characteristics. For example, all banks were to be commercial in nature, listed on the Dhaka Stock Exchange and had to ensure compliance with the governance code (or otherwise explain non-compliance). However, banks had to meet three criteria to be included in the final sample: (a) a bank's full five-year annual reports from 2011 to 2015 must be available; (b) the corresponding five-year financial and non-financial information required for this study must also be available; (c) the sampled banks must have a positive equity value. Accordingly, the final sample for this study consisted of 29 out of the 30 listed commercial banks. One of the listed banks was omitted from the sample for having a negative equity value over the entire study period (see subsection 5.1.1 of chapter 5).

Secondly, this study used panel data. There are three estimation models typically employed to analyse panel data. They are (1) the pooled ordinary least squares (OLS) regression model, (2) the fixed-effects model and (3) the random-effects model. In order to choose an appropriate model for the panel data used in this study, two econometric tests, i.e. the Hausman Specification test and the Breusch-Pagan Lagrange Multiplier test, were conducted. Both tests suggested employing the random-effects model to examine the relationship between the variables (see subsections 6.5.2 and 6.5.3 of chapter 6).

Thirdly, beyond the selection of the appropriate model, this study conducted a screening test to detect outliers to make the data representative and meaningful in order that the correlation and regression results reflected the actual effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. Some outliers in the data were found, which were winsorised at 5% and 95% levels to minimise the effect of the outliers (see section 6.1 of chapter 6).

Fourthly, this study used tolerance statistics and the variance inflation factor to confirm there was no multicollinearity problem between each pair of independent variables (see subsection 6.5.1 of chapter 6). Fifthly, it checked the assumption of normality of each variable used in this study by conducting three normality tests, i.e. the Shapiro-Wilk W test, the Shapiro-Francia W test and the Jarque-Bera test. Some variables were not found to be normally distributed; however, they were transformed to make them normally distributed (see section 6.3 of chapter 6). Sixthly, this study checked for the presence of heteroscedasticity in the regression model, by conducting the Breusch-Pagan/Cook-Weisberg test. The results showed that the regression models with the dependent variables ROE and EVA-log are homoscedastic. However, the regression models with the dependent variable TQ were not free from heteroscedasticity, for which this study uses robust standard errors as one of the remedies (see subsection 6.5.4 of chapter 6). Seventhly, this study conducted the Wooldridge test and Durbin-Watson *d* test to check for first-order autocorrelation problem. The tests indicated that there was evidence of positive autocorrelation in all the datasets. Therefore, this study used the random-effects GLS regression model with AR(1) disturbance to remove/reduce the autocorrelation problem (see subsection 6.5.5 of chapter 6). Finally, this study defined and measured all the variables based on prior corporate governance studies or relevant theoretical notions.

It is observed that the results of this study have been established by employing adequate sampling, reliable measurements and appropriate statistical procedures. These procedures, therefore, suggest that this study has produced flawless and unambiguous conclusions, indicating the robustness of the results about the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value.

7.2 SUMMARY OF THE CHAPTER

This chapter has checked the robustness of the findings of this study. Specifically, the key aim of this chapter is to confirm the validity of the results presented in chapter six and determine the extent to which the findings are robust and insensitive to an alternative model and measurements. Firstly, the results of the Sobel test, an alternative model for determining the mediating effect, confirm all results of the main findings. Secondly, when two variables are measured in an alternative way, the results confirm the

main findings. Thirdly, the results are also insensitive to the composite mediating effect of four non-equity stakeholders. Finally, this study concludes that the results obtained in this study are statistically valid and robust. Overall, the results of this study are consistent and robust.

The final chapter presents the conclusion of the thesis. Specifically, it presents a summary of the results, policy implications, contributions, limitations of this study, recommendations and potential avenues for further studies.

CHAPTER EIGHT

CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

8.0 OVERVIEW OF THE CHAPTER

This chapter summarises and concludes the thesis. It seeks to achieve four key objectives. Firstly, it sums up the research findings presented in chapter six. Secondly, it focuses on the implications of the research results, and, where applicable, makes appropriate recommendations. Thirdly, it discusses the contributions made by this study, and, finally, it points out the limitations of this study and identifies avenues for future research.

The remainder of the chapter is organised as follows. Section 8.1 presents a summary of the findings of this study. Section 8.2 discusses the implications of this study's findings and makes recommendations, while section 8.3 highlights the research contributions. Section 8.4 points out the limitations of this study and areas for future research, and, finally, section 8.5 presents the conclusion of this study.

8.1 SUMMARY OF THE RESEARCH FINDINGS

Economists, academics, corporate executives, corporate and non-corporate policy-makers and special interest groups have been involved in a polarised high-stakes debate over the appropriate corporate governance model for firms, particularly over whether corporate governance model and arrangements should be oriented to shareholder value or stakeholder value. Given this conflicting situation, the present study contends that the corporate governance models should not only be oriented to shareholder value or stakeholder value; rather, they should be oriented to non-equity stakeholder value. In view of that, this study focuses on a new model of corporate governance, namely the "Non-Equity Stakeholder Model of Corporate Governance". The hypothesis of the proposed model is: there is no direct relationship between internal corporate governance mechanisms and shareholder value; instead, non-equity stakeholders mediate these

relationships. This study, therefore, seeks to address a key question in the corporate governance area: *Do non-equity stakeholders mediate the relationship between internal corporate governance mechanisms and shareholder value in listed banking companies in Bangladesh?* Therefore, this study aims to examine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value in listed banking companies in Bangladesh. Specifically, this study attempts to examine whether internal corporate governance mechanisms do influence non-equity stakeholders, which, in turn, affect the shareholder value in the listed banking companies in Bangladesh. In order to achieve this aim, this study has addressed the following four objectives.

1. To examine the direct relationship between internal corporate governance mechanisms and shareholder value in listed banking companies in Bangladesh.
2. To assess the direct relationship between internal corporate governance mechanisms and non-equity stakeholders (e.g. depositors, borrowers, employees and society) in listed banking companies in Bangladesh.
3. To ascertain the effect of internal corporate governance mechanisms and non-equity stakeholders on shareholder value in listed banking companies in Bangladesh.
4. Finally, to determine whether non-equity stakeholders mediate the relationship between internal corporate governance mechanisms and shareholder value in the listed banking companies in Bangladesh.

The summary of the findings of this study is as follows.

8.1.1 Relationship between Internal Corporate Governance Mechanisms and Shareholder Value

In order to examine the direct relationship between internal corporate governance mechanisms and shareholder value, this study has tested the first nine hypotheses (i.e. H_1-H_9). This study finds no convincing evidence of a statistically significant direct relationship between board size, the existence of the independent audit committee and the size of the audit committee of the sampled banks and shareholder value, regardless of the

measures used. These results, therefore, reject hypotheses one *(H_1)*, seven *(H_7)* and eight *(H_8)*.

However, this study finds mixed results for the rest of the corporate governance mechanisms being examined and shareholder value. Firstly, for example, a higher proportion of sponsor-directors' shareholding has contributed significantly to enhancing value-based shareholder value (measured by EVA-log); however, it makes an insignificant contribution towards accounting return-based and market-based shareholder value (measured by ROE and TQ, respectively) over the study period. Therefore, the result related to EVA-log fails to reject hypothesis two *(H_2)*; however, the results related to ROE and TQ reject the same hypothesis. Secondly, the results reveal that a higher proportion of independent non-executive directors on the sampled banks' board and higher levels of CEOs' compensation paid by the sampled banks have played a significant positive role in increasing market-based shareholder value (measured by TQ). However, both mechanisms have made an insignificant contribution towards accounting return-based and value-based shareholder value (measured by ROE and EVA-log, respectively). Therefore, the result relating to TQ fails to reject hypotheses five *(H_5)* and six *(H_6)*; however, the results related to ROE and EVA-log reject the same hypotheses.

In contrast, and thirdly, the results show that a higher proportion of institutional shareholding has decreased accounting return-based and market-based shareholder value (measured by ROE and TQ, respectively) over the study period. However, the same mechanism has an insignificant effect on value-based shareholder value (measured by EVA-log). Therefore, the results related to ROE and TQ support hypothesis three *(H_3)*; however, the result related to EVA-log rejects the same hypothesis. Fourthly, the results suggest that a high volume of the audit committee meetings has also led to reduced accounting return-based shareholder value (measured by ROE); however, it has an insignificant impact on market-based and value-based shareholder value (measured by TQ and EVA-log, respectively). Therefore, the results related to ROE fail to reject hypothesis nine *(H_9)*; however, the results related to TQ and EVA-log reject the same hypothesis.

Finally, the results report that a higher proportion of general public shareholding has played a significant positive role in increasing value-based shareholder value

(measured by EVA-log). Conversely, it has played a negative role that has led to a decrease in market-based shareholder value (measured by TQ) and an insignificant role in accounting return-based shareholder value (measured by ROE). Therefore, the results related to ROE reject hypothesis four *(H_4)*; however, the results related to TQ and EVA-log fail to reject the same hypothesis.

