Corporate Governance Practices in Bangladesh and Its Impact on the Performance of the Banking Industry of Bangladesh

By

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Certification Page

I, **Hasan A K M Kamrul (**Student ID **52115011)** hereby declare that the contents of this Master's Thesis are original and true, and have not been submitted at any other university or educational institution for the award of degree or diploma.

All the information derived from other published or unpublished sources has been cited and acknowledged appropriately.

Hasan A K M Kamrul
2017/01/13

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The responsibility for any errors or deficiencies in this research work obviously is my own .

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Abstract

To ensure stable and resilient banking system in any economy, corporate governance considered as an effective tool. Although in 2006 the first corporate governance code was introduced in Bangladesh, it brings awareness among various stakeholders of the industry within very short time. However the Corporate governance code was revised in 2012 after the Bangladesh capital market slump in 2011. It is expected that all the stakeholders in the industry will be benefited by adopting the revised guidelines but during the period 2010 to 2015, the non- performing loans (NPL) has increased significantly and the Return on Asset (ROA), Return on Equity (ROE) of the banking industry has observed negative growth. Therefore the concern is that, why banks asset quality continuously deteriorated despite of enhancing the internal monitoring mechanisms like increasing more independent directors in the Board, strengthening the audit committee, specifying the CEO's responsibility and so on. In this regard, this thesis aims to investigate the relationship between bank performance and corporate governance through theoretical and empirical analysis. While theoretical analysis, this research critically analyzed the contemporary corporate governance theories and various role of board sub-committees from bank's strategic point of view. This research also briefly discussed about the evolution process of corporate governance in globally and Bangladesh perspective. On the other hand, while empirical analysis, the research has considered secondary data for six years (2010–2015) of 21 commercial bank of Bangladesh and Bangladesh economy. It is hypothesized that there is positive relation between corporate governance and bank performance. In order to test the hypothesis, it uses the Ordinary least square (OLS) method to test the relationship between five

indicators of corporate governance guidelines and four basic bank performance indicators. One major finding in this research is that, the board size is positively correlated with the bank performance and statistically significant. This indicates that the board size can improve the bank performance. In addition, it was found that the independent director's size has significant impact on bank performance. It was found that despite of appointment of independent directors bank performance further deteriorating during the period 2013-2015. One reason may be the independent directors were appointed within the same board size after adopting the code but due to banks ownership structure, they cannot fully control over board and management. Another reason may be the country's economic indicators also shows negative trend during 2013-2015 except GDP (which slightly enhanced in 2013-2015 comparing to 2010-2012), which contributed negatively for bank performance. Based on the theoretical and empirical analysis, this thesis advocates that, the adoption of corporate governance code has contributed to stop further distortion of performance of banks and independent directors play a positive role within the limited scope. However this research argues that as the implementation of corporate governance in Bangladesh is in early stage; there are scopes to develop the code specifically which are mentioned in the recommendation part of this thesis and the corporate governance codes should be critically analyzed and monitored by the regulatory bodies and stakeholders periodically. Besides this, it seems, it is too early to judge the impacts of newly introduced corporate governance guidelines over the bank performance as other factors like low growth rate in credit demand due to global economic recession, domestic political unrest and strict regulation imposed by central bank during the observed period are also contributed largely on the bank performance.

Chapter One- Introduction

1.1 Background of the study

For stable and resilient banking system the essence of good governance system is a much talked issue. Although the first corporate governance code was started to implement in Bangladesh in 2006, it brings awesome awareness among various stakeholders of the industry. Corporate governance practices of Bangladeshi banks have been significantly improved since the commencing the corporate governance code (Islam et al., 2015).

Banking industry plays an important role in the economy. Therefore, banks performance is also a major concern for economic development. Banks performance attracts significant attention from public and financial regulators as banks are critical institutions in most economies (Stankeviciene et al. 2012). Any disturbance of banking sector in Bangladesh can severely paralyzed the whole economy (Uddin and Bristy, 2014). There is a significant relationship between corporate accrual and general public ownership and the immoral management takes the advantages of information asymmetry while preparing the corporate reports (Hasan et al. 2014). Independence of banking supervisors, independence from political influence and strong legal protection against the authority of the supervisors are key challenges in good governance in banking industry in Bangladesh (Yusuf Kamal et al.2007).

Bangladesh Securities and Exchange Commission (BSEC) and Bangladesh Bank, the central bank of Bangladesh, are the chief regulator of the country's capital market and money market respectively. However, both regulators issues specific guidelines regarding banks governance system from time to time to protect the investors and depositors interest. Therefore, there need to justify the guidelines issued on corporate governance that, what is the impact of those guidelines on industry performance. Besides the existing corporate governance code in Bangladesh is applicable since 2012 but the trend of non-performing Loans (NPL) for the last six years has an upward trend (Table 1.1). It is assumed that if corporate governance has positive impacts on the decision making process of the Board of Directors then it should positively reflects on the bank asset quality. Therefore, it is required to analysis the corporate governance guideline so that its impact on the banks would be more evident as well as create value to the organization.

Table 1.1 Gross Non- performing Loans (NPL) Ratio (Gross NPL as a percentage of Total Loans outstanding)

Banks Type	**Dec 2010**	**Dec 2011**	**Dec 2012**	**Dec 2013**	**Dec 2014**	**Dec 2015**
State Owned Commercial Banks	15.7	11.3	23.9	18.8	22.4	21.5
Private Commercial Banks	*3.2*	*2.9*	*4.6*	*4.5*	*5*	*4.8*
Foreign Commercial Banks	3	3	3.5	5.5	7.3	7.8
Specialized Development Banks	24.2	24.6	26.8	34.7	32.8	23.2
Overall	**7.1**	**6.2**	**10**	**8.9**	**9.7**	**8.8**

(Source: Bangladesh Bank Annual Report 2014-15, Financial Stability Report 2015)

1.2 Statement of problem

Before discussing the problem statement of this thesis, we would like to address some key issues.

First of all, banking industry in Bangladesh is formed by banking companies act 1991 (Amended in 2013) and regulated by Bangladesh Bank. However, the state owned banks (SOBs) and Specialized Development Banks (SDBs) are dually supervised by Ministry of Finance (MoF) and Bangladesh Bank. On the other hand, all the listed companies in the burses are monitored and supervised by Bangladesh Securities and Exchange Commission (BSEC). Therefore, while BSEC issued Corporate Governance guidelines in the year 2006 and later on in 2012 for listed companies in the burses, it is also applicable to the Banking companies that are listed in the stock exchanges. On the other hand Bangladesh Banks has also issued detailed guidelines on Board of Directors appointment, responsibilities and also the internal governance system of the bank from time to time which are mandatory to comply by all scheduled banks. As a result there are dual supervisory authorities exists in banking industry of Bangladesh regarding Corporate Governance.

Besides this, there is a loophole in appointment of Independent Directors in the Board. Listed companies in Bangladesh are not free from prototype of family business governance (Asian Development Bank 2003). It is observed that most of the independent directors in the board are comes from the relatives and peers circle of the sponsor directors. In addition, independent directors in the state owned commercial banks (SCBs) are nominated by MoF. As a result the conflict of interest has risen for such appointment and the Independent directors cannot play role in favor of general shareholders. Therefore, it is a concern that to what extent independent directors are truly independent in nature. What is more, another drawback of the existing corporate governance guideline in that, there is no provision to impose penalty for non-compliance of the guideline.

Last but not least, the restructuring facility of Bangladesh Bank for large loans has significant role to downsizing the NPL ratio in the banking industry. The banking industry reschedules and/or restructures a portion of their stressed loans at the end of each year, which inflates banks' profitability and reduces provision requirements (Bangladesh Bank 2015). Weak bank balance sheets and governance issues reduce lending capacity, take credit away from productive investment, and, in the case of State owned banks, can lead to fiscal recapitalization costs (IMF -2015)

1.3 Research Objectives

The objective of this research is to find out the impact of corporate governance on bank performance especially for private commercial banks just after adaptation of the corporate governance guidelines.

1.4 Research Questions

There are two core research questions in this research

1. ***What are the key elements or critical factors in the corporate governance guidelines of Bangladesh?*** Through this question we will try to find out the key element of the existing guidelines that play a vital role in banks performance.

2. ***Is there any relation between corporate governance and bank performance?*** This question investigates the relationship and impact of governance system on bank performance.

To address these two questions there also some sub-questions that is related to the core questions.

i) *What is corporate governance in banks?*

ii) *What are the basic performance measurement yardsticks for measuring banking industry performance?*

iii) *To what extent Basel accord implementation in Bangladesh enhanced the monitoring skills of the banks?*

1.5 Hypothesis and Justification

To answer the research questions we hypothesize that

1. There is a positive relationship between corporate governance and bank performance. If the code are properly addressed by the regulatory authority and duly complied by the banks, then the performance will be boost up.
2. Another hypothesis is that implementation of Basel accord in Bangladesh is not so successful to ensure the improving asset quality in the banking sector.

1.5.1 Justification of the hypothesis

An empirical study was conducted on the relationship between corporate governance and banking sector in Malaysia and Vietnam by Dao and Dao (2014). This research also followed the same methodologies as followed by Dao and Dao (2014), where they find that, introducing of corporate governance code in Malaysia and Vietnam has positive impact on ROE, ROA of banks in both countries. They also consider Malaysian and Vietnamese commercial banks data as sample size in their empirical research. In this research we also consider board size and its composition as corporate governance attribute and ROA, ROE as bank performance measurement. Additionally in this study we also consider only commercial banks data. Therefore it is justified to take same methodology of Dao and Dao (2014).

Regarding second hypothesis, we assume that the risk weighted assets (RWA) have a negative relationship with Gross NPL but Roy (2016), finds that despite of low RWA , Indian banks has high Gross NPL, which indicate that although the banks has maintained its Capital adequacy ratio (CAR) as per Basel II standard but it failed to control its asset quality. Bangladesh banking industry has also experiencing same situation. Bangladesh has successfully run Basel II during the period 2010 to 2015 but the implication of Basel II accord on assets quality is not visible.

1.6 Overview of the Methodology

- In order to answer the first question this study will overview the history, background and current guidelines of Corporate Governance in Bangladesh.
- In order to answering the second question, we will use empirical data of Banking industry of Bangladesh for last six years (2010-2015) and latest Corporate Governance (CG) code that issued by Bangladesh Securities and Exchange Commission (BSEC)
- In order to answer the sub questions, this study will describe the benchmark for performance measurement yardstick of banking industry. This study will also analyze the Japan's financial and governance system as a case analysis of transition into Anglo American System.

1.7 Limitation of this research

Times series of data is the main limitation of this research. It considers only six year's data for bank performance and economic indicators of the economy while regression analysis. In fact such short time is not sufficient to judge the whole bank performance and the corporate governance attributes. Another limitation of the study is that, this research considers corporate governance attributes while accessing bank performance. But there are several factors such market competition, credit growth rate, political stability are also influences bank performance. Another limitation is that this research excluded the state owned banks and foreign commercial Banks in the sample bank data base as the majority shareholder of these institutions are government and foreign parent companies respectively.

1.8 Disposition

The disposition of the thesis is as follows:

The introduction chapter includes the background of the study, problem statement, research question, research hypothesis and justification and limitation of the study.

Corporate governance and its different theories, conceptual frame work of corporate governance, financial institutions governance system, and performance yardsticks for financial institutions are discussed in the second chapter.

In the third chapter, evolution of corporate governance code, role of different committees of board of directors are discussed. Besides the Japanese financial system and Basel Accord implementation in Japan are also discussed in this chapter as a case study.

Overview of Bangladesh Banking industry and governance system discussed in detailed in the fourth chapter. Research methods and discussion on empirical results are briefly described in the fifth and sixth chapter respectively. Finally, the recommendations of the whole research are discussed in the last chapter

****

Chapter Two - Literature review

1.1 What is Corporate Governance?

The basis of corporate governance comes from the agency problem. One of the ingredient in the survival of modern corporation is to separate the ownership and managerial control (Fama, 1980).