Overall, the findings suggest that some of the internal corporate governance mechanisms under analysis have a significant and direct positive or negative effect on shareholder value. On the other hand, some mechanisms appear to have no impact or an insignificant impact on shareholder value for the sampled banks for the study period, thereby supporting the argument of this study.

8.1.2 Relationship between Internal Corporate Governance Mechanisms and Non-Equity Stakeholders

The relationship between internal corporate governance mechanisms and non-equity stakeholders has been examined by testing nine additional hypotheses (i.e. H_{10}-H_{18}). This study finds no convincing evidence that board size, sponsor-directors' shareholding, institutional shareholding, independent non-executive directors and the audit committee meetings are corporate governance mechanisms for the banking sector in Bangladesh which contribute to changing the attitudes of depositors, borrowers, employees and society towards the sampled banks. These results, therefore, reject hypotheses ten (H_{10}), eleven (H_{11}), twelve (H_{12}), fourteen (H_{14}) and eighteen (H_{18}). However, this study finds convincing evidence that, with an increase in the proportion of general public ownership, the relationship with depositors, borrowers, employees and society also improves. This result suggests that general public ownership has played a constructive role in developing positive attitudes among depositors, borrowers, employees and society towards the sampled banks over the study period. The results, therefore, fail to reject hypothesis thirteen (H_{13}).

In contrast, the results reveal that CEOs' compensation is one of the most damaging corporate governance mechanisms because the sampled banks' relationship with depositors, borrowers, employees and society deteriorates with an increase in CEOs' compensation. Consequently, this study suggests that a negative attitude is

created among depositors, borrowers, employees and society towards the sampled banks. Therefore, the result fails to reject hypothesis fifteen (H_{15}). Similarly, this study reveals credible evidence that the presence of an independent audit committee is also a damaging corporate governance mechanism for the banking sector in Bangladesh, as it has created a negative attitude in depositors, borrowers, employees and society towards the sampled banks over the study period. Therefore, the result fails to reject the hypothesis sixteen (H_{16}). However, these results related to the relationship between the size of the audit committee and non-equity stakeholders are mixed. This study reports a significant negative relationship between the size of the audit committee and borrowers and employees; however, there is an insignificant relationship with depositors and society. These results suggest that a larger audit committee in the banking sector in Bangladesh creates a negative attitude among borrowers and employees, but it is not a corporate governance mechanism that contributes to developing a relationship with depositors and society and influencing their attitudes towards the sampled banks.

8.1.3 Effect of Internal Corporate Governance Mechanisms and Non-Equity Stakeholders on Shareholder Value

In order to examine the effect of internal corporate governance mechanisms and non-equity stakeholders on shareholder value, this study has tested one hypothesis (i.e. H_{19}). This study has incorporated four key non-equity stakeholders (e.g. depositors, borrowers, employees and society) into regression models 3a–3d as mediating variables. These mediating variables eventually function as predictors of shareholder value, together with internal corporate governance mechanisms and control variables. Therefore, the effect of internal corporate governance mechanisms and each of four non-equity stakeholders on shareholder value (measured by ROE, TQ and EVA-log) are examined separately. This study finds that all four non-equity stakeholders under analysis enhance shareholder value, regardless of the measures used for it, after controlling for the effect of internal corporate governance mechanisms.

However, the results concerning the relationship between internal corporate governance mechanisms and shareholder value are mixed when the effect of each of four non-equity stakeholders are taken into consideration. For example, firstly, this study reveals that the shareholder value of the sampled banks is not explained in a significant

way by board size and audit committee size, when the effect of each of four non-equity stakeholders is considered. Secondly, after taking into account the effect of each of four non-equity stakeholders, the results show that market-based shareholder value, as measured by TQ, increases due to a higher proportion of independent non-executive directors on the board and higher levels of CEOs' compensation in the sampled banks. However, neither corporate governance mechanisms provide a significant explanation for accounting return-based and value-based shareholder value, as measured by ROE and EVA-log, respectively. Thirdly, the result suggests that, when the effect of each of four non-equity stakeholders is taken into consideration, value-based shareholder value, as measured by EVA-log, increases, because of the higher proportion of sponsor-directors' ownership in the banking sector in Bangladesh. However, the mechanism is unable to explain accounting return-based and market-based shareholder value in a significant way, as measured by ROE and TQ, respectively.

Fourthly, value-based shareholder value, as measured by EVA-log, increases because of the presence of an independent audit committee in the sampled banks; however, this mechanism provides an insignificant explanation for accounting return-based and market-based shareholder value, as measured by ROE and TQ, respectively, after taking into account the effect of depositors, borrowers and employees. However, the mechanism does not explain shareholder value in a significant way, irrespective of the measures used for it, after taking into account the effect of society. Fifthly, this study finds that, when the effect of each of four non-equity stakeholders is taken into account, accounting return-based and market-based shareholder value, as measured by ROE and TQ, respectively, decrease because of the higher proportion of institutional ownership in the banking sector in Bangladesh. However, this mechanism does not explain value-based shareholder value in a significant way, as measured by EVA-log, after taking the effect of each of four non-equity stakeholders into consideration.

Sixthly, this study finds that a higher number of the audit committee meetings is one of the detrimental corporate governance mechanisms that reduce accounting return-based shareholder value, as measured by ROE; however, it provides an insignificant explanation for market-based and value-based shareholder value, as measured by TQ and EVA-log, respectively, when the effect of each of four non-equity stakeholders is

considered. Finally, the results suggest that, after taking the effect of each of four non-equity stakeholders into account, value-based shareholder value, as measured by EVA-log, increases; conversely, market-based shareholder value, as measured by TQ, decreases, while accounting return-based shareholder value, as measured by ROE, is not explained in any significant way by general public ownership in the banking sector in Bangladesh.

8.1.4 Mediating Effect of Non-Equity Stakeholders on the Relationship between Internal Corporate Governance Mechanisms and Shareholder Value

This study has followed the "three-step approach" of Baron & Kenny (1986) to determine the mediating effect of each of four non-equity stakeholders on the relationship between internal corporate governance mechanisms tested and shareholder value. The results suggest that the relationship between internal corporate governance mechanisms and accounting return-based shareholder value (measured by ROE) is not mediated by any of four non-equity stakeholders (e.g. depositors, borrowers, employees and society).

In contrast, each of four non-equity stakeholders partially mediates the relationship between general public shareholding and the market-based shareholder value (measured by TQ). Also, all four non-equity stakeholders partially mediate the relationship between CEOs' compensation and market-based shareholder value (measured by TQ). However, the relationship between the rest of internal corporate governance mechanisms under analysis (i.e. board size, sponsor-directors' shareholding, institutional shareholding, independent non-executive directors, existence of the independent audit committee, size of the audit committee and frequency of the audit committee meetings) and market-based shareholder value is not mediated by any of four non-equity stakeholders.

Each of four non-equity stakeholders also partially mediates the relationship between general public shareholding and value-based shareholder value (measured by EVA-log). However, the relationship between the rest of internal corporate governance mechanisms under analysis (i.e. board size, sponsor-directors' shareholding, institutional shareholding, independent non-executive directors, existence of the independent audit

committee, CEOs' compensation, size of the audit committee and frequency of the audit committee meetings) and value-based shareholder value is not mediated by any of four non-equity stakeholders.

The present study has conducted a series of tests to confirm whether the main findings of this study are robust and insensitive. Firstly, this study has conducted the Sobel test, which determines the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value in an alternative way. Secondly, two variables have been measured alternatively, and, hence, the main results of this study have been reproduced incorporating the effects of an alternative measurement of variables. In both cases, these results have confirmed the main results of this study. Thirdly, it has further determined the composite mediating effect of four non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. These results also substantiate the main results of this study. Finally, this study has evaluated the statistical validity of its procedures and concluded that the main results of it are consistent and robust.

8.2 IMPLICATIONS OF THE RESEARCH FINDINGS AND RECOMMENDATIONS

The findings of the current study are important in several ways for banks, regulators of the banking sector in Bangladesh, researchers and academics, watchdog groups and institutions involved in developing corporate governance principles and guidelines and policy-makers. This study hypothetically advocates that internal corporate governance mechanisms do not have a direct effect on shareholder value; instead, non-equity stakeholders play a mediating role in that relationship. Part of the empirical results supports the hypothesis that non-equity stakeholders mediate the relationship between internal corporate governance mechanisms and shareholder value. These results provide valuable information for banks, regulators and researchers and academics, as it has uncovered the realistic role of internal corporate governance mechanisms and non-equity stakeholders in enhancing shareholder value.

Given the realistic role of internal corporate governance mechanisms and non-equity stakeholders in enhancing shareholder value, some of the corporate governance

mechanisms, which are identical to the Anglo-American mechanisms, are not effective for the banking sector in Bangladesh in attracting non-equity stakeholders or developing a meaningful relationship with them or in creating positive attitudes among them towards the sampled banks. For example, this study finds that board size, sponsor-directors' shareholding, institutional shareholding and the frequency of the audit committee meetings do not play a significant role in developing a relationship with the sampled banks and creating positive attitudes among non-equity stakeholders about the sampled banks. The results suggest that these corporate governance mechanisms act as decorations and that these attributes are maintained and pursued by the sampled banks only because they are regulatory requirements. As a result, these mechanisms have failed to bring non-equity stakeholders associated with the Bangladeshi banks closer to the sampled banks. This study also finds that CEOs' compensation, the presence of an independent audit committee and the size of the audit committee are mechanisms which damage value, as they create a negative attitude among non-equity stakeholders about the sampled banks.