Survival of organizational forms largely depends on the controlling of agency problem (Fama and Jensen, 1983a). Corporate governance deals with agency problem and legal protection to investors' rights and concentration or ownership are the approaches to corporate governance (Shleifer and Vishny 1997). Corporate governance affects the asymmetric information of IPO- stage firms (Lucian 2002). Corporate governance helps to mitigate the influence of the agency problem on managers cost adjustment decisions (Chen et al. 2012). Corporate Governance is beyond mere code compliance and box ticking (Christopher Halburd, 2014). Good Corporate governance which includes meaningful corporate transparency, improves the function of the real economy, corporate resource allocation and security market efficiency (James L. Bicksler, 2003)."Corporate governance" is connected with the board and its activities from the perspective of the personal characteristics and role of individual board members based on their perception of the character of human beings. (Marie 2014). The building blocks of corporate governance are accountability , probity and transparency and four parties such as owners, directors, legislators and regulators are responsible for effective corporate governance (Bob Garratt, 2015). Corporate governance largely influences the factors that affects firms value (Lucina et al.2009). Governance policies enable an individual corporation to operate effectively (William, 2014).

According to Prudential Regulatory Authority (PRA) of Bank of England,
"Good governance is important for all regulated firms, although the degree of supervisory attention paid to governance issues for particular firms may vary according to the risk profile of the firm and the potential impact of failure. Equally, judgments on the adequacy of governance arrangements may be influenced by the culture, management incentives and business goals of the firm". (PRA, 2015)

From the institutional point of view , corporate governance create long term value creation to all shareholders and it act as an mediator of communication between the investors and the companies they own. (NYSE, 2014)

According to Guideline on Corporate governance Banks published by Banks for International Settlements (BASEL),

"Corporate governance determines the allocation of authority and responsibility by which the business and affairs of a bank are carried out by its board and senior management, including

- *to set the bank's strategy and objectives*

- *select and oversee personnel,*
- *operate the bank's business on a day-to-day basis,*
- *protect the interest of depositors, meet shareholder obligations, and take into account the interests of other recognized stakeholders ,*
- *align corporate culture , corporate activities and behavior with the expectation that the bank will operate in a safe and sound manner, with integrity and incompliance with applicable laws and regulations ".*

(Basel 2015 a)

2.2 Theories of Corporate Governance

There are a number of theories behind the corporate governance evolvement. Conventional corporate governance theories can be broadly classified into three and these are agency theory, stewardship theory and stakeholder theory (Sheila et.al, 2013). In the following subsections we will elaborate the contemporary theories of corporate governance.

2.2.1 *Agency theory*

Agency theory based upon the principal-agent agreement and relationship. In any corporation the owners and the managers have different organizational objectives, whereas owners seek the long term value creation and managers want to maximize their incentives. However, the relationship should be instrumentals in a rationale way to smooth running the organization. In this sense owners are considered as principal and managers are considered as agent. Alchian, A. & Demsetz, H. (1972), refers the relationship between owners and managers as "team productive process" where firm owner and managers work together with contractual arrangement. Jensen and Meckling (1976) briefly discussed about the agency cost that arises while separation of ownership and control. Fama (1980) emphasizes that the incentives for owners and managers are determined and resolved by market competition. If we consider the relationship between shareholders/common equity holders and Board of Directors, there also principal–agent relationship exists. Directors are appointed by the Shareholders to meet their expectation from the firms. In this case, the agency cost is directors' fees and other incentives received from the firm. In short, we can say that in agency theory principal delegates responsibility to the agent through mentoring and monitoring mechanism. Conflict or distrust arises because of opportunism of managers as behavioral theorists' advocates. Another reason for Principal-agent conflicts may be agents sometimes seem to be risk averse if their incentives will be lower than principal incentives. Mainly to avoid these two major conflicts in principal-agent relationship governance mechanism has developed.

Agency cost is main concern in agency theory. To minimize the agency cost, code of corporate practices developed and executive compensations are sometimes aligns with the firm's performance. Although it is difficult to judge the appropriate incentive package compatible to agents but in recent years in the United States and European firms are widely exercising the executive compensation package to control agent behavior. Conyon and Schwalbach (2000) found that there is positive relation between the executive pay and company performance in some UK and German companies. Although there is different governance model used in UK and Germany, but to solve the agency problem same executive compensation worked in both countries. On the other hand, Rashid (2015) found that, to some extent a firm's agency cost can be reduced by appointing independent directors in the board. Institutional investors who invest in the firm from their own perspectives can also reduce the agency problem by closely monitoring the firm's activities as they equip with professional experience and expertise.

2.2.2 *Transaction cost economics theory*

Transaction cost economics (TCE) theory views the firm as governance structure whereas agency theory views the firm as a nexus of contacts (Mallin, 2010). The work of Williamson (1984) largely contributed to the TCE theory. Hart (1995) argument also contributed the TCE theory further development. He also pointed out some limitation such as , *"the contract will have gaps and missing provisions - future actions will be specified only partly and in some cases not at all"*.

Williamson (1984) advocates that it is difficult to craft a governance structure for managers as they are more firm specific rather they should include in the board which helps board to take superior decision as there is less information gap. Hence the cost of information can be reduced. The control of managerial behavior in such case, firm can introduce two-tier board system (Williamson ,1984). TCE theory attempts to reconcile the bounded rationality and opportunism of managerial behavior in a more pragmatic way.

Comparing with TCE and agency theory, Solomon (2010) point out that *"transaction theory assumes people are often opportunistic, whereas agency theory discusses moral hazard and agency costs. Another difference is that, the unit of analysis in agency theory is the individual agent, whereas in transaction cost theory the unit of analysis is the transaction. However both theories attempt to tackle the same problem: how do we persuade company management to pursue shareholders interest and shareholders profit maximizations".*

2.2.3 *Stewardship theory*

Stewardship theory emphasizes on collectiveness to achieve the organizational goals. Stewardship theory was promoted by Donaldson and Davis as an alternative to agency theory (Mallin, 2010). Donaldson et al., (1991) refers CEO's role in the board as supportive to the governance and as a man of less opportunistic. Where the CEO and Board Chairman is same person in an organization, the agency conflict is not exist in the firm. Return to shareholders is improved by combining, rather than by separating the role of chair and CEO position (Donaldson et al.,1991). Stewardship theory emphasizes on behavioral aspects of manger rather than contractual arrangement or rationality to judge the managerial responsibility. Therefore the monetary benefit that the firm attains through stewardship theory is less monitoring cost or can minimize the transaction cost of decision making. Stewardship theory suggests motivating managers by offering fulfillment of psychological needs (Donaldson, 2008). Donaldson et al., (1997) mentioned that, the behavior of steward is collective and this collectivism is beneficial for both insider and outsider of the organization.

The reward in the stewardship theory based on intrinsic traits of managers such as how long they are dedicated with the achievement of mission statement of the organization. In fact there are broad ranges of difference between the agency approach and stewardship approaches of corporate control and incentives to managerial behavior.

2.2.4 *Stakeholder theory*

Stakeholder theory is considered as the concurrence of agency theory. Freeman (1984) considered as the pioneer of stakeholder theory. He further developed the theory in 1994. The separation thesis i.e. discourse of business from discourse of ethics is the major principles of stakeholder theory (Freeman, 1994). A group of parties that involve with firm directly or indirectly such as creditors, clients, governmental and local community group are considered as value creating factor in the governance and hence their participations in the governance is expected in stakeholder theory. Freeman and Mcvea (2001) refers five dimensions of stakeholder approach such as single strategic framework, strategic management process, survival/organizational objectives achievement, value based management and prescriptive process. However it depends on the preference of shareholders and stakeholders to choose a best-fit approach for their firm. The firm that strives to provide a sustainable value to its different stakeholders is best suited for stakeholder governance system in it's corporate board (Wheeler et al., 2004)

Jenson (2001) found that stakeholder theory of governance maximize the long-term value of the firm by combination of structure of stakeholder group in the board and to achieve the firms objectives. But it depends on how firm successfully manage its stakeholder value process. Carlon et al., (2014) advocates three steps to reap the harvest from stakeholder approach such as (a) negotiating identity of the firm (b) Creating value aligning with the identity (c) actual realization of the stakeholder value by firm. He also concludes that the purpose of corporate governance has been to maximize profits to shareholders perspective (Carlon and Downs , 2014). Bridoux et al. (2014) concluded from empirical analysis that "stakeholder theory proposes a positive relationship between the fairness towards stakeholders and firm performance" .

Therefore the stakeholder theory can be differentiated from the agency theory in such way that it combine all direct and indirect beneficiaries of the firm and capitalize their resources through stakeholder approach whereas agency theory only focus on the execution of contract between principal and agent.

From the above discussion the corporate governance theories can be summarized in the following table:

Table 2.2 Summary of corporate governance theories

Theory Name	Summary
Agency theory	According to agency theory there is principal-agent relationship between owners of the firm and management. Owners considered as principal and managers considered as agent. Governance structure is a tool to bridge between both parties.
Transaction cost economicstheory	Transaction cost economist theory assume that firms have own vision which is more than written in contract between owners and professional managers.
Stewardship theory	Stewardship theory suggests keeping trust on mangers as all managers are not opportunistic. It reflects the motivational spirit of managers.
Stakeholder theory	Stakeholder theory considers a broad range of parties involvement in the organization. The related parties interest also have to protect through governance structure.

2.3 Corporate governance framework

Governance framework depends on several factors. Such as: firm size, firm ownership nature, industry expectation, Stakeholder influences and state regulation (Figure 2.1). Details of corporate governance framework will be discussed in chapter three.

Firm size can be categorized by sales volume, number of subsidiaries, similarly firm ownership nature i.e. family-owned/State-owned. Shareholders dominated firm also have impact on governance structure. Some Industry like financial services are strongly required to follow the audit committee independence while manufacturing industry required more experts on related sector as an additional qualification for non-executive/independent director. Freeman (1984), has mentioned twelve (12) stakeholder groups for large organization Moreover, the country specific regulation has also strong influential power in governance framework. For example, there required minimum forty percent of each sex in the board room of any publicly held companies in Norway (Public Companies Act 2009) which quite different from the corporate governance guidelines 2012 in Bangladesh.

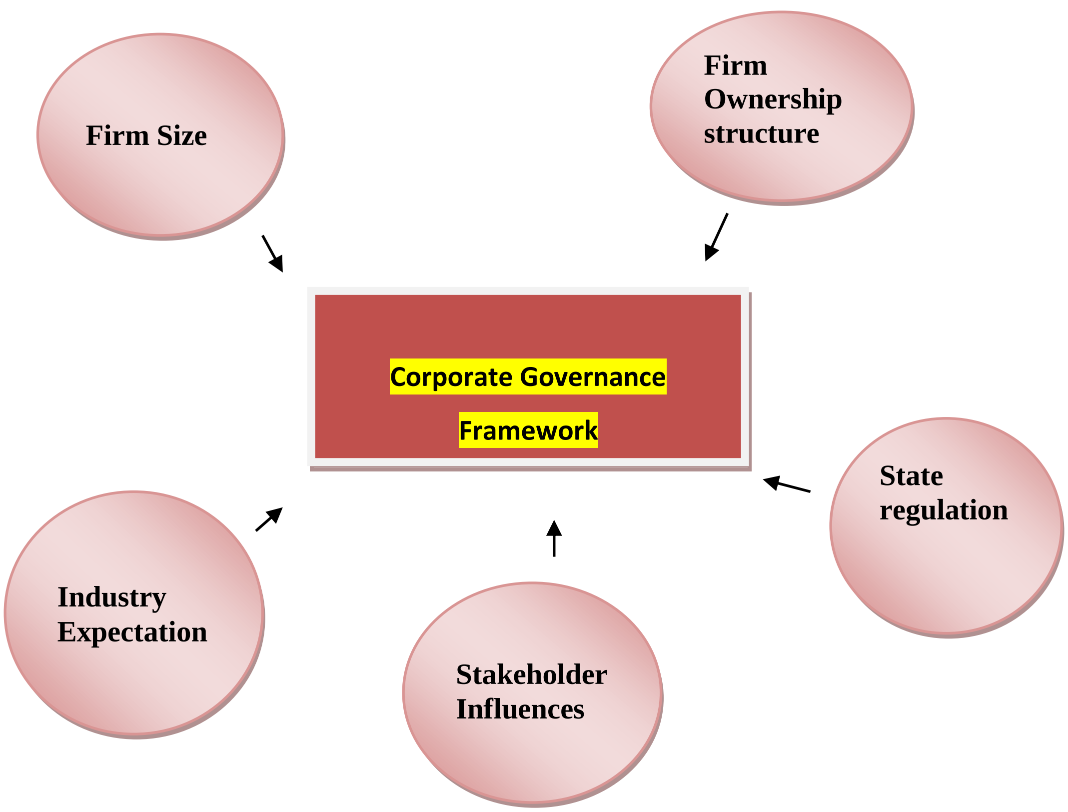

Figure: 2.1 Factors affecting corporate governance framework

2.4 What is financial institutions governance system?

The nature of business and organizational structure of Financial Institution is different from the manufacturing or other industries. More complexities than other industries and greater government regulation in banking system require special corporate governance practices in Banks (Levine, 2004). Macey et al., (2003) argued that directors of depository institutions should have legal obligation to consider the impact of their decisions on bank profitability, safety and soundness. Therefore the Board of director of the bank has an additional responsibility than other organizations. Bank governance is different from traditional non-financial governance system because of its Boards system, ownership and control, pay for performance, internal controls, reform proposals (Becht et al., 2011). Banks loans and deposit contract with the clients are different from other organization (Fama,1985).Severe requirements of bank regulation and bank supervision will spilling over from bank governance to firm governance (ECGI,2013).Quality information and market disclosure can mitigating the fundamental market failures and improving the corporate governance in the financial institutions (Mehran et al. 2012).According to Australian Prudential Regulatory Authority (ARPA), effective corporate governance in financial institutions should have three elements such as: 1) establishing governance arrangements, 2) architecture of governance and 3) supervisory review of governance by institutions (ARPA, 2005). Another distinguish features of financial institution is to manage the tradeoff between risk and return. Although there are well managed risk management oversight structure like, risk management committee (RMC), asset liability committee (ALCO), business risk committee (BRC) are exists in the banking organizational structure, the role of corporate governance is also play important role in bank risk management. Determination of risk appetite should be performed by Board of Directors which is the integral parts of choosing business strategies of banks (IFC, 2012). Risk governance and risk culture is a integral parts of financial institutions and corporate governance is a key cornerstone for risk transformation initiatives (Deloitte , 2016). Another empirical research conducted by Adams et al., (2003), has found that there is a systematic difference between governance in banking and manufacturing firms.

In the sub-section 2.3 and figure 2.1, we mention and discuss that corporate governance framework influenced by firm size, ownership structure, industry expectation, stakeholder influences and state regulation. But based on the discussion from this section, it is evident that corporate governance in banks is more complex than other industry’s one. Because banks are highly leveraged institutions and financial institutions are interrelated with each other. Therefore failure of any bank/some major banks might lead to bank run in the market and can collapsed whole financial system, which we found in 2007-2008 financial crisis. Moreover the directors in the financial institutions should have financial literacy and the relationship between the principal and agent has more dimensions in banking structure. For example there are rating agencies, central bank, who are playing a critical role in governing financial institutions. The bank governance system illustrated in the figure 2.2

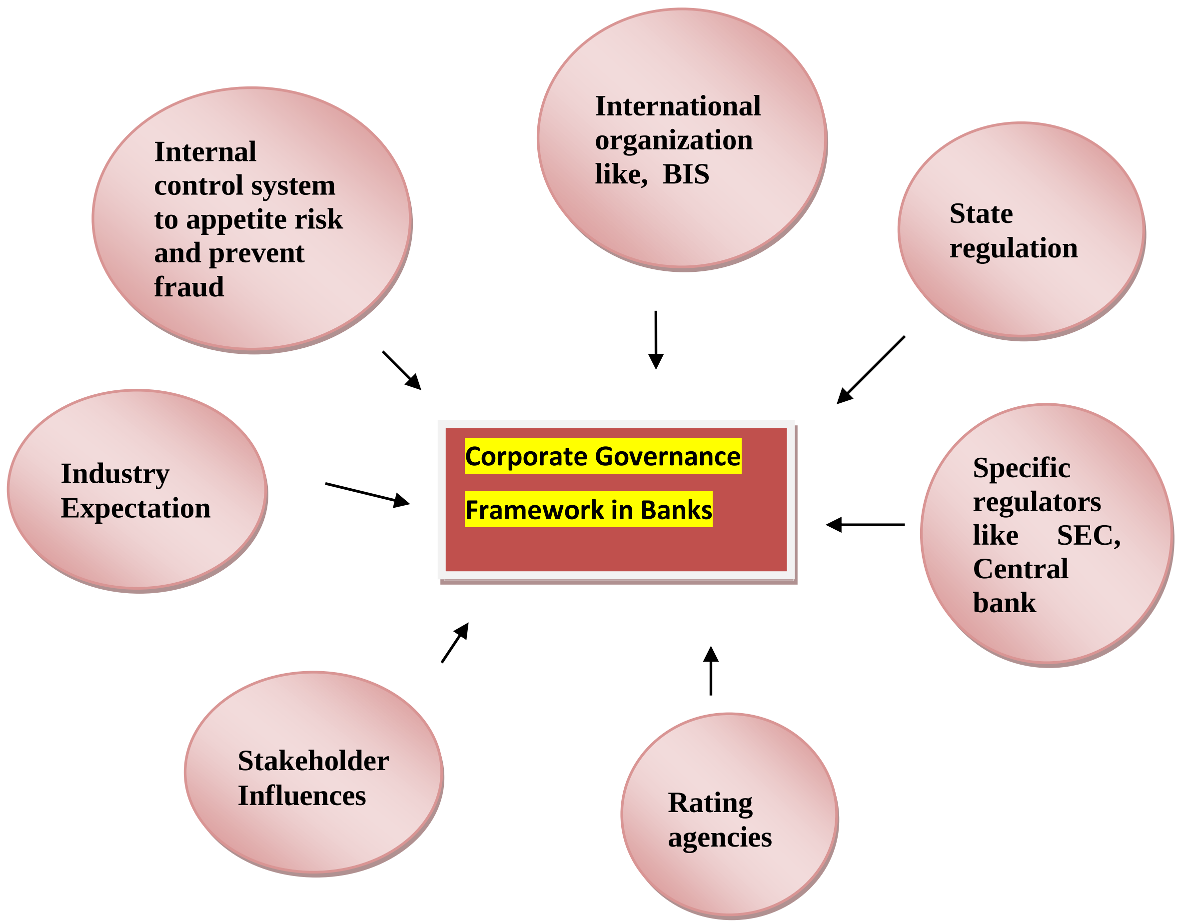

Figure: 2.2 Factors affecting corporate governance in banks

2.5 *What are the Performance measurement yardsticks for financial institutions?*

Financial institutions performance generally measured by return on assets (ROA), return on equity (ROE) and ratio of non- performing loan to total loan (NPL ratio). Return on equity (ROE) also a widely used parameter for measuring banking performance. Berger (1995),found that ROE is closely positively related with bank capital ratios, bank risk and regulatory policies. Capital ratios, liquidity ratios and interest rate positively related with financial institutions profitability (Bourke, 1989). ROA and ROE is widely used for measuring the profitability in banking sector and to determine the effect of bank specific and macro economic indicator on profitability (Ali et al., 2011). Ali et al. (2011) used ROA and ROE as basic ratio to analyses the profitability of Pakistan's commercial bank on economic indicator. Sayilgan & Yildirim, (2009) also take ROA and ROE as a determinate to explore the profitability of Turkey commercial bank for the period 2007-2011.

Vighneswara (2013) finds that large banks are able to maintain better asset quality due to their efficiency in credit management. He examines the hypothesis over Indian banking industry and found significant evidence in favor of the claim. Roman et al. (2012), also support the same in their empirical research over commercial banks on European member states. Nonperforming loan stagnant the banks' lending capabilities which ultimately lowering banks profitability and performance (Cucinnelli, 2015). According to Zhang et al. (2016), while analyzing the panel data of 81 Chinese banks found that NPL ratio can be useful indicator for measuring managerial risk taking behavior, design policy goals and crafting strategy to closely monitor the bank.

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Chapter Three - Evolution of Corporate Governance and Japan as a case analysis

In this chapter the evolution of corporate governance code will be discussed in the first section. Typical board roles and structure, appointment procedure and evaluation process will be discussed in the second, third and fourth section respectively. In fifth section of this chapter, Japanese financial and governance system will be discussed as a case analysis.

3.1 Evolution of Corporate Governance Code

Corporate governance code considered as vital parts of governance system of organization. Adoption of corporate governance code is considered as regulatory, normative and marginally cognitive pressures (Shahin, 2015). “The importance of ethical principles in corporate governance is based on the fact that financial innovation sacrifices business ethics by taking excessive risk for the sake of huge profits” (Soltani et al., 2015) . The need for corporate governance in banking industry seems as urgent after financial crisis 2007. Emerging economics should focus more on corporate laws to improve the corporate governance before financial supervision (Kim,2016). The evolution of corporate governance in United States , United Kingdom and Europe arises from the separation of corporate ownership from corporate control which is associated with agency problem (Mallin, 2010). Practicing corporate governance code has good impact on firm’s earning as well as ensuring transparency in the organization. Empirical research conducted by

Geis(2016), Aras (2015), Okaro et al., (2015), Haji (2014), Chen et al., (2014), support the statement. The table 3.1 shows the countries timelines of adopting corporate governance code

Table 3.1 Time line for adopting first corporate governance guidelines

Year	List of countries : first code of practice									
1992	UK									
1993										
1994	Canada	South Africa								
1995	Australia	France								
1996	Spain									
1997	Japan	The Netherlands	USA							
1998	Belgium	Germany	India	Itlay	Thailand					
1999	Brazil	Greece	Hongkong	Ireland	Mexico	Portugal	South Korea	OECD ICGN	Commonwealth	
2000	Denmark	Indonesia	Malaysia	Romania	The Philippines					
2001	China	Czech Republic	Malta	Peru	Singapore	Sweden	Uganda			
2002	Austria	Cyprus	Hungary	Kenya	Pakistan	Poland	Russia	Solvokia	Switzerland	Taiwan
2003	Finland	Lithunia	Oman	New Zealand	Turkey	Ukarine				
2004	Argentina	Bangaldesh	Iceland	Norway	Slovenia	OECD				
2005	Jamaica	Latvia								
2006	Egypt	Estonia	Lebanon	Luxembourg	Israel	Macedonia	Nigeria	Sri Lanka	Saudi Arabia	United Nations
2007	Bulgaira	Kazakhstan	Republic of Maldives	United Arab Emirates						
2008	Albania	Morocco	Tunisia	Qatar	Serbia	Slovakia				
2009	Algeria	Georgia								
2010	Armenia	Bahrain	Baltic States	Croatia	EBRD	Ghana	Malawi	Yemen		
2011	Azerbaijan	Bosnia and Herzegovina	Guernsey	Guernsey						
2012	Bulgaria									
2013	Barbados									

(Source: European Corporate Governance Institute)

Asian financial crisis 1997 play an alarming call to the major Asian economics and most countries developed corporate governance guidelines, enacted required laws and regulations and has tailored their corporate governance code in line with OECD principles.