Specifically, this study finds that corporate governance mechanisms relating to the audit committee are ineffective or damaging in the banking sector in Bangladesh. To improve the overall audit environment and make it effective, this study suggests putting in place quality control in audit practices, prohibiting members of the internal audit committee from being employed without accounting and auditing qualifications. Moreover, regular training for internal auditors is also important to close to contemporary developments in the area of auditing and accounting. In this case, the Institute of Chartered Accountants of Bangladesh (ICAB) can work to assess the gap between the competence of internal auditors and banks' expectations. In order to minimise this gap, a training programme can be organised to provide lessons about the latest developments in auditing and accounting.

In relation to the negative relationship between CEOs' compensation and non-equity stakeholders, it is essential to revise this mechanism, as it impairs relationship of banks with their non-equity stakeholders and creates a negative attitude among them about banks and, hence, decreases shareholder value. This study suggests that CEOs'

compensation be aligned with the degree of the relationship established between non-equity stakeholders and banks.

Having developed an appropriate corporate governance mechanism(s) for enhancing the relationship with non-equity stakeholders and creating a positive attitude about banks, it is indispensable to communicate the mechanism(s) to the relevant non-equity stakeholders in useful ways. When the relevant non-equity stakeholders become aware of the mechanisms that protect their value and interests, they are more likely to get involved with banks in a way that maximises shareholder value. Both electronic and printed versions of the mechanism(s) should be available for them to be communicated effectively.

Emphasis should be placed on the successful implementation of corporate governance mechanisms. Current corporate governance mechanisms adopted in the banking sector in Bangladesh are voluntary mechanisms, which may not be able to substantially enhance levels of compliance. For successful implementation and to have fruitful results from voluntary mechanisms, two measures are suggested: firstly, creating awareness within all relevant parties about the beneficial sides of complying with the mechanisms; and secondly, regulatory pressure, particularly from the Bangladesh Securities and Exchange Commission (BSEC), in order to achieve compliance with the mechanisms.

A post-implementation review and, hence, the development of strategies based on the outcomes of that review are equally important. In this case, a separate supervisory body, other than the BSEC, can be instituted to regularly monitor the compliance status of firms and provide support to enhance the levels of compliance in order to protect the interests of non-equity stakeholders for sustainable long-term shareholder value.

The findings are, therefore, important for the central bank of Bangladesh, the Bangladesh Securities and Exchange Commission (BSEC), the Bangladesh Enterprise Institute (BEI) and other regulatory bodies, because they are involved in developing and enforcing corporate governance principles and guidelines. Similarly, the results are also important for shareholders, as they should put pressure on banks' management to be oriented to non-equity stakeholder value. That is, once the bank management adopts any

policy, it should place a high emphasis on the satisfaction and value of non-equity stakeholders or the protection of their interests by means of which shareholder value can be maximised in the long-run.

Overall, the findings of this study thus can be helpful for banks and regulators to realise the ineffectiveness or detrimental effect of some of the corporate governance mechanisms in attempts to develop a productive relationship between banks and their non-equity stakeholders. Therefore, the ineffective or detrimental mechanisms should be revised in order that they care for the interests of non-equity stakeholders to ensure sustainable shareholder value in the long-run.

8.3 CONTRIBUTIONS OF THE STUDY

The present study makes a number of contributions and extensions to the existing corporate governance literature. Firstly, and as has been discussed in chapters one and four, over recent decades, economists, academic scholars, corporate executives, corporate and non-corporate policy-makers and special interest groups have been polarised in choosing an appropriate governance model for corporations. Specifically, they have been involved in a high-stakes debate over whether corporate governance arrangements should be only oriented to shareholder value or stakeholder value. In this context, the present study focuses on a new model, namely a "Non-Equity Stakeholder Model of Corporate Governance". The model argues that corporate governance should be oriented to non-equity stakeholders instead of being exclusively oriented to shareholder or stakeholder value. Hence, every internal corporate governance mechanism should focus on caring for and protecting the interests or value of non-equity stakeholders in order to maximise shareholder value, according to the model.

This model has combined the potential outcomes of the shareholder and stakeholder models of corporate governance, brought the two models into a single platform and made them united in maximising shareholder value. Therefore, the proposed model is expected to minimise the debate and has made a significant theoretical contribution to the extant body of knowledge.

Secondly, and unlike the stakeholder model, the proposed model is well-matched to the concept of business, as it supports the arguments of Friedman (1970) that *the*

business of business is the business. That is, the model shifts the focus of firms to the desires of shareholders all the way through the interests of non-equity shareholders. Accordingly, and unlike the shareholder model that overemphasises the immediate short-term benefits for shareholders, the model has emphasised long-term sustainable value for shareholders. Moreover, the model is compatible with the concept of corporate governance, as it has emphasised the accountability of corporate management to shareholders through non-equity stakeholders.

Thirdly, previous empirical studies have examined the direct relationship between internal corporate governance mechanisms and shareholder value, in which shareholder value has been operationalised employing accounting return-based measures (e.g. ROE, ROA, NP, ROI) and market-based measures (e.g. TQ, stock price, market-to-book ratio). In the study of corporate governance in Bangladesh, this study for the first time has used a new variable, namely "economic value added" (EVA), among the value-based measures, over and above the accounting return-based and market-based measures, to quantify shareholder value. Therefore, unlike previous empirical studies, this study has filled a gap by presenting comparative results using three different measures of shareholder value.

Fourthly, this study also adds value to the body of existing knowledge by providing a new approach for measuring the non-equity stakeholders associated with banks. Previous empirical studies (e.g. Ruf *et al*., 1993; Graves & Waddock, 1994; Sharfman, 1996; Waddock & Graves, 1997; Berman *et al*., 1999; Hillman & Keim, 2001; Deckop *et al.*, 2006; Jo & Harjoto, 2011; Atanassov, 2013) use the KLD index to measure CSR engagement/stakeholder attitudes as the proxies for non-equity stakeholders. Unlike previous studies, the current study takes a unique position in measuring non-equity stakeholders' attitudes towards banks. Firstly, this study operationalises the attitudes of each of four non-equity stakeholders (e.g. depositors, borrowers, employees and society) in isolation, based on whether each internal corporate governance mechanism influences the state of mind of depositors, borrowers, employees and society towards the sampled banks. Secondly, it develops a composite index value to represent the composite attitude of four non-equity stakeholders towards the sampled banks, by determining an arithmetic average of the combined scores of the attitudes of depositors, borrowers, employees and

society towards the sampled banks. This new approach for measuring the attitudes of non-equity stakeholders towards banks thus contributes to knowledge.

Finally, and as has been stated in chapters one and two, the Bangladesh Enterprise Institute (BEI) (2004) states that companies that make transparent corporate governance arrangements are better able to attract investors and the best-qualified professionals as employees, thereby achieving higher profits. This implies that the corporate governance system should advocate a number of internal corporate governance mechanisms that influence investors, professional workers and society, known as non-equity stakeholders in this study, who, in turn, contribute to maximising shareholder value.

A number of prior empirical studies have examined the direct relationship between internal corporate governance mechanisms and shareholder value based on the "Shareholder Model of Corporate Governance", while others have examined the direct relationship between internal corporate governance mechanisms and stakeholder value based on the "Stakeholder Model of Corporate Governance". However, no study has been conducted to determine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. This study fills this gap in the extant literature on corporate governance by suggesting for the first time that internal corporate governance mechanisms explain shareholder value in a roundabout way through non-equity stakeholders. In particular, this study argues that there is no direct relationship between internal corporate governance mechanisms and shareholder value; non-equity stakeholders mediate the relationship instead. Therefore, this study contributes to the existing corporate governance literature by examining the relationships between internal corporate governance mechanisms, non-equity stakeholders and shareholder value. These results represent a key stage in the process of gaining a realistic understanding of internal corporate governance mechanisms, non-equity stakeholders and shareholder value relations based on the Bangladeshi setting.

8.4 LIMITATIONS OF THE STUDY AND AREAS FOR FUTURE RESEARCH

As with prior studies, the present study is subject to several limitations. Firstly, this study has used secondary data regarding internal corporate governance mechanisms, shareholder value and non-equity stakeholders. All data have been collected only from

annual reports or supplementary sources of the respective banks. The analysis of the results using secondary data may not be adequate to determine the actual level of the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value. Therefore, future studies could use primary data along with secondary data. Data related to the attitudes of non-equity stakeholders and shareholder value can be collected from a questionnaire survey and face-to-face interviews. Subsequently, the findings using secondary data and primary data could be compared to enhance the validity and reliability of the results.