3.2 Board of Directors role and it's Structure

3.2.1 Role of Board: The board has the power to hire and oversee the top management for protecting the shareholders interest (Lightly et al., 2015). The role of board of directors in the company is to gain a strategic positioning in the competitive market (Nicholic et al., 2011). Hanbrick et al., (2015), Aiello et al., (2012), Zhu et al., (2014) has also support the board role as an strategic management point of view. The Carver model of policy governance is more precisely describe board responsibility as a mechanism for core value creation of the firm. The Carver model of governance principles has 10 basic rules (Koeing ,2012). According to Epstein and Roy (2006), the board must achieve three core objectives of the firm:

i) provide superior strategic guidance to the management to ensure company's sustainable growth;

ii) ensure accountability of the company to all of its stakeholders;

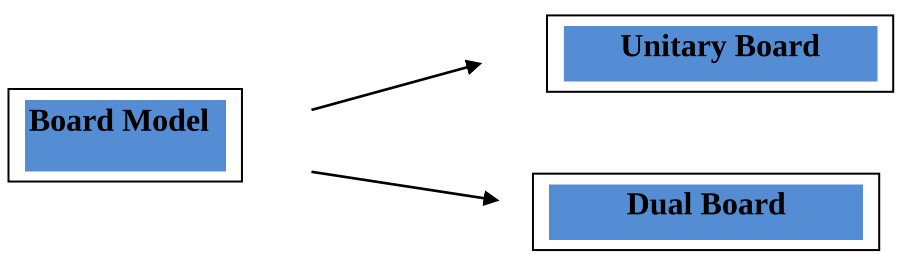
iii) ensure a high quality executive teams in managing the company.

(Adapted by Mallin, 2010)

Therefore, the board role in the corporate governance is to create value for the firm than just mentoring and monitoring the managers' activities.

3.2.2 Board Model: Board model may differ from countries to countries. Board model can be classified in to two broad categories such as unitary and dual board (figure 3.1). Unitary board is a single board system comprised with shareholder directors and non-shareholders such as executive director, independent director, depositor director and director from others stakeholders. In the United States and the UK , Canada and Australia, most of the companies follow the unitary board system. On the other hand, dual board has two layers: one is called *supervisory board* another is *executive board*. Supervisory board members are elected by shareholder and formulate the strategy for business. Executive board members comprised with the top management and they run the business. In Europe the dual board system is preferred by the corporations.

Figure 3.1 : Board model



3.2.3 Sub-committees of Board

In a board there are several sub committees such as executive committee, audit committee, remuneration committee, nomination committee, risk committee, ethics committee. The members and term of reference (ToR) of each committee are fixed by the board of directors. The relationship between board of directors and each committee is shown below in the figure 3.2 :

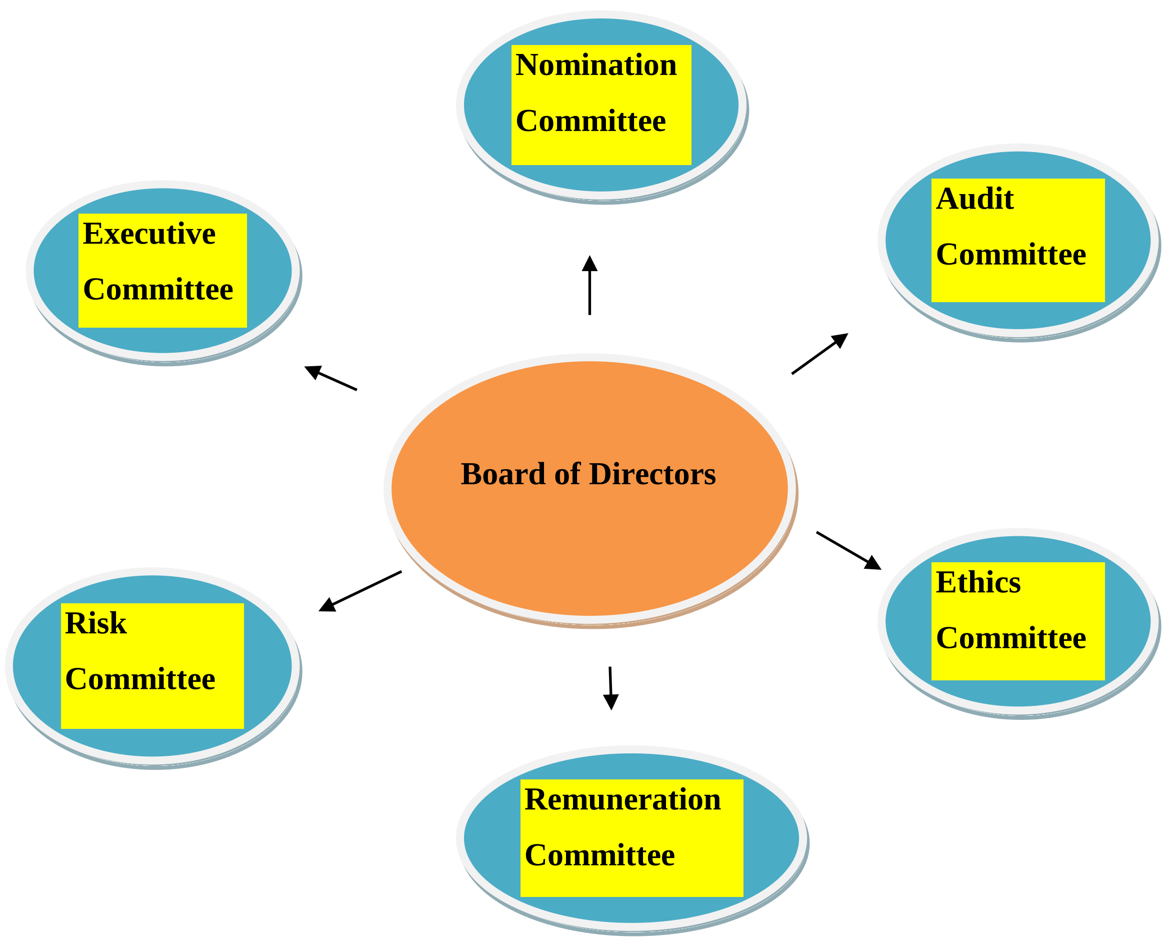


Figure 3.2 : Board of director and its various committees

The prime objective of executive committee is to take decision as business and operation level. To review the scope and outcome of internal and external audit is the main objectives of audit committee. According to The Institute of Internal Auditors (IAA) of United States , the responsibility of audit committee includes:

i) Ensure the integrity of the financial statement of the company
ii) Comply legal and regulatory requirement of the company
iii) Ensure independent external auditors qualifications and independence
iv) Ensure a vibrant internal audit function

(IAA, 2014)

The main responsibility of risk committee is to identify the potential risk arises from business operation and to formulate required policies to tackle those risks. In some countries like The UK, Australia has nomination committee which role is to pick the suitable candidate for director (in case of independent director), prepare succession plan for the company and also to evaluate the performance of the sitting board members. Remuneration committee works on the term of reference of CEO, CEO's compensation package, executive compensation system and pension system of the company. Ethics committee's objectives are to ensure the stop of breach of perceived good governance, shareholders right, fraud and any unethical practices inside the organization.

3.3 Background and objectives of Basel regulation

Basel committee was formed in 1974 by governors of G10 countries as a result of financial turmoil that occurred in 1973 after breakdown of Bretton Wood System (Basel 2015 b). The necessity of introducing a homogeneous capital rule for all internationally active banks was raised by the Basel committee in early 1980s, when the Latin American debt crisis hits world economy. G10 countries central banks governors were agreed to consider weighted approach to measure the banks on and off balance sheet risk (Basel 2015 b). Basel accord was established with two fundamental objectives:

1) *to strengthen the soundness and stability of international banking system , and*
2) *to bring high degree of consistency to banks in different countries.*

Through the accord, it was hoped that banks creditors' interest would be protected even bank fails and it also create disincentives for taking excessive risk by banks. Additionally, it removes the inequality arises from differences in capital requirement followed by each countries i.e. it create an international level playing field for all internationally active banks. In 1988, the first Basel accord I was approved by G10 governors and decided to maintain minimum capital ratio 8% (capital to risk weighted assets). In 1993, Basel committee has confirmed that all G10 countries implement the Basel-I accord for international banking business and later on almost 100 countries have adopted Basel-I within 1998. According to Jacobo (2003), there were three major shortcoming of Basel-I accord which includes:

A) Risk categories and risk weight were not linked with default rate. All assets in one category were considered as same risky.

B) Flawed risk assessment methodologies which assumes that a portfolio's total risk is equal to the sum of the risks of the individual assets in the portfolio.

C) It gives preferential treatment to government securities which mean that banks need not hold any capital against those securities.

The Asian crisis in 1997-98, Sovereign default of Russia in 1998 has pointed out the limitations of Basel-I accord more practically. To respond the limitations of Basel-I accord, in 1998 Basel committee issued a new proposal for capital adequacy framework which known as Basel II accord. In 2004, the committee has released revised capital framework under Basel II accord. In this framework the followings were incorporated

1) *Raised the minimum capital from 8 % to 10%*
2) *Supervisory review process introduced for which banks have to maintain additional capital.*
3) *Effective Market disclosure for market discipline and sound banking practices.*

However, the Lehman shock in 2008 has again pointed out to strengthen the capital base , need to review the Basel II accord and it was found that banking sector's has taken too much leverage and inadequate liquidity which leads to global financial crisis. In 2010, Basel III was set out by Basel committee and G20 leaders have emphasis to introduce Basel III in 2013 and fully implemented by 2017 . The major features of Basel III are:

1) *Enhance the quality of capital and specify the minimum common equity capital and Tier- 1 capital.*
2) *Need to maintain 2.5% capital conservation buffers.*
3) *Introduce Liquidity coverage ratio (LCR) and Net stable funding ratio (NSFR) to combat against liquidity crisis and funding mismatch respectively.*

3.4 Financial and governance system of Japan as a case analysis

3.4.1. What is financial system:

Financial system is considered as economic life line of economic growth. De Gregorio & Guidotti (1995), Levine & Zervos (1996), Ahmed & Ansari (1998), Adjasi & Biekpe (2006), Hassan et al., (2011), Adu et al.,(2013), Nyashaand Nicholas (2016) support the statement. According to Berglof (1990), financial systems can be two types such as :

i) *Anglo American security based system*

ii) *Bank based system.*

Anglo American security based system mainly concentrates on capital market. An efficient securities market is a prerequisite for this type of financial system. Most of the corporate finance is collected from the capital market through issuing stocks, corporate bond, and other capital market product. United States financial system is a good example for security based banking system. In contrast, *bank based system* is focused on credit provides by banks to firms for their long term and short term finance. Capital market role is limited in this system. Here, banks are closely monitor firms' activities through its various mechanisms. Japanese traditional banking system can be cited for bank based system.

3.4.2 Main bank system of Japan :

Main bank system is the unique beauty of Japanese financial system. Three stages corporate monitoring system such as ex ante, interim and ex post are delegated to the main bank of firm (Aoki, 1994). Suzuki (2011) states that, to act *as financial intermediary*, main bank system used indirect finance mode for corporate finance, creating incentive for monitoring and long run relationship with clients and *for financial stability* it used three mechanism such as protection mechanism, sanction mechanism and sharing information with regulators. Based on Patrick (1983) , Kato (1957) and Teranishi (1990) analysis, Aoki (1994), has labeled the evolution of main bank system in to five phases such as *i) 1870s-1910s*

ii) 1810s-1927s

iii) 1927s- 1950s

iv) 1951s-1975s (Hey days of main bank system)

v) 1975-till

3.4.3 Impact of Basel accord in Japanese banking system

To comply the Basel-I accord all Japanese banks that having overseas branch were required to kept 8% capital ratio, whereas the banks having only domestic branches required to maintain 4% capital ratio. All the banks in Japan were given five years to adjust the Basel accord that force into effect from 1992. However, implementation of Basel accord in 1992 has considered as one of the key reason for Japanese prolonged financial stagnant. The implementation of Basel accord was a badly planned transition of monitoring framework based on Anglo American and Basel model (Suzuki, 2011). Actually implementation of Basel accord in Japan was so hurry to respond the international community's concern especially from United States in the name of creating level playing field. As a result the domestic banks have to limit their lending and the firms get fewer loans from the banks. Ultimately the firms produce less and consumers reduce their consumption and which turned into decline of GDP. Peek and Rosengren (1993) found that regulatory enforcement actions such as Basel shrinkage the bank loans to the economic sectors. Risk based capital requirement associated with Japanese stock market decline (Peek and Rosengren (1997). Basel-I accord implementation has decline the credit supply in the Japanese market (Honda, 2002) . Ito and Sasaki (2002) conducted empirical studies on 87 major Japanese banks credit behavior from the period 1990-1993 and found that bank with lower capital ratio tend to issue subordinate debt and credit growth was curtailed. City banks and trust banks lending behavior also affected by Basel accord (Ito and Sasaki, 2002). Horiuchi et al., (1998) also conducted empirical studies on major 21 Japanese banks for the period 1990 to 1996 and conclude that Japanese major banks issued subordinate debt to tackle the Basel accord requirement. Montgomery (2005) stated that the Basel accord implementation in Japan tends the bank's portfolio from highly risk weighted assets such as corporate loans into un-weighted low return based assets such as government bond.