Secondly, this study has assessed the mediating effect of four non-equity stakeholders. Apart from these four non-equity stakeholders, there are many non-equity stakeholders associated with banking firms (e.g. government, regulatory bodies, environment and similar). The mediating effect of other categories of non-equity stakeholders remains unexplored in the current study. Therefore, future studies could be conducted to incorporate more than these four non-equity stakeholders to assess the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value.

Thirdly, there are definitional limitations for several variables. For example, sponsor-directors' shareholding was not categorised in terms of ownership held by foreign and local owners. Further, ownership patterns have not been classified into different levels of ownership held, e.g. low (0%-5%), medium (5%-25%) and high (25% and above). Similarly, institutional shareholding has not been classified into local and foreign institutional ownership. Ownership could also have been classified into family, non-family managerial and block holding ownership. Consequently, the effect of these different categories of ownership remains unexplored in this study. Therefore, future studies could be carried out by classifying sponsor-directors' shareholding into these forms of ownership held by foreign and local owners, family and non-family owners, managerial and block holding ownership, or by classifying ownership into different levels of shareholding. Similarly, future studies may also incorporate the classification of institutional shareholdings, for example, in terms of local and foreign institutional shareholders.

Finally, the current study has not incorporated informal personal perception of depositors, borrowers and employees about corporate governance structures that may have a potential effect on shareholder value. Further, internal corporate governance mechanisms do not include the right intentions according to which banks are complying with the mechanisms. "Managers may know that non-executive directors may be practically ineffective in monitoring their actions, they may still appoint them just to merely signal their intentions of treating outsiders or shareholders fairly" (Ntim, 2009, p. 376). Future studies can, therefore, incorporate the personal perception of depositors, borrowers, employees and different groups of society in order to ascertain their views about the effectiveness of the current internal corporate governance mechanisms in creating value for them.

Moreover, it can be argued that internal corporate governance mechanisms have nothing to do with establishing a productive relationship between non-equity stakeholders and banks. The relationship between non-equity stakeholders and banks may be influenced by macroeconomic variables and the general state of the economy of a country. For example, positive or negative attitudes of non-equity stakeholders towards banks may depend, respectively, on a booming economy or an economic downturn; consequently, shareholder value may increase or decrease accordingly. Therefore, internal corporate governance mechanisms may not be the only key determinant in influencing the attitudes of non-equity stakeholders towards the banking sector in Bangladesh, and these may not be the only factor influencing shareholder value. Future studies could, therefore, also incorporate various macroeconomic variables and the general state of the economy of Bangladesh.

8.5 CONCLUSION

This study focuses on the contemporary debate in the corporate world about whether the shareholder model or the stakeholder model of corporate governance should be followed by firms to ensure maximum value for shareholders. This study argues that the corporate governance model should not be exclusively oriented to shareholder or stakeholder value; rather, it should be oriented to non-equity stakeholder value, which may be termed as the "Non-Equity Stakeholder Model of Corporate Governance". The model proposes that internal corporate governance mechanisms should be developed in a

way that they positively influence the firms' non-equity stakeholders, which, in turn, have an effect on shareholder value. Accordingly, the proposed model hypothesises that there is no direct relationship between internal corporate governance mechanisms and shareholder value; instead, non-equity stakeholders mediate this relationship. Based on this hypothesis, the current study attempts to examine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value in listed banking companies in Bangladesh.

There are three key variables associated with this study. Firstly, internal corporate governance mechanisms requiring listed banks in Bangladesh to "comply or explain" are the independent variables of this study. This study has examined nine internal corporate governance mechanisms. These include: board size, sponsor-directors' shareholding, institutional shareholding, general public shareholding, independent non-executive directors, CEOs' compensation, presence of the independent audit committee, size of the audit committee and frequency of the audit committee meetings. Secondly, shareholder value is the dependent variable of this study. Shareholder value is measured from three different viewpoints, namely (1) from an accounting profit viewpoint that is termed "accounting return-based shareholder value", measured by return on equity (i.e. ROE), (2) from a market value viewpoint that is termed "market-based shareholder value", measured by Tobin's Q (i.e. TQ), and, finally, (3) from an economic profit viewpoint that is termed "value-based shareholder value", measured by economic value added (i.e. EVA). Finally, non-equity stakeholders are the mediating variables of this study. Four key non-equity stakeholders associated with commercial banks (namely, depositors, borrowers, employees and society) are incorporated in this study as mediating variables.

This study aims to determine the mediating effects of each of four non-equity stakeholders (depositors, borrowers, employees and society) on the relationship between internal corporate governance mechanisms and shareholder value. It has employed the random-effect GLS regression model to examine the relationships between the variables. Subsequently, the "three-step approach" suggested by Baron & Kenny (1986) is used to determine the mediating effect of non-equity stakeholders on the relationship between internal corporate governance mechanisms and shareholder value.

This study finds that the relationship between internal corporate governance mechanisms and accounting return-based shareholder value is not mediated by any of four non-equity stakeholders. In contrast, all four non-equity stakeholders partially mediate the relationship between general public shareholding and the market-based shareholder value. All four non-equity stakeholders also partially mediate the relationship between CEOs' compensation and market-based shareholder value. However, the relationship between the rest of the internal corporate governance mechanisms variables under analysis (i.e. board size, sponsor-directors' shareholding, institutional shareholding, independent non-executive directors, existence of the independent audit committee, size of the audit committee and frequency of the audit committee meetings) and market-based shareholder value is not mediated by any of four non-equity stakeholders.

Similarly, all four non-equity stakeholders partially mediate the relationship between general public shareholding and value-based shareholder value. However, the relationship between the rest of the internal corporate governance mechanisms under analysis (e.g. board size, sponsor-directors' shareholding, institutional shareholding, independent non-executive directors, existence of the independent audit committee, CEOs' compensation, size of the audit committee and frequency of the audit committee meetings) and value-based shareholder value is not mediated by any of four non-equity stakeholders.

In the end, the empirical results of this study may be useful in providing insights and supplementary direction for regulators and policy-makers in Bangladesh, and possibly in other similar emerging economies, to develop internal corporate governance mechanisms oriented to non-equity stakeholder value.

APPENDICES:

Appendix 1: Major scams, irregularities and frauds in the banking sector in Bangladesh, as reported in the media

SL No.	Banks Involved	Scams	Measures
1	Sonali Bank (2010-2012)	Hall Mark and some other businesses embezzled BDT 354.7 million. (Source: The Daily Star, 14th August, 2012)	In October 2012, the Anti-Corruption Commission (ACC) filed 11 cases against 27 people, including Hallmark Group Chairman and Sonali Bank's 20 former and current officials. (Dhaka Tribune, 11th July, 2018)
2	Janata Bank (2010-2015 & 2013 to present)	Fraudulence by Crescent and AnonTex involving BDT 1000 million. (Source: Dhaka Tribune, 3rd November, 2018)	On 30 October 2018, an inquiry committee, headed by an Executive Director of Bangladesh Bank (BB), submitted a report to the BB on the scam. (Source: Dhaka Tribune, 3rd November, 2018)
3	Janata Bank, Prime Bank, Jamuna Bank, Shahjalal Islami Bank Ltd and Premier Bank (June 2011-July 2012)	Embezzlement and laundering of BDT 117.446 million by Bismillah Group and its fake sister concerns. (Source: The Daily Star, 7th October, 2016)	On 3 November 2013, the ACC filed 12 cases against 54 people over the scam. (Source: The Independent, 11th September, 2018)
4	AB Bank (2013-2014)	Money laundering of BDT 16.5 million. (Source: The Daily Star, 12th June, 2018)	On 25 January 2018, the ACC filed a case against former AB Bank Chairman and officials. (Source: The Daily Star, 12th March, 2018)
5	NRB Commercial Bank (2013-2016)	Gross irregularities over disbursing loans of BDT 70.1 million. (Source: New Age Bangladesh, 10th December, 2017)	On 29 December 2016, the central bank appointed an observer at the bank to restore discipline and corporate governance. (Source: Dhaka Tribune, 7th December, 2017)
6	Janata Bank (2013-16)	Loan scam involving BDT 123 million. (Source: The New	In October 2018, Thermax requested to reschedule the entire loan again (previously

Appendix 1: Continued

		Nation, 22nd October, 2018)	restructured in 2015). Janata Bank's board endorsed this proposal by Thermax and sent it to the BB for approval. (Source: The Daily Star, 21st October, 2018)
7	Farmers Bank (2013-2017)	Fund embezzlement by 11 companies, e.g. NAR Sweaters Ltd, Advanced Development Technologies etc. involving BDT 50 million. (Source: The Daily Star, 24th March, 2018)	In January 2018, Farmers Bank was directed by the BB to conduct a functional audit on credit accounts with an outstanding amount of at least BDT 10 million in its Motijheel branch. (Source: The Daily Star, 24th March, 2018) In April 2018, the Anti-Corruption Commission (ACC) arrested four accused, including the Farmers Bank's former Audit Committee Chairman. (Source: The Independent, 11th April, 2018)
8	Bangladesh Bank (February 5, 2016)	Theft of BDT 67.96 million (USD 81million) by international cyber hackers from the treasury account of Bangladesh Bank with the New York's US Federal Reserve Bank. (Source: The Daily Star, 5th August, 2017)	On 19 March 2016, the government formed a 3-member investigation committee, headed by former governor of Central Bank Dr Farashuddin. (Source: The Daily Star, 5th August, 2017)

Source: Khatun (2018)

Appendix 2: List of regulations produced by the Bangladesh Bank

Areas	Regulations
Regulations for Scheduled Banks	Prudential Guidelines for Agent Banking Operation in Bangladesh Guidelines to establish a banking company in Bangladesh Guidelines for Islamic banking Prudential Regulations for Banks Guidelines for establishment of NRB bank Guidelines on Risk Based Capital Adequacy (Revised Regulatory Capital Framework in line with Basel III) Guidelines for Bank Directors Policy Guidelines for Green Banking for new Banks Policy Guidelines for Green Banking for Banks Guidelines on Commercial Paper for Banks
Banks and Financial Institutions	Indicative guidelines for CSR expenditure allocation and end use oversight Mainstreaming Corporate Social Responsibility (CSR) in banks and financial institutions in Bangladesh Merger/Amalgamation of banks/FIs
Managing Core Risks in Banks	Risk Management Guidelines for Banks, 2012 Credit risks Asset & liability/balance sheet Foreign exchange risks Internal control & compliance Money laundering risks Guidelines on Core Banking Solution (CBS) Features and Controls Guideline on ICT security for Banks and Non-Bank Financial Institutions, May 2015 Guidelines on Environmental & Social Risk Management (ESRM) for Banks and Financial Institutions in Bangladesh
Foreign Exchange	Foreign exchange guideline vol 1 Foreign exchange guideline vol 2 Policy for drawing arrangements FAQ in foreign exchange transactions Forex Transactions for Individuals Forex Transactions for Inbound and Outbound Travellers Guidelines to FX Audit Team [for auditing the Daily Basis Reporting of Forex Transactions to the Online Forex Monitoring System]
Anti Money Laundering	Guidelines on Money Laundering & Terrorist Financing Risk Management Guidelines for Banks Guidance notes on Prevention of Money Laundering for Banks Guidelines on Implementation of The UN Security Council Resolutions Concerning Targeted Financial Sanctions, Travel Ban, And Arms Embargo

Appendix 2: Continued

	Money Laundering and Terrorist Financing Risk Assessment Guidelines for Financial Institutions for Banking Sector for Designated Non- Financial Businesses and Professions for Postal Remittance Business for capital market intermediaries for NPO/NGO Sector Guidance notes on AML&CFT for insurance companies for money changers
Payment and Settlement	Bangladesh Real Time Gross Settlement (BD-RTGS) System Rules Regulations on Electronic Fund Transfer 2014 Bangladesh Payment and Settlement Systems Regulations 2014 Payment & settlement systems regulations 2009 Bangladesh Electronic Fund Transfer Network (BEFTN) operating rules NPSB Switch Operating Rules & User Manual: Disputes Management Rules
Others	Operating Guidelines for Mall And Marginal Sized Farmers Agricultural Productivity Improvement And Diversification Financing Project (SMAP) Guidelines on Credit Risk Management (CRM) for Banks Guidelines on Internal Control & Compliance in Banks Guidelines on Asset-Liability Management (ALM) Agricultural and Rural Credit Policy and Programme for 2017-2018 Guidelines for Customer Services and Complaint Management Guidelines on Agent Banking for the Banks Guidance Note for Approval and Operation of Agent Banking Activities of Banks Mobile Financial Services for the Banks School Banking Guideline Guidelines for investment in Treasury Bills Guidelines for investment in Bangladesh Government Treasury Bonds Guideline to fill in the Banking Statistics returns-SBS-1, SBS-2 & SBS-3 EEF (ICT) Fund Usage Policy -2012 Code lists for reporting of external sector transactions by the authorised dealers SME credit policy & programs Spread calculation procedure Guidelines on Stress Testing Guidelines on Stress Testing for NBFIs, 2012

Source: Bangladesh Bank (2016a), https://www.bb.org.bd/aboutus/regulationguideline/guidelist.php

Appendix 3: List of banks listed on the Dhaka Stock Exchange as of August 2016

SL No.	Name of Banks	Categories of Banks	Status (included/ excluded in the sample size)
1	AB Bank Limited	Private (Traditional) Commercial Bank	Included
2	Al-Arafah Islami Bank	Private (Islamic) Commercial Bank	Included
3	Bank Asia Ltd.	Private (Traditional) Commercial Bank	Included
4	BRAC Bank Ltd.	Private (Traditional) Commercial Bank	Included
5	City Bank	Private (Traditional) Commercial Bank	Included
6	Dhaka Bank	Private (Traditional) Commercial Bank	Included
7	Dutch-Bangla Bank	Private (Traditional) Commercial Bank	Included
8	Eastern Bank	Private (Traditional) Commercial Bank	Included
9	Exim Bank of Bangladesh	Private (Islamic) Commercial Bank	Included
10	First Security Islami Bank Ltd	Private (Islamic) Commercial Bank	Included
11	**ICB Islami Bank**	**Private (Islamic) Commercial Bank**	**Excluded**
12	IFIC Bank	Private (Traditional) Commercial Bank	Included
13	Islami Bank Bangladesh Ltd (IBBL)	Private (Islamic) Commercial Bank	Included
14	Jamuna Bank Ltd	Private (Traditional) Commercial Bank	Excluded
15	Mercantile Bank Ltd.	Private (Traditional) Commercial Bank	Included
16	Mutual Trust Bank Ltd.	Private (Traditional) Commercial Bank	Included
17	National Bank Ltd (NBL)	Private (Traditional) Commercial Bank	Included
18	NCC Bank Ltd	Private (Traditional) Commercial Bank	Included
19	One Bank Limited	Private (Traditional) Commercial Bank	Included

Appendix 3: Continued

20	Premier Bank Ltd	Private (Traditional) Commercial Bank	Included
21	Prime Bank	Private (Traditional) Commercial Bank	Included
22	Pubali Bank Ltd	State-owned (Traditional) commercial bank	Included
23	Rupali Bank	Private (Traditional) Commercial Bank	Included
25	Shahjalal Islami Bank Ltd	Private (Islamic) Commercial Bank	Included
26	Social Islami Bank Ltd	Private (Islamic) Commercial Bank	Included
27	Southeast Bank	Private (Traditional) Commercial Bank	Included
24	Standard Bank Limited	Private (Traditional) Commercial Bank	Included
28	Trust Bank Ltd	Private (Traditional) Commercial Bank	Included
29	United Commercial Bank Ltd	Private (Traditional) Commercial Bank	Included
30	Uttara Bank	Private (Traditional) Commercial Bank	Included

Source: DSE (2016a)

Appendix 4: Definitions and measurements of independent variables

Description of variables	Acronym of variables	Definitions and measurements
Board size	BdSize	Number of board members at the end of the financial year.
Sponsor-directors' shareholding	SdSh	The proportion of the ordinary shares held by sponsors and directors at the end of the financial year.
Institutional shareholding	InstSh	The proportion of the ordinary shares held by institutional investors at the end of the financial year.
General public shareholding	PubSh	The proportion of the ordinary shares held by general public at the end of the financial year.
Independent non-executive directors	INEDs	The proportion of the independent non-executive directors on the board at the end of the financial year.
CEOs' compensation	CeoCom	The sum of total annual benefits (salaries, bonuses and other financial benefits) paid to a CEO of a sampled bank in each financial year.
Presence of the independent audit committee	ExaudC	Dichotomous with 1 if a separately constituted audit committee with a Chairman, who is an independent director, is in operation during the period; 0 otherwise.
Size of the audit committee	SizeaudC	Number of members serving on the audit committee at the end of the financial year.
Frequency of the audit committee meetings	AudcM	Total number of meetings held by the audit committee of a bank in each financial year.