Therefore, it is evident that Basel accord implementation in Japan has created some problem in the domestic credit market although it brings internationalization of Japanese banks. In the next chapter we will discussed this issue in the context of Bangladesh as Bangladesh has also implement Basel I and Basel II in 1998 and 2009 respectively.

3.4.4 Transformation in the corporate governance of Japan

The main institutional features of corporate governance in Japan can be described in three broad pillars such corporate ownership and finance , employment and industrial relation , board of directors (Aoki et al., 2007). The figure 3.4 illustrates the traditional corporate governance system in Japan .

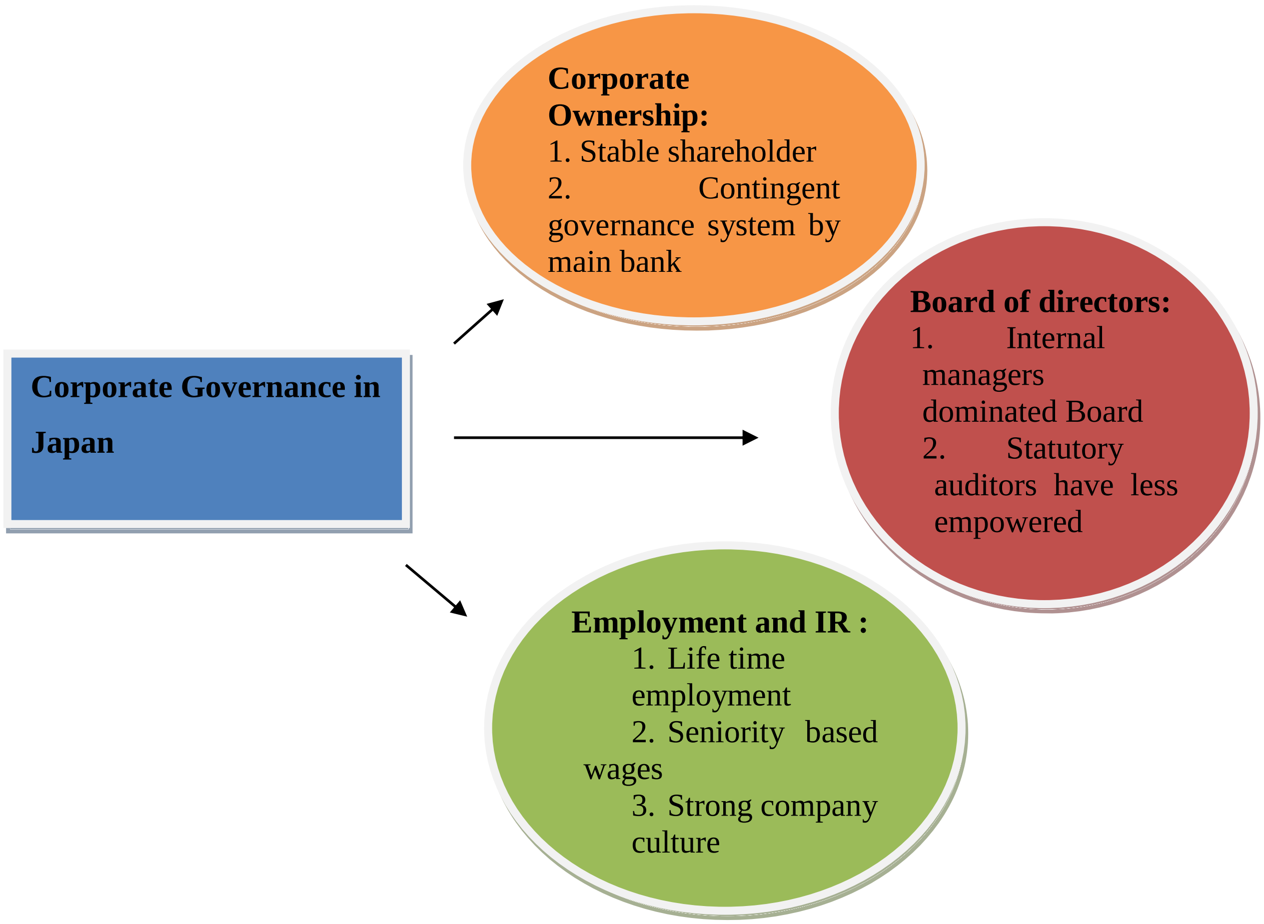


Figure 3.3 Features of Corporate Governance in Japan

(Source: Adopted from Aoki et al., 2007)

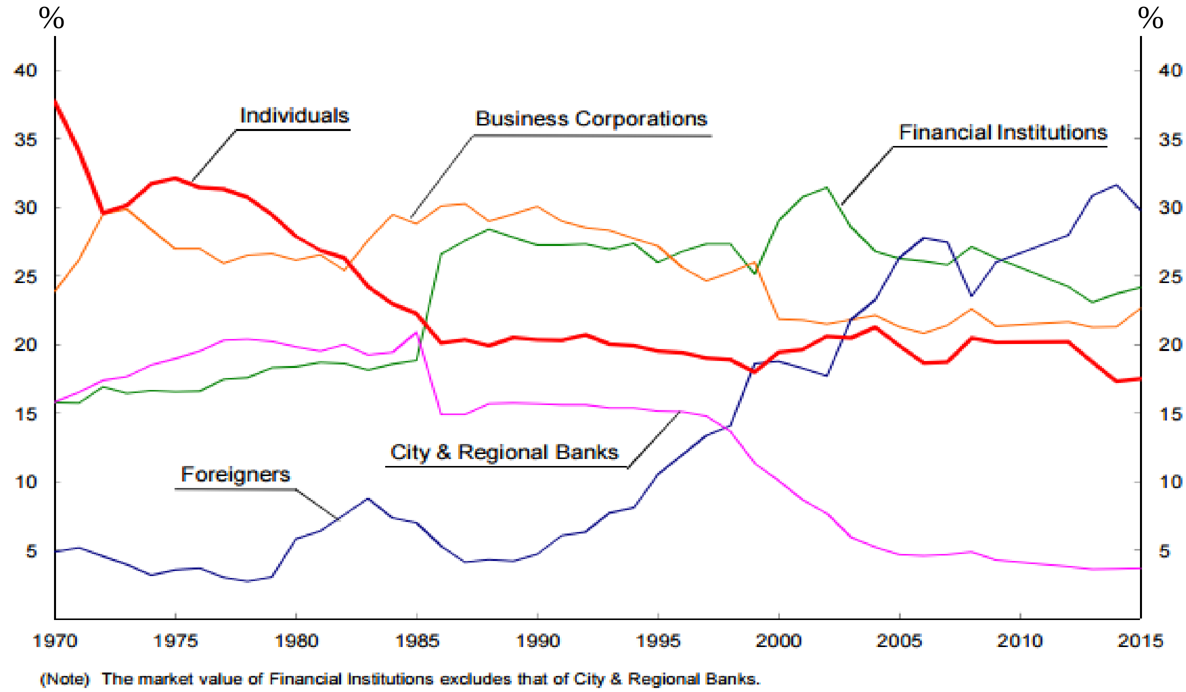
However after the Olympus scandal in 2011, the voice for reform in governance system got more popularity and finally Japan introduced new corporate governance code in 2015. However the changing process started from the mid-1990s. Box 4.2 shows the milestones for legal changes of corporate governance in Japan.

Box 3.1 Legal changes in Japanese Corporate governance system

Year	Nature of change	Significance
1993	Commercial code	Induction of outside director has approved
1994	Commercial code	Remove the prohibition on the purchase of own company's share
1997	Commercial code	Change the share buyback system
1999	Commercial code	Introduce share swap system in inter-company
2002	Commercial code	Introduce committee system for major corporations.
2003	Accounting standard	Introduce asset-impairment accounting
2006	Corporate law (Company Act)	Adopted the revised corporate law to bring diversification in the governance structure
2013	National Policy	Japan revitalization Strategy adopt by Cabinet
2014	Corporate governance code	Adopt "Japan's Stewardship code"
2015	Corporate governance code	Adopt "Japan's Corporate Governance code"
	Corporate law (Company Act)	Adopted revised company act that incorporating the new corporate governance system.

The impact of changes in corporate governance has reflected on the ownership structure of Tokyo stock exchange securities. A significant change in the institutional investors in shareowners and foreigners invest more on the Tokyo stock exchange which reflects that the confidence on market has gradually increased over last fifteen years. Figure 3.4 shows the percentage of shareowners category form 1970 to 2015.

Figure : 3.4 Distribution percentage of market value owned by type of shareholders



(Source: 2015 Shareowners survey , Tokyo Stock Exchange), (http://www.jpx.co.jp/english/markets/statistics-equities/examination/01.html)

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Chapter Four - Overview of Bangladesh Banking Industry, governance System and Basel Accord

4.1 Overview of Banking Industry in Bangladesh

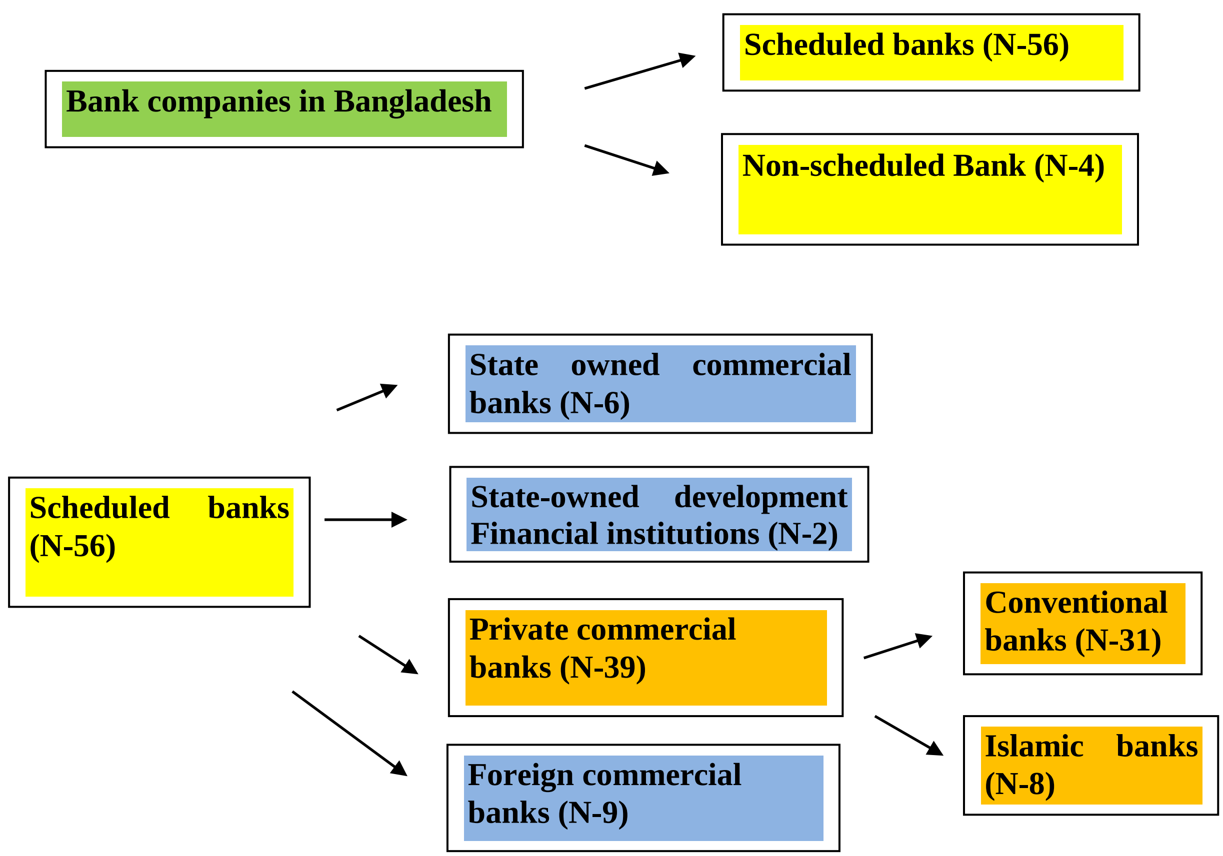
Bangladesh banking industry has restarted in January 1972 just after independence from Pakistan in December, 1971. In 1972 all the commercial banks were nationalized to ensure the economic development in all regions of the country and to collect the domestic savings from rural areas. In 1980s the country has opened the banking industry to private entrepreneurs. Some state-owned banks were denationalized and some new banks get license to start banking business in this period. Now 39 private commercial banks are operated in Bangladesh. Bangladesh bank has classified total banks of the country into two broad types; one is scheduled bank, that gets license from the Bangladesh Bank and operated under Bank companies act. Another is nonscheduled bank which established through special acts to serve some specific purposes. There are 56 scheduled banks and 4 non-scheduled banks in Bangladesh. Scheduled banks can also be classified into four basic categories. Classification of Private commercial banks as per generation wise are shown in table 4.1, whereas in figure 4.1 shows the function wise classification of banks in Bangladesh.