Appendix 5: List of the strength and concern items in the KLD social rating database

Category	Strength items	Concern items
Community	Generous giving Innovative giving Support for housing Support for education (added ‘94) Indigenous peoples’ relations (added ‘00, moved ‘02) Non-US charitable giving Other strength	Investment controversies Negative economic impact Indigenous peoples’ relations (‘00–’01) Other concern
Environment	Beneficial products and services Pollution prevention Recycling Communications (added ‘96) Property, plant, and equipment (ended ‘95) Other strength	Hazardous waste Regulatory problems Alternative fuels Ozone depleting chemicals Substantial emissions Agricultural chemicals Climate change (added ‘99) Other concern
Diversity	CEO Promotion Board of Directors Family benefits Women/minority contracting Employment of the disabled Progressive gay and lesbian policies Other strength	Controversies Non-representation Other concern
Employee relations	Strong union relations No layoff policy (ended ‘94) Cash profit sharing Employee involvement Strong retirement benefits Health and safety strength (added ‘03) Other strength	Poor union relations Health and safety concerns Workforce reductions Pension/benefits (added ‘92) Other concern
Product quality and safety	Quality product safety R&D/innovation Benefits to economically disadvantaged Other strength	Marketing/contracting controversy Antitrust Other concern

Appendix 5: Continued

KLD exclusionary items	Alcohol Gambling Tobacco Firearms Military Nuclear

Source: Jo & Harjoto (2011, p. 377)

Appendix 6: Definitions and measurements of mediating variables

Description of variables	Acronym of variables	Definitions and measurements
Depositors	DeR	Depositors are the proxy for their attitude towards the sampled banks. The attitude of depositors towards the sampled banks is the inclination of depositors to deposit their savings in banks. It is measured as the amount of savings deposited in the sampled banks by all categories of depositors (such as deposits in savings accounts, current accounts and fixed deposit accounts) in each financial year.
Borrowers	BrR	Borrowers are the proxy for their attitude towards the sampled banks. The attitude of borrowers towards the sampled banks is the inclination of borrowers in taking loans and advances from the sampled banks. It is measured as the total amount of money borrowed by all categories of borrowers (such as individuals and corporations) from the sampled banks in each financial year.
Employees	EmR	Employees are the proxy for their attitude towards the sampled banks. The attitude of employees towards the sampled banks is the state or quality of employees' commitment to the bank. It is measured as the amount of average net revenue earned by each employee, calculated by dividing the net revenue earned by a sampled bank in each financial year by the total number of employees of the bank at the end of its financial year, calculated as: $$\text{Revenue per employee} = \frac{\text{Net Revenue}}{\text{Number of Employees}}$$
Society	SoeR	Society is the proxy for its attitude towards the sampled banks. The attitude of society towards the sampled banks refers to the interaction between the sampled banks and society. It is measured as the yearly amount of net profit spent by the sampled banks for social development, such as education, health, green environment, pollution prevention and similar.

Appendix 7: Definitions and measurements of dependent variables

Description of variables	Acronym of variables	Definitions and measurements
Return on equity	ROE	Net income (after preferential stock dividends but before common stock dividends) divided by total equity (excluding preferred shares) (Vintilă & Gherghina, 2012).
Tobin's Q	TQ	Ratio of the market value of equity shares plus total debt divided by the book value of total assets of banks (Haniffa & Hudiab, 2006).
Economic value added	EVA	Profit after tax plus the provision for loans and other assets less written off during the year minus the cost of equity (City Bank, annual report, 2014).

Appendix 8: Calculation of EVA made by Bank Asia in Bangladesh for the financial years 2012, 2013 and 2014

Particulars	Financial Years		
	2014	**2013**	**2012**
Invested fund by shareholders			
Shareholders' equity	16,864.42	14,617.70	13,045.17
Add: Cumulative Provision for loans/ investment/ off-balance sheet items, offshore banking units & others	6,280.52	5,100.99	4,392.28
Total invested funds by shareholders	23,144.94	19,718.69	17,437.45
Average invested fund by shareholders [A]	21,431.82	18,578.07	16,151.03
Earnings for the year			
Profit after taxation	2,218.69	1,459.82	907.99
Add: Provision for loans/ investment, off-balance sheet items and Offshore banking units	1,561.88	1,895.17	2,328.81
Less: written off during the year	471.38	1,341.14	455.83
Earnings for the year [B]	3,309.19	2,013.85	2,780.97
Average cost of equity (based on the weighted average rate of 10 years Treasury Bond issued by Bangladesh Government) plus 2% risk premium [C]	14%	14%	14%
Cost of average equity [D = A x C]	3,000.45	2,600.93	2,261.14
Economic Value Added [B-D]	**308.74**	**(587.08)**	**519.83**

Source: Bank Asia (2015, p.129)

Appendix 9: Definitions and measurements of control variables

Description of variables	Acronym of variables	Definitions and measurements
Firm size	FmSize	Total assets of a sampled bank at the end of its financial year.
Asset tangibility ratio	Asttang (%)	Ratio of property, plant and equipment (PP&E) assets to book value of total assets of a sampled bank at the end of its financial year (Michaux & Mon, 2014).
Debt-equity ratio	Gear (%)	Total debt of a sampled bank divided by its total shareholders' equity (Ahmed, 2010).
Firm age	FmAge	Number of years listed on the Dhaka Stock Exchange (DSE) (Farooque *et al*., 2007).

Appendix 10: Results of sensitivity to alternative measurement of firm size for the direct relationship between ICGMs and SHV

	Regression Model 1 (All bank years)						**Sensitivities to alternative measurement of firm size** (Changes in sign on the coefficient and level of significance)
	Estimations before alternative measurement of firm size (i.e. FmSize-log)			**Estimations after alternative measurement of firm size (i.e. FmSize-log_A)**			
	Dep. var: ROE	**Dep. var: TQ**	**Dep var: EVA-log**	**Dep. var: ROE**	**Dep. var: TQ**	**Dep. var: EVA-log**	
Wald chi^2	84.34	164.72	73.07	85.52	167.26	59.11	No changes in the goodness-of-fit of the model.
Prob > chi^2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Ind. variables: BdSize	-.0284 (-0.27)	-.0003 (-0.27)	-.0023 (-0.28)	-.0241(-0.23)	-.0001(-0.15)	.0056 (0.62)	No changes in sign on the coefficients and level of significance.
$SdSh^2$	.0005 (1.09)	-3.34e-06 (-0.74)	.0001 (2.41)**	.0006 (1.17)	-2.91e-06 (-0.65)	.0001 (3.02)***	Changes in the level of significance from 5% to 1% related to the dependent variable EVA-log.
InstSh	-.1424 (-3.17)***	-.0009 (-2.04)**	-.0029 (-0.83)	-.1463(-3.25)***	-.0008 (-2.02)**	-.0019 (-0.48)	No changes in sign on the coefficients and level of significance.
PubSh	-.0006 (-0.02)	-.0007 (-2.46)**	.0088 (3.48)***	-.0003 (0.01)	-.0007 (-2.51)**	.0088 (3.07)***	
INEDs	.0651 (1.28)	.0012 (2.56)**	-.0001 (-0.02)	.0608 (1.19)	.0012 (2.57)**	-.0001 (-0.03)	
CeoCom	.2001 (1.38)	.0038 (2.83)***	.0015 (0.13)	.1858 (1.27)	.0040 (2.97)***	.0015 (0.12)	
ExaudC	.4742 (0.42)	-.0166 (-1.58)	.1385 (1.58)	.4551 (0.41)	-.0177 (-1.60)	.0776 (0.79)	
$SizeaudC^2$	.0692 (1.34)	-.0007 (-1.39)	.0039 (0.96)	.0673 (1.32)	-.0007 (-1.54)	.0001 (0.02)	
AudcM	-1.4587 (-2.70)***	-.0072 (-1.44)	.0328 (0.78)	-1.4159(-2.62)***	-.0078 (-1.56)	.0311 (0.66)	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate the p-value is statistically significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: dependent variable (Dep. var), independent variables (Ind. variables), return on equity (ROE), Tobin's Q (TQ), log form of economic value added (EVA-log), board size (BdSize), sponsor-directors' shareholding squared ($SdSh^2$), institutional shareholding (InstSh), general public shareholding (PubSh), independent non-executive directors (INEDs), CEOs' compensation (CeoCom), presence of the independent audit committee (ExaudC), size of the audit committee squared ($SizeaudC^2$), and finally, frequency of the audit committee meetings (AudcM).

Appendix 11: Results of sensitivity to alternative measurement of firm size for the direct relationship between ICGMs and NESHs

	Regression Model 2 (All bank years)								**Sensitivities to alternative measurement of firm size** (Changes in sign on the coefficient and level of significance)
	Estimations before alternative measurement of firm size (i.e. FmSize-log)				**Estimations after alternative measurement of firm size (i.e. FmSize-log_A)**				
	Dep. var: DeR	**Dep. var: BrR**	**Dep. var: EmR**	**Dep. var: SoeR^2**	**Dep. var: DeR**	**Dep. var: BrR**	**Dep. var: EmR**	**Dep. var: SoeR^2**	
Wald chi^2	74.85	80.08	58.49	69.64	74.23	77.89	58.81	56.78	No changes in the goodness-of-fit of the model.
Prob > chi^2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Ind.variables:									
BdSize	1565.141 (1.30)	1635.882 (1.56)	.0965 (1.60)	.0811 (1.13)	1375.24 (1.16)	1409.444 (1.35)	.0887 (1.49)	1.5823 (1.45)	No changes in sign on the coefficients and level of significance.
SdSh^2	1.0376 (0.18)	1.2764 (0.26)	.0002 (0.66)	-.0001 (-0.38)	.0881 (0.02)	.1832 (0.04)	.0001 (0.52)	-.0022 (-0.44)	
InstSh	254.2546 (0.49)	122.3256 (0.27)	.0385 (1.49)	.0205 (0.67)	275.1336 (0.53)	127.9271 (0.28)	.0402 (1.55)	.7500 (1.57)	
PubSh	1657.006(4.41)***	1434.984(4.38)***	.0810 (4.31)***	.0923 (4.14)***	1709.45 (4.63)***	1509.401 (4.67)***	.0826 (4.48)***	1.3785(4.06)***	
INEDs	933.8782 (1.60)	827.2972 (1.62)	.0429 (1.47)	.0416 (1.20)	938.461 (1.61)	841.9625 (1.64)	.0457 (1.56)	.6081 (1.13)	
CeoCom	-6449.825(-3.86)***	-5544.041(-3.80)***	-.2549 (-3.05)***	-.4058 (-4.09)***	-6308.193 (-3.75)***	-5437.269 (-3.69)***	-.2461 (-2.93)***	-5.0843(-3.29)***	
ExaudC	-40334.18(-3.10)***	-35769.6 (-3.15)***	-1.6887 (-2.59)***	-2.1950 (-2.84)***	-39007.48 (-3.01)***	-34126.91(-3.01)***	-1.6668(-2.58)***	-25.2029(-3.12)***	
SizeaudC^2	-968.6418 (-1.63)	-965.6563(-1.86)*	-.0628 (-2.11)**	-.0462 (-1.31)	-879.5941 (-1.49)	-958.7963(-1.78)*	-.0592 (-2.01)**	-.0571 (-1.37)	
AudcM	-8024.745(-1.29)	-7790.486(-1.44)	-.4243 (-1.37)	-.2617 (-0.71)	-8421.658 (-1.35)	-8073.718(-1.48)	-.4496 (-1.44)	-4.2385 (-0.74)	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate the p-value is statistically significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: depositors (DeR), borrowers (BrR), employees (EmR) and society squared (SoeR^2). All other variables are defined in Appendix 10.

Appendix 12: Results of sensitivity to alternative measurement of firm size for the effect of ICGMs and depositors on SHV

	Regression Model 3a (All bank years)						**Sensitivities to alternative measurement of firm size** (Changes in sign on the coefficient and level of significance)
	Estimations before alternative measurement of firm size (i.e. FmSize-log)			**Estimations after alternative measurement of firm size (i.e. FmSize-log_A)**			
	Dep. var: ROE	**Dep. var: TQ**	**Dep. var: EVA-log**	**Dep. var: ROE**	**Dep. var: TQ**	**Dep. var:EVA-log**	
Wald chi^2	85.73	164.72	74.12	87.03	167.32	29.19	No changes in the goodness-of-fit of the model.
Prob > chi^2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0461	
Ind. variables							No changes in sign on the coefficients and level of significance.
BdSize	-.0392 (-0.37)	-.0003 (-0.27)	-.0030 (-0.37)	-.0339 (-0.33)	-.0001 (-0.13)	-.0054 (-0.29)	
$SdSh^2$	.0005 (1.08)	-3.34e-06 (-0.74)	.0001 (2.41)**	.0006 (1.17)	-2.91e-06 (-0.65)	.0001 (2.24)**	
InstSh	-.1442(-3.22)***	-.0009 (-2.04)**	-.0030 (-0.87)	-.1483(-3.30)***	-.0008 (-1.85)*	-.0019 (-0.50)	Changes in the level of significance from 5% to 10% related to the dependent variable TQ.
PubSh	-.0121 (-0.35)	-.0007 (-2.29)**	.0080 (2.97)***	-.0119 (-0.35)	-.0008 (-2.55)**	.0072 (2.83)***	No changes in sign on the coefficients and level of significance.
INEDs	.0586 (1.15)	.0012 (2.53)**	-.0005 (-0.13)	.0538 (1.05)	.0012 (2.60)**	-.0003 (-0.07)	
CeoCom	.2447 (1.60)	.0038 (2.68)***	.0045 (0.38)	.2310 (1.51)	.0039 (2.77)***	.0026 (0.20)	
ExaudC	.7534 (0.64)	-.0166 (-1.52)	.1578 (1.74)*	.7347 (0.64)	-.0182 (-1.60)	.0844 (1.83)*	
$SizeaudC^2$	.0759 (1.46)	-.0007 (-1.38)	.0043 (1.07)	.0736 (1.44)	-.0007 (-1.55)	.0003 (0.06)	
AudcM	-1.4032 (-2.59)***	-.0072 (-1.43)	.0367 (0.87)	-1.3556 (-2.50)**	-.0079 (-1.57)	.0326 (0.68)	Changes in the level of significance from 1% to 5% related to the dependent variable ROE.
Med. var: DeR	6.92e-06 (2.92)***	6.83e-10 (3.01)***	4.79e-07 (2.82)***	7.17e-06 (2.96)***	1.12e-08 (3.16)***	3.75e-07 (2.76)***	No changes in sign on the coefficients and level of significance.

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate the p-value is statistically significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: mediating variable (Med. var) and depositors (DeR). All other variables are defined in Appendix 10.

Appendix 13: Results of sensitivity to alternative measurement of firm size for the effect of ICGMs and borrowers on SHV

	Regression Model 3b (All bank years)						**Sensitivities to alternative measurement of firm size** (Changes in sign on the coefficient and level of significance)
	Estimations before alternative measurement of firm size (i.e. FmSize-log)			**Estimations after alternative measurement of firm size (i.e. FmSize-log_A)**			
	Dep. var: ROE	**Dep. var: TQ**	**Dep. var: EVA-log**	**Dep. var: ROE**	**Dep. var: TQ**	**Dep. var: EVA-log**	
Wald chi^2	85.63	164.73	73.90	86.87	167.34	29.11	No changes in the goodness-of-fit of the model.
Prob > chi^2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0495	
Ind. variables:							No changes in sign on the coefficients and level of significance.
BdSize	-.0409 (-0.39)	-.0003 (-0.27)	-.0030 (-0.38)	-.0350 (-0.34)	-.0001 (-0.13)	-.0056 (-0.61)	
$SdSh^2$	.0005 (1.07)	-3.34e-06 (-0.73)	.0001 (2.40)**	.0006 (1.17)	-2.90e-06 (-0.65)	.0001 (2.01)**	
InstSh	-.1434 (-3.20)***	-.0009 (-2.04)**	-.0029 (-0.85)	-.1473(-3.28)***	-.0008 (-2.02)**	-.0019 (-0.48)	
PubSh	-.0115 (-0.33)	-.0007 (-2.29)**	.0081 (3.00)***	-.0113 (-0.33)	-.0008 (-2.53)**	.0075 (2.82)***	
INEDs	.0588 (1.15)	.0012 (2.54)**	-.0005 (-0.12)	.0541 (1.06)	.0012 (2.57)**	-.0002 (-0.04)	
CeoCom	.2425 (1.59)	.0038 (2.68)***	.0041 (0.35)	.2278 (1.49)	.0039 (2.77)***	.0016 (0.12)	
ExaudC	.7479 (0.64)	-.0167 (-1.53)	.1559 (1.72)*	.7191 (0.62)	-.0172 (-1.60)	.1582 (1.77)*	
$SizeaudC^2$	.0766 (1.46)	-.0007 (-1.38)	.0043 (1.07)	.0739 (1.44)	-.0007 (-1.56)	.0001 (0.03)	
AudcM	-1.3991 (-2.58)***	-.0072 (-1.43)	.0366 (0.87)	-1.3535 (-2.49)**	-.0079 (-1.57)	.0312 (0.65)	Changes in the level of significance from 1% to 5% related to the dependent variable ROE.
Med. var: BrR	7.65e-06 (2.89)***	2.76e-09 (3.03)***	4.88e-07 (2.73)***	7.74e-06(2.91)***	2.55e-08(3.20)***	3.62e-08 (2.02)**	Changes in the level of significance from 1% to 5% related to the dependent variable EVA-log.

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate the p-value is statistically significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: mediating variable (Med. var) and borrowers (BrR). All other variables are defined in Appendix 10.

Appendix 14: Results of sensitivity to alternative measurement of firm size for the effect of ICGMs and employees on SHV