Table 4.1 Generation wise classification of private commercial banks in Bangladesh

Bank Categories as per generation	**Year of operation/ denationalization**	**Number of banks**
1st generation	1982-1987	9
2nd generation	1995-1999	18
3rd generation	2001	3
4rth generation	2013	9
Total		**39**

Figure 4.1 Classification of Banks (function -wise)

(N= Number of banks)



The performance of the banking industry for the year 2015 is presented in the table 4.2

Table 4.2 Bangladesh banking performance (2015)

Bank types	*No. of banks*	*No. of branches*	*% of Total assets*	*% of Total deposit*	*ROA*	*ROE*	*NPL ratios*
SCBs	5	3,690	27.5	28.28	-0.6	-13.30	21.9
DFIs	3	1,406	3.7	2.92	-1.2	-5.8	23.2
PCBs	*39*	*4,226*	*63.5*	*64.44*	*1.0*	*10.8*	*4.8*
FCBs	9	75	5.5	4.36	2.9	15.7	7.8
Total	**56**	**9,397**	**100**	**100**	**1.27**	**10.5**	**8.8**

(Source: Bangladesh Bank , 2015)

The central bank operated under Bangladesh Bank order 1972 (amended in 2003) and all scheduled banks are regulated through banking companies act 1991 (amended in 2013) . Various reform projects were implemented to enhance the supervisory and regulatory capacity of central bank. Right now two World Bank projects are active in Bangladesh, namely “Financial Sector Support Project” and “Modernization of State-owned Financial Institutions Project” for strengthening central bank and state-owned commercial banks respectively. On the other hand, the activities of private commercial banks are directly monitored and supervised by central bank and all state-owned banks are monitored jointly by ministry of finance and central bank.

4.2 Overview of Corporate Governance system in banking industry of Bangladesh

After capital market collapsed in Bangladesh in 1996, there was massive concern about market discipline and the roles of BSEC in the capital market. Several committees were formed to investigate the market crash and development of capital market in Bangladesh. It was believed that most of the sponsor directors were involved in market manipulation and SEC has failed to monitor and control this malpractice. Although the government did not disclose the findings to the public, several criminal cases were filed against various companies' directors. Policy reform and formulation can improve the efficiency and reliability in the market (Alam et al., 2011). The journey of corporate governance was started in early 2000s in Bangladesh. In 2004, Bangladesh Enterprise Institute (BEI) published the governance code. But as this institute has no regulatory authority, there is no obligation to the listed companies to comply the BEI code. Subsequently BSEC has issued the first governance code in 2006. This was the first step to regularize the listed companies' corporate governance system in "comply or explain basis". In 2011, unfortunately again Dhaka Stock Exchange general index (DGEN) fall sharply to 7118 on January 11, 2011 from 8912 on December 05, 2010 (figure 4.2) and thousands of investors lost their initial investment within one month. After continuous protestation from various stakeholders of the market, BSEC again revised the corporate governance code and made it as "comply" basis. The evolution of corporate governance in Bangladesh is shown in table 4.3

Figure 4.2 Dhaka Stock Exchange general index (DGEN) from 2006-2012

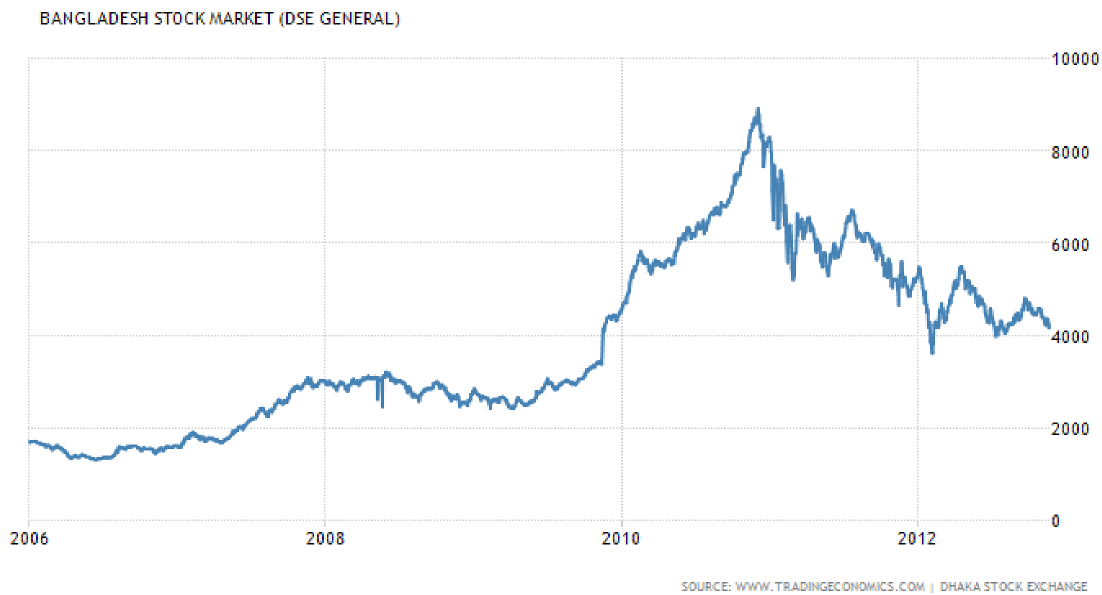


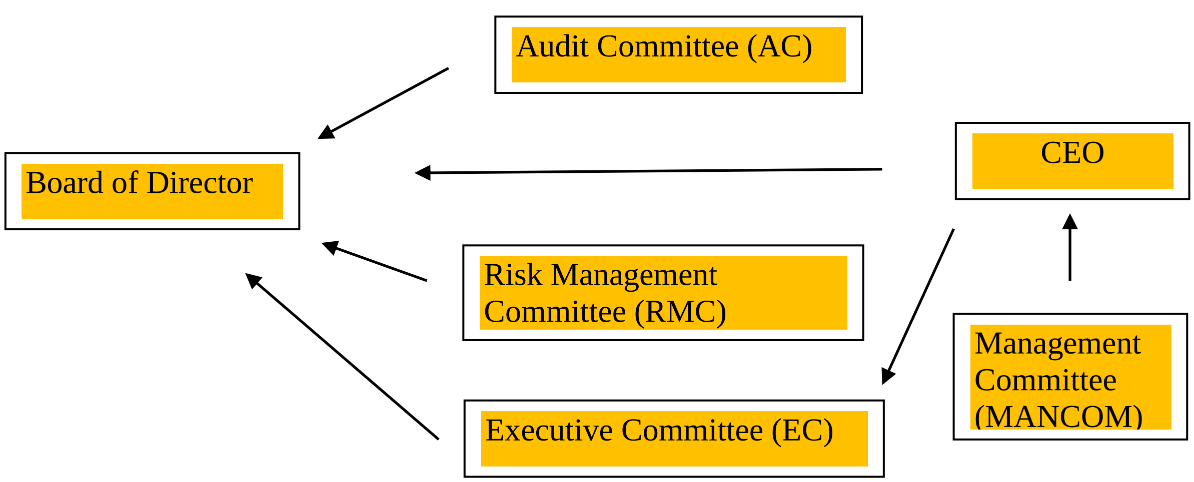
Table 4.3 Timeline of evolution of corporate governance in Bangladesh

1996	First capital market scam in Bangladesh
2004	BEI first published governance code
2006	BSEC introduced governance code for all listed companies as “comply or explain” basis.
2010	Bangladesh Bank issued new guidelines for banking company’s board of directors and other related governance issues.
2011	Massive market crash in Dhaka Stock Exchange
2012	BSEC revised governance code for all listed companies and mentioned it as “comply” basis.
2012	Bangladesh Bank revised the guidelines for board of directors and other governance issues.
2013	Banking companies act 1991 was amended in line with governance code

4.3 Corporate Governance framework of banking industry in Bangladesh

All the banking companies in Bangladesh have unitary board and all the private commercial banks (except fourth generation banks) are listed in the bourses. Boards of directors are elected in the annual general meeting by the shareholders for three years term. As the institutional investors are not dominating in banking securities, their representation in the board is also very low. In this research we found that average 40% of banking companies' shares is concentrated with sponsor directors (annexure Table A3) and hence it is very difficult to elect a director from the general shareholders group. The governance practice and decision making procedure are almost same in all private banks. The figure 4.3 shows the corporate governance structure of the banking industry of Bangladesh.

Figure 4.3 Corporate governance framework of banking industry in Bangladesh



It is shown in the figure 4.3 that, the three sub-committees (AC, RMC and EC) and CEO are directed by Board of directors. MANCOM consists with top executives of the banks which run operational activities and it leads with CEO.

As mentioned earlier in this study that, there are two regulatory bodies such as BSEC and Bangladesh Bank for corporate governance issues in banking industry. Therefore, based on the corporate governance guidelines (2012), Bank companies act (1991) and other different directives issued by BSEC and Bangladesh bank up to November 2016, the key features of corporate governance of banking industry of Bangladesh are summarized in the table 4.3.

Table 4.4 Key features of corporate governance in the banking industry of Bangladesh.

Sl. no	Governance attributes	Benchmark
1	Board's size	5-20
2	Minimum shareholding required to be an director	2%
3	Maximum number of director from a family	02
4	Number of independent directors (ID)	At least 20% of board size
5	Tenure for director	Can be consecutive for 2 terms (3 years each term)
6	Number of board's sub-committee allowed	3 (AC, RMC, EC)
7	Maximum member in Audit Committee (AC)	5 (at least 2 ID and the chairman of AC must be an ID)
8	CEO duality	Not allowed

9	CEO bonus	Cash (maximum 1 million BDT), no stock options will be allowed.
10	Termination of director and CEO	Executed by Central bank , if deemed necessary
11	Disclosure of compliance	Mandatory in the annual report.
12	Compliance certificate of corporate governance	Mandatory by professional Secretaries/Accountants

4.4 *Implementation of Basel accord in Bangladesh:*

The financial system in Bangladesh is bank based and its capital market is not well developed. Hence indirect finance mode is dominated for corporate finance and the banks have collected the household savings through countrywide branch network. In 1996, Basel accord was first introduced in Bangladesh (Bangladesh Bank, 2002). Bangladesh bank has increased the capital adequacy ratio requirement from 8% to 9% in the year 2003. In 2005, the country has started its journey towards Basel II and from January 2010 it fully implemented the Basel II accord. Subsequently in 2015 it started the implementation of Basel III accord and full implementation of Basel III is scheduled to be completed on January 2019. Bangladesh banking industry uses standardized approach to compute the risk weighted assets .There is few empirical research were conducted on Basel implementation effect in Bangladesh. Kabir (2009) found that the risk taking behavior of banks in South Asian countries were constrained by Basel accord. Ahmed et al., (2015) conducted research for five years data (2008-2012) on 25 commercial banks in Bangladesh and found that capital adequacy ratios have positive impact on bank profitability. However the small and medium enterprises (SMEs) in Bangladesh have a negative impact on Basel accord. As SMEs portfolio is high risk weighted, banks have less intent to finance in SMEs. But country's Small and Medium enterprises contributes about to 40% of manufacturing output of the country and 25% to national GDP and about 70-80% of non –agricultural work forces are engaged in 7.2 million firms in 2013 (ADB, 2014). Existing credit rating system in Bangladesh also hinders SMEs to get bank loan (Chowdhury et al., 2013). SME finance may massively affected by strict lending requirement (ESBG, 2014). High cost of finance is a constraint for Bangladesh to gear up growth and SME access to credit is still limited (ADB, 2016). There are eight different refinance scheme facilities were implemented for banks and NBFIs by BB and different development partners (DP) in recent years (Bangladesh Bank 2014-15). The refinance scheme has subsidized all commercial banks SME portfolios which presented in the table 4.5.