	Regression Model 3c (All bank years)						**Sensitivities to alternative measurement of firm size** (Changes in sign on the coefficient and level of significance)
	Estimations before alternative measurement of firm size (i.e. FmSize-log)			**Estimations after alternative measurement of firm size (i.e. FmSize-log_A)**			
	Dep. var: ROE	**Dep. var: TQ**	**Dep. var: EVA-log**	**Dep. var: ROE**	**Dep. var: TQ**	**Dep. var: EVA-log**	
Wald chi^2	85.39	165.30	74.42	86.57	157.95	29.13	No changes in the goodness-of-fit of the model.
Prob > chi^2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0462	
Ind. variables:							No changes in sign on the coefficients and level of significance.
BdSize	-.0400 (-0.38)	-.0003 (-0.34)	-.0033 (-0.41)	-.0418 (-0.39)	.0004 (0.44)	-.0055 (-0.59)	
$SdSh^2$	.0005 (1.05)	-3.47e-06 (-0.76)	.0001 (2.37)**	.0005 (1.00)	-2.69e-06 (-0.59)	.0001 (2.42)**	
InstSh	-.1470 (-3.26)***	-.0009 (-2.09)**	-.0033 (-0.94)	-.1549 (-3.39)***	-.0008 (-2.05)**	-.0021 (-0.53)	
PubSh	-.0103 (-0.30)	-.0008 (-2.48)**	.0079 (2.95)***	-.0082 (-0.25)	-.0008 (-2.60)***	.0079 (2.74)***	Changes in the level of significance from 5% to 1% related to the dependent variable TQ.
INEDs	.0599 (1.17)	.0012 (2.47)**	-.0005 (-0.13)	.0647 (1.25)	.0012 (2.57)**	-.0006 (-0.14)	No changes in sign on the coefficients and level of significance.
CeoCom	.2307 (1.54)	.0040 (2.87)***	.0042 (0.36)	.2035 (1.36)	.0041 (3.01)***	.0062 (0.47)	
ExaudC	.6772 (0.58)	-.0154 (-1.43)	.15685 (1.75)*	.2276 (0.20)	-.0112 (-1.06)	.1668 (1.86)*	
$SizeaudC^2$	.0768 (1.46)	-.0006 (-1.28)	.0045 (1.12)	.0799 (1.57)	-.0001 (-1.53)	.0005 (0.10)	
AudcM	-1.4077 (-2.60)***	-.0069 (-1.37)	.0374 (0.89)	-1.4643 (-2.67)***	-.0079 (-1.57)	.0289 (0.61)	
Med. var: EmR	.1202 (2.80)***	.0007 (2.51)**	.0109 (2.94)***	.7310 (2.70)***	.0008 (2.06)**	.1643 (2.71)***	

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate the p-value is statistically significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: mediating variable (Med. var) and employees (EmR). All other variables are defined in Appendix 10.

Appendix 15: Results of sensitivity to alternative measurement of firm size for the effect of ICGMs and society on SHV

	Regression Model 3d (All bank years)						**Sensitivities to alternative measurement of firm size** (Changes in sign on the coefficient and level of significance)
	Estimations before alternative measurement of firm size (i.e. FmSize-log)			**Estimations after alternative measurement of firm size (i.e. FmSize-log_A)**			
	Dep. var: ROE	**Dep. var: TQ**	**Dep. var: EVA-log**	**Dep. var: ROE**	**Dep. var: TQ**	**Dep. var: EVA-log**	
Wald chi^2	84.92	164.82	73.16	86.25	167.60	29.14	No changes in the goodness-of-fit of the model.
Prob > chi^2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0468	
Ind. variables:							No changes in sign on the coefficients and level of significance.
BdSize	-.0346 (-0.33)	-.0002 (-0.25)	-.0025 (-0.30)	-.0303 (-0.29)	-.0001 (-0.11)	-.0057 (-0.63)	
$SdSh^2$	.0005 (1.11)	-3.37e-06 (-0.74)	.0001 (2.42)**	.0006 (1.20)	-2.99e-06 (-0.67)	.0008 (2.19)**	
InstSh	-.1439(-3.20)***	-.0008 (-2.03)**	-.0029 (-0.84)	-.1483(-3.29)***	-.0008 (-2.03)**	-.0019 (-0.47)	
PubSh	-.0076 (-0.22)	-.0007 (-2.24)**	.0086 (3.20)***	-.0076 (-0.22)	-.0008 (-2.50)**	.0077 (2.90)***	
INEDs	.0619 (1.21)	.0012 (2.56)**	-.0002 (-0.04)	.0569 (1.11)	.0012 (2.57)**	-.0001 (-0.02)	
CeoCom	.2307 (1.50)	.0037 (2.60)***	.0025 (0.20)	.2191 (1.42)	.0038 (2.68)***	.0009 (0.07)	
ExaudC	.6402 (0.55)	-.0171 (-1.58)	.1438 (1.59)	.6364 (0.55)	-.0177 (-1.64)	.0741 (0.73)	
$SizeaudC^2$	.0727 (1.40)	-.0007 (-1.41)	.0040 (0.98)	.0709 (1.38)	-.0008 (-1.58)	.0001 (0.01)	
AudcM	-1.4389 (-2.66)***	-.0072 (-1.45)	.0335 (0.80)	-1.3907(-2.57)**	-.0080 (-1.58)	.0305 (0.64)	Changes in the level of significance from 1% to 5% related to the dependent variable ROE.
Med. var: $SoeR^2$	.0756 (2.60)***	.0002 (2.21)**	.0024 (2.25)**	.0847 (2.67)***	.0005 (2.39)**	.0016 (2.15)**	No changes in sign on the coefficients and level of significance.

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate the p-value is statistically significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: mediating variable (Med. var), society ($SoeR^2$). All other variables are defined in Appendix 10.

Appendix 16: Results of sensitivity to alternative measurement of employees for the direct relationship between ICGMs and EmR

	Regression Model 2 (All bank years) (EmR Part Only)		
	Estimations before alternative measurement of employees (i.e. EmR)	**Estimations after alternative measurement of employees (i.e. EmR_A)**	**Sensitivities to alternative measurement of employees** (Changes in sign on the coefficient and level of significance)
	Dependent variable: EmR	**Dependent variable: EmR_A**	
Wald chi^2	58.49	66.54	No changes in the goodness-of-fit of the model.
Prob > chi^2	0.000	0.000	
Ind. variables:			
BdSize	.0965 (1.60)	.0166 (1.23)	No changes in sign on the coefficients and level of significance.
$SdSh^2$	.0002 (0.66)	.0001 (0.49)	
InstSh	.0385 (1.49)	.0052 (0.90)	
PubSh	.0810 (4.31)***	.0187 (4.42)***	
INEDs	.0429 (1.47)	.0107 (1.63)	
CeoCom	-.2549 (-3.05)***	-.0678 (-3.62)***	
ExaudC	-1.6887 (-2.59)***	-.4437 (-3.03)***	
$SizeaudC^2$	-.0628 (-2.11)**	-.0110 (-1.65)*	Changes in the level of significance from 5% to 10%.
AudcM	-.4243 (-1.37)	-.1006 (-1.44)	No changes in sign on the coefficients and level of significance.

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicates the p-value is statistically significant at 1%, 5% and 10% levels, respectively. All variables are defined in Appendix 10.

Appendix 17: Results of sensitivity to alternative measurement of employees for the effect of ICGMs and employees on SHV

	Regression Model 3c (All bank years)						**Sensitivities to alternative measurement of employees** (Changes in sign on the coefficient and level of significance)
	Estimations before alternative measurement of employees (i.e. EmR)			**Estimations after alternative measurement of employees (i.e. EmR_A)**			
	Dep. var: ROE	**Dep. var: TQ**	**Dep. var: EVA-log**	**Dep. var: ROE**	**Dep. var: TQ**	**Dep. var: EVA-log**	
Wald chi^2	85.39	165.30	74.42	85.30	164.72	73.52	No changes in the goodness-of-fit of the model.
Prob > chi^2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Ind. variables:							
BdSize	-.0400 (-0.38)	-.0003 (-0.34)	-.0033 (-0.41)	-.0369 (-0.35)	-.0003 (-0.27)	-.0027 (-0.34)	
$SdSh^2$	.0005 (1.05)	-3.47e-06 (-0.76)	.0001 (2.37)**	.0005 (1.06)	-3.35e-06 (-0.74)	.0001 (2.39)**	
InstSh	-.1470 (-3.26)***	-.0009 (-2.09)**	-.0033 (-0.94)	-.1451 (-3.23)***	-.0009 (-2.04)**	-.0030 (-0.87)	
PubSh	-.0103 (-0.30)	-.0008 (-2.48)**	.0079 (2.95)***	-.0102 (-0.29)	-.0007 (-2.30)**	.0083 (3.06)***	No changes in sign on the coefficients and level of significance.
INEDs	.0599 (1.17)	.0012 (2.47)**	-.0005 (-0.13)	.0596 (1.16)	.0012 (2.53)**	-.0004 (-0.09)	
CeoCom	.2307 (1.54)	.0040 (2.87)***	.0042 (0.36)	.2349 (1.55)	.0038 (2.71)***	.0034 (0.29)	
ExaudC	.6772 (0.58)	-.0154 (-1.43)	.15685 (1.75)*	.7021 (0.60)	-.0165 (-1.52)	.1509 (1.66)*	
$SizeaudC^2$	.0768 (1.46)	-.0006 (-1.28)	.0045 (1.12)	.0749 (1.43)	-.0007 (-1.38)	.0042 (1.03)	
AudcM	-1.4077 (-2.60)***	-.0069 (-1.37)	.0374 (0.89)	-1.4071 (-2.59)***	-.0072 (-1.42)	.0356 (0.85)	
Med. var: EmR	.1202 (2.80)***	.0007 (2.51)**	.0109 (2.94)***	.5137 (3.77)***	.0008 (3.01)***	.0281 (3.54)***	Changes in the level of significance from 5% to 1% related to the dependent variable TQ.

Notes: Coefficients are outside the parentheses and z-statistics are within the parentheses. ***, ** and * indicate the p-value is statistically significant at 1%, 5% and 10% levels, respectively. Variables are defined as follows: mediating variable (Med. var), employees (EmR). All other variables are defined in Appendix 10.

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