Table 4.5: SME refinance schemes for bank in Bangladesh

			Refinance up to December 2014		
Name of the Fund	Budget/Fund (All funds are Revolving)		Amount of Refinance (Tk million)	No of Enterprises	Remarks
BB Fund	Tk6,000 millon	General	12,218	12,692	Ongoing
		Women entrepreneur	9,573	11,008	
	Sub total		21,791	23,700	
EGBMP Fund (IDA Fund)	Tk1,160 million		3,126	3,160	Closed
ADB -1 Fund	Tk2,020 million	General	3,185	3,134	Closed
		Women entrepreneur	165	130	
	Sub total		3,349	3,264	
ADB -2 Fund	Tk7,000 million	General	7,176	13,192	Closed
		Women entrepreneur	293	453	
	Sub total		7,469	13,645	
JICA Fund	Tk4,150 million		2,777	381	Ongoing
Grand Total			38,512	44,150	

ADB = Asian Development Bank, BB = Bangladesh Bank, EGBMP = Enterprise Growth and Bank Management Project, IDA = International Development Association, JICA = Japan International Cooperation Agency, SME = small and medium-sized enterprise.

(Source: ADB, 2014)

The impact of Basel transition on Japan’s national economy has already discussed in chapter three of this research and it was found that Basel accord hindered Japan’s growth. From the above Bangladesh context analysis, we can conclude that although Basel accord brings financial stability in the banking industry of Bangladesh but it hinders the SME growth in Bangladesh to some extent.

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Chapter Five: Methodology

5.1 Research Approach

The purpose of the research is to identify the relationship between the corporate governance and commercial bank performance. The purpose of the study is also to analysis the corporate governance guidelines 2012 that is effective now in Bangladesh. To obtain a true picture of the banking sector performance, we consider Return on Assets (ROA), Return on Equity (ROE), Non- performing loan (NPL), and Cost of fund (COF) as performance measurement yardstick. On the other hand this research consider some key parameters from the corporate governance guideline such as the number of board members, audit committee size, the ratio of independent directors in both board and audit committee . Bangladesh is a developing country and its economy mainly based on readymade garments (RMG) and remittance from Non- resident Bangladeshi (NRB). Therefore, we consider five well recognized economic indicators like consumer price index (CPI), broad money growth rate , risk premium on lending rate, gross domestic product (GDP) growth rate and personal remittance on GDP in the regression line to check the model's viability in economic fluctuation of the country. In this research we conducted quantitative analysis of the sample data and while interpreting the result of the analysis we use traditional statistical interpretation.

5.2 Data set and sample size

The data relevant to performance yardstick and corporate governance variables are taken from the annual reports from the year 2010 to 2015. Disclosure of corporate governance compliance and the key financial ratios in annual report are mandatory for all banking companies in Bangladesh and those must be certified by Professional Chartered Secretaries and Professional Accountants respectively. Therefore the information is duly certified and authenticated. There are 39 private commercial banks operated in Bangladesh. Out of them nine (09) banks has started its operation in 2013. As we consider the data base of the sample banks for the year 2010 to 2015, hence, these nine banks are excluded from the sample size. Total 21 banks data are included in the sample size which is shown in the table 5.1. The final sample set consists of 126 observations for 21 banks over six years. All the economic indicators dataset of Bangladesh economy was retrieved from the World Bank data base (http://data.worldbank.org/country/bangladesh).

Table 5.1 Population and sample size distribution

Bank Categories as per generation	**Population**	**Sample size**	**Sample represents the % of population**	**% of total sample**
1st generation	9	6	66%	28.57%
2nd generation	18	12	66%	57.15%
3rd generation	3	3	100%	14.28%
4rth generation *	9	-	-	-
Total	39	21	54%	100%

*4rth generation banks have started its operation at the end of 2013

5.3 Definition of Variables:

The dependent and independent variables used in this research are largely recognized by contemporary literatures. This will helps to understand the prior empirical research findings and this research findings as well. In this study four variables are considered as dependent variables (i.e. return on assets, return on equity, percentage of nonperforming loans to total loans and cost of fund) whereas the independent variables includes board size, audit committee size, ratio of independent director to total board size, ratio of independent director to audit committee size, percentage of sponsor directors shareholding to total shareholding position of the bank, CPI, broad money growth rate, risk premium for lending , GDP growth rate and the percentage of personal remittance on country's GDP . We do not consider any control variables in the model as every bank have to follow the corporate governance guidelines and the sample banks have similarities in size of assets and age of maturity. Definition of the variables are listed in the table 5.2

Table 5.2 Definition of variables

Variables	Definitions
Dependent variables :	
Return on Assets (ROA_{it})	Ratio of net profit after tax to total asset .
Return on Equity (ROE_{it})	Ratio of net profit after tax to total equity capital.
Ratio of NPL loan to total loan (NPL_{it})	Percentage of nonperforming loan to total loan and advances

Cost of fund (COF_{it})	Ratio of total cost of deposit (including administrative expenses) to total weighted average deposit*
Independent variables:	
Board Size(BS_{it})	Log of bank's board size. Board size determines the number of directors in bank's board.
Audit committee size (AS_{it})	Log of bank's audit committee size. Audit committee size determines the number of member in bank's audit committee.
Ratio of independent director on the board(IB_{it})	A percentage of independent director to total number of directors in the board
Ratio of independent director on audit committee(IA_{it})	A percentage of independent director to total number of directors in the audit committee
Ratio of sponsor director shareholdings in the bank(SS_{it})	Ratio of share owned by sponsor director to total outstanding common stocks.
Consumer price index (CPI_{it})	CPI refers the price level change in consumers good and services consumed by household and it reflects the inflation or deflation effects on goods and services
Broad money growth rate (BM_{it})	Money supply (M2, M3, M4) growth rate in the economy
Risk premium on lending rate	The interest rate that obtains after deducting the

(RP_{it})	treasury bills rate from lending rate.
Growth rate of gross domestic product (GDP_{it})	Annual growth rate of GDP of the country
Percentage of personal remittance on GDP (PR_{it})	Proportion of Personal remittance received on GDP

* *While computation of cost of fund banks have to follow the guidelines of Bangladesh Bank. According to BB guideline "cost of deposit" include the interest rate of deposit, administrative cost, cost of capital whereas the "total weighted average deposit" computed after assigning the weight on each deposit product as per maturity.*

5.4 *Research* model

This research use panel data methodology because of sample contains data of various banks and over a period of time. Panel data is helpful to identify the effects of differences and dynamics of individual variables than cross sectional time series data (Hisao, 2007). The core regression model is specified as follows:

$$Y_{it} = \alpha + x_{it} \beta + \mu_{it}$$

Where, *i*=1,……126,*t*=1,……6

where *i* denotes the cross-section dimension and *t* indicates the time dimension, Y_{it} is the firm *i*'s performance measures at time *t*, x_{it} is a 1 x K vector of observations on K, β is a K x 1 vector of parameters explanatory variables for the *i*th firm in the *t*th period, μ_{it} is a disturbance term and is defined as

$$\mu_{it} = \mu_i + V_t$$

Where μ_i denotes the unobservable individual effect and V_t denotes the remainder disturbance.

Pooled least square method was used to estimate the coefficients. The following four regression models were developed to analyze the effects of corporate governance attributes on the bank performance.

$$ROA_{it} = \beta_o + \beta_1 BS\blacksquare_{it} + \beta_2 \mathrm{AS}\blacksquare_{it} + \beta_3 \mathrm{IB}\blacksquare_{it} + \beta_4 \mathrm{IA}\blacksquare_{it} + \beta_5 \mathrm{SS}\blacksquare_{it} + \beta_6 \mathrm{CPI}\blacksquare_{it} +$$

$$+ \beta_7 \mathrm{BM}\blacksquare_{it} + \beta_8 \mathrm{RP}\blacksquare_{it} + \beta_9 \mathrm{GDP}\blacksquare_{it} + \beta_{10} \mathrm{PR}\blacksquare_{it} + \varepsilon_{it} \quad \text{………………..(i)}$$

$$ROE_{it} = \beta_o + \beta_1 BS\blacksquare_{it} + \beta_2 \mathrm{AS}\blacksquare_{it} + \beta_3 \mathrm{IB}\blacksquare_{it} + \beta_4 \mathrm{IA}\blacksquare_{it} + \beta_5 \mathrm{SS}\blacksquare_{it} + \beta_6 \mathrm{CPI}\blacksquare_{it} +$$

$$+ \beta_7 \mathrm{BM}\blacksquare_{it} + \beta_8 \mathrm{RP}\blacksquare_{it} + \beta_9 \mathrm{GDP}\blacksquare_{it} + \beta_{10} \mathrm{PR}\blacksquare_{it} + \varepsilon_{it} \quad \text{………………..(ii)}$$

$$NPL_{it} = \beta_o + \beta_1 BS\blacksquare_{it} + \beta_2 \mathrm{AS}\blacksquare_{it} + \beta_3 \mathrm{IB}\blacksquare_{it} + \beta_4 \mathrm{IA}\blacksquare_{it} + \beta_5 \mathrm{SS}\blacksquare_{it} + \beta_6 \mathrm{CPI}\blacksquare_{it} +$$

$$+ \beta_7 \mathrm{BM}\blacksquare_{it} + \beta_8 \mathrm{RP}\blacksquare_{it} + \beta_9 \mathrm{GDP}\blacksquare_{it} + \beta_{10} \mathrm{PR}\blacksquare_{it} + \varepsilon_{it} \quad \text{……………(iii)}$$

$$COF_{it} = \beta_o + \beta_1 BS\blacksquare_{it} + \beta_2 \mathrm{AS}\blacksquare_{it} + \beta_3 \mathrm{IB}\blacksquare_{it} + \beta_4 \mathrm{IA}\blacksquare_{it} + \beta_5 \mathrm{SS}\blacksquare_{it} + \beta_6 \mathrm{CPI}\blacksquare_{it} +$$

$$+ \beta_7 \mathrm{BM}\blacksquare_{it} + \beta_8 \mathrm{RP}\blacksquare_{it} + \beta_9 \mathrm{GDP}\blacksquare_{it} + \beta_{10} \mathrm{PR}\blacksquare_{it} + \varepsilon_{it} \quad \text{… …………..(iv)}$$

Where

ROA_{it} = Return on assets of bank *i* at time *t*,

ROE_{it} = Return on equity of bank *i* at time *t*,

NPL_{it} = Percentage of nonperforming loan to total loan and advances of bank *i*at time *t*,

COF_{it} = Ratio of total cost of deposit (including administrative expenses) to total weighted Average deposit of bank *i* at time *t*,

BS_{it} = Board size of bank *i* at time *t*,

AS_{it} = Audit committee size of bank *i* at time *t*,

IB_{it} = Ratio of independent director to board size of bank *i* at time *t*,

IA_{it} = Ratio of independent director to audit committee size of bank *i* at time *t*,

SS_{it} = Sponsor director shareholding ratio of bank *i* at time *t*,

CPI_{it} = Consumer price index of the country for bank *i* at time *t*,

BM_{it} = Broad money growth rate of the country for bank *i* at time *t*,

RP_{it} = Risk premium on lending rate of the country for bank *i* at time *t*,

GDP_{it} = GDP growth rate of the country for bank *i* at time *t*,

PR_{it} = Personal remittance as percentage of GDP of the country for bank *i* at time *t*,

$\beta_1 - \beta_{10}$= coefficients of the related variables,

ε_{it} = error term of firm i at time t.

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Chapter Six: Analysis of empirical results

6.1 Descriptive statistics

The descriptive statistics of all dependent and independent variables used in this study are shown in appendix table A1. In the descriptive statistics it is shown that the mean of return on assets, return on equity, nonperforming loan and cost of fund are 1.38%, 14.63%, 4.29% and 9.15% respectively. These mean of the ratios indicate that the banking sector performance is not so promising in the observed period. The ROA and ROE are decreased in 2013-2015 comparing to 2010-2012 and NPL has increased during the same period. In 2010-2012 the mean of ROA, ROE and NPL were 1.70, 17.30 and 3.51 respectively whereas in 2013-2015 it stood at 1.06, 11.96 and 5.08 respectively (Table A3) . This refers that the performance of the banks went down after code adopted in 2012.

The mean of independent directors on the board size is 14.75%. According to corporate governance guidelines-2012, the requirement for appointment of independent director is minimum one-fifth to total board size. This requirement was not obligatory for the year 2010 - 2011. As this research dataset included the year 2010 and 2011, the mean ratio of independent directors to total board size was shown as 14.75% which shows that less than minimum 20%. On the other hand, the ratio of independent directors in the audit committee is 32.38% which reflects that audit committee has a good composition with independent directors. The mean ratios of Sponsor directors shareholding in the bank is 40.12% which indicates that sponsors directors have strong voting power in the annual general meeting as well as in the board room. This also indicate that although independent directors ratio were raised in the year 2013-2015 but the shares held by sponsor directors remain almost same in the same period.

Besides, the mean of broad money growth rate, GDP growth rate, risk premium on lending, CPI and personal remittance on GDP for the period 2010-2015 are 16.72%, 6.19%, 6.15%, 122.27 and 9.19% respectively (Table A1). The trend of mean of the economic indicators before and after adoption of governance code also hints that the economic trend were not well performing. The average of CPI, BM and PR during the period 2010-2012 were 109.43, 18.33, 9.79 respectively whereas in 2013-2015 those stood as 135.13, 15.12 and 8.60 respectively. Moreover if we follow the trend of GDP growth rate and risk premium on lending during the period 2012-2014 then it observed that the situation becoming worsened and the trend showed negative performance. This trend also reflected in the regression result that will be discussed in the subsection 6.3

6.2 Correlations of variables

Result of Pearson correlation coefficient is presented in the appendix table A2. It is observed from the table that the cross correlation terms for the dependent variables are relatively small and thus there is no more concern for multi co-linearity among the dependent variables.

6.3 Regression Results

This research has developed four regression models to analyze the effect of corporate governance attributes on bank performance. The detailed of empirical results are provided in the appendix A4, A5, A6 and A7. While regression analysis we use fixed-effect model to interpret the result. Because while run the random–effect model, we found that, the Wald chi2 >0.05 in all regression model and the Hausman test also reject the null hypothesis to accept the random-effect model. In the fixed-effect model the probability of f test (prob.>F) of all regression models are less than .005 (<0.05) which validate the model acceptability. It also refers that, all coefficient in this models are different than zero which can able to explain the variation of the variables in the model.

The result reported in the table A4 shows that all the independent variables are related with return on assets. All the attributes of corporate governance such as board size, audit committee size, the ratio of independent directors to board size, the ratio of independent directors to audit committee and sponsor directors shareholding ratio are positively correlated and statistically significant with return on assets. On the other hand, CPI, risk premium and GDP growth rate are negatively co-related with ROA and also this relationship is statistically significant. Broad money growth rate and personal remittance on GDP are positively and negatively respectively with ROA but are not statistically significant.

The result presented in the table A5 indicates that board size and audit committee size are positively related with return on equity but statistically insignificant. Ratio of independent director ratio to board size and independent director ratio on audit committee size are negatively related with return on equity and both are statistically significant. Sponsor directors shareholding ratio is negatively related with return on equity but statistically insignificant. Although economic indicators show both positive and negative relationship with ROE but none of them are statistically significant.

In the table A6, the reported result shows that Board size and Audit committee size are correlated negatively and positively respectively with ratio of nonperforming loans (NPL) and both are statistically significant. On the other hand ratio of independent director to board size, is negatively correlated but statistically insignificant and ratio of independent director to audit committee size is positively correlated and statistically significant. Finally sponsor directors shareholding ratio is positively related with return on equity and statistically significant. Among the economic indicators: CPI, broad money growth rate and personal remittance percentage of GDP are positively related with NPL but statistically insignificant. Risk premium and GDP growth rate are negatively correlated with NPL whereas the former one is statistically significant and later in not.

Finally, the result presented in the table A7 indicates that, the relationship with the all the attributes of corporate governance and cost of fund are statistically significant. Board size, Independent director ratio on audit committee size and sponsor directors shareholding ratio are negatively related with cost of fund. Besides, audit committee size and ratio of independent director to board size are positively related with cost of fund. On the other hand CPI, risk premium on lending and percentage of personal remittance are positively related with cost of fund but only CPI is statistically significant. Broad money growth and GDP growth are negatively correlated and both are statistically insignificant.

The summary of the relationship between corporate governance attributes, economic indicators and performance measurement variables are presented in the table 6.1.

Table 6.1: Summary of relationship between corporate governance attributes economic indicators and performance measure variables

Variable	**ROA_{it}**	**ROE_{it}**	**NPL_{it}**	**COF_{it}**
BS_{it}	Positive	Positive	Negative*	Positive
AS_{it}	Negative**	Negative**	Positive	Positive**
IB_{it}	Negative**	Negative**	Positive**	Negative
IA_{it}	Negative**	Negative**	Positive**	Negative
SS_{it}	Positive	Positive*	Positive	Positive
CPI_{it}	Negative**	Negative**	Positive**	Negative
BM_{it}	Positive**	Positive**	Negative**	Negative
RP_{it}	Positive**	Positive**	Negative**	Negative*
GDP_{it}	Negative**	Negative**	Positive*	Positive*
PR_{it}	Positive	Positive	Negative	Positive**

**= Significant at 1% level, *= significant at 5% level

6.4 Discussion on empirical findings

The coefficient of board size is positively related with return on assets, return on equity and negatively related with nonperforming loan ratio. This relationship indicates that the broader size of board can contribute more effectively to the board decision and ultimately enhance the company's ROE and ROA. It also indicates that broader board size enhances the shareholders' value. Earlier empirical studies such as Isik (2016), Hsu (2016), Adams et al. (2012), Dalton et al. (1998) also support this findings and they argue that resource dependency theory exists behind this positive relationship. But some studies such as Fukomoto et al. (2013), Vo (2013) find negative relationship with board size and firm performance. Behavioral theory of firm was the main arguments in favor of their research. To sum up, this relationship depends on the firm size, age, nature and expertise of board members. However, our study finds that the larger board size has positive correlation with cost of fund i.e. the cost of fund increases when the firms maintain a large board. Lee et al., (2016) refer such cost as "social cost of firms" whereas Uwuigbe et.al. (2012), finds that in large board some members are free ride. Moreover sometimes in a large board, some board members are biased by the opinions of a group of members while decision making process which increase the overall firm's expenditure.

The research shows that the coefficient of audit committee size has negative relationship with return on assets and return on equity and positive relationship with nonperforming loans and cost of fund. It indicates that the audit committee size has played an ineffective role in the bank or audit committee cannot play a fair role in improving firm's performance. Husam et al., (2011), Yahya et al. (2012), Ebrahim (2014) supports our findings. While analyzing the biography that disclosed in the bank's annual report, it is found that some of the audit committees' members have no financial literacy and some are bureaucrat. These empirical researches finds that the quality of audit committee is the chief factor rather than its size while considering audit committee as a performance enhancing tolls for the firm.

Interestingly, the ratio of Independent director to board size and to audit committee size has shown negative correlation with performance variables of bank. The Table A3 shows that the ratio of independent directors both to board size and audit committee size has increased during the period 2013 to 2015. But the sponsor directors shareholding percentage almost same (only 0.07% decreased) during the period 2010-2012 and 2013-2015 (Table A3) .This indicates that although the independent directors ratio has increased during the period 2013-2015, the control of ownership within sponsor directors has remain unchanged during the same period. This refers that the control of board still in same groups and independent directors has less power in strategic decision making although their representation in board has increased during 2013-2015.This findings consistent with previous studies such as Kallamu (2016), where he finds that,37 Malaysian finance companies performance has negatively related with independent directors ratio during the period 2007-2011 and conclude that the strength of independent directors depends on ownership structure of the firm . Chen et al. (2015), conducted research on 1,241 Chinese firms performance for the period of 2003-2008 and within this period he found that the independence of board on firm performance has increased as the ownership concentration was decline during the period. Leung et al. (2014) stated that the effectiveness of independent directors depend on ownership pattern of the firm while analyzing 170 firms of Honk Kong Stock Exchange. Lin et al., (2012) found that independent directors cannot enhance performance or monitoring function due to small representation on board comparing to controlling shareholders representation. To sum up, it is evident from the previous empirical research that , the role of independent directors has largely influenced by firm's ownership structure.

The coefficient of sponsor directors shareholding with all performance variables are positively significant. This findings have two major significance: firstly, return on assets and return on equity are increased when the sponsor directors shareholding is increased which is good for firm's financial health, another is, the nonperforming loan and cost of fund also increase while sponsor directors shareholding increased which has long term negative effect on firm and turn the banks vulnerable to new investment. Hanafi et al.,(2013) found that ownership concentration in bank can positively related with ROA and bank risk whereas La porta et al. (1999, 2000)found that the ownership concentration in the firm protect the investors' interest. On the other hand, Rim et al., (2015) found that the ownership concentration in bank may lead to credit misallocation. Wang (2015) found that the relationship between the ownership concentration and performance across the developing countries are negatively correlated. Parichat et al., (2011) found that ownership concentration deteriorates the assets quality of bank and increase the overall operating cost. To sum up we might conclude that the sponsor shareholder concentration in the bank increase the investors return to some extent but the assets quality may be deteriorated in long term.

In this regression model, we consider five economic indicators that are surrounding the bank performance environment. It helps to test the viability of this model to what extent it works under different economic environment. In table A2 it is observed that consumer price index (CPI) has negatively correlated with ROA, ROE and COF whereas it is positively related with NPL. Previous study also supports this result. Chioma et al. (2015) has conducted research on 18 Nigerian commercial bank for the period of 2000-2014 and find that there is significant negative correlation with bank performance and inflation. They (Chioma et al., 2015) suggest that government should control money circulation to control inflation which needed to fine tuned of banking growth. The empirical research conducted by Boyd et al., (2000) over 97 countries from the period 1960-1995 of banking sector development and impact of inflation and claims that increase in inflation can intensify information asymmetries in the financial sector which distorts the bank performance.

Broad money growth rate, risk premium on lending and personal remittance has positive correlation with ROA, ROE and negative relation with NPL. Besides, regarding COF there is negative, negative and positive correlation with broad money, risk premium and remittance respectively. Although those relationships are not significant yet they have some indications. This relationship indicates that banking sector performance can be boost up by enhancing circulation of money, raising the lending rate and also by individual foreign remittance send by non- resident nationals. The reason may be bank could efficiently maximize its profitability in a speedy money circulation environment and by maximum utilization of the wage earners cost free deposit. Rukka (2015) finds while empirical analysis of the impact of monetary policy of The People's Bank of China for the period 1998-2014 that, the money supply instrument play significant positive role in economic development of China. Badarudin et al.,(2011) also find significant relationship with money supply and bank stock return while analyzing data of G-7 countries and refer that Post Keynesian or PK theory of endogenous money supply can be useful to explain the effect. Fayman and Ling (2011) have found positive correlation with commercial bank performance and prepayment of risk premium while analyzing US commercial banks data for the period of 1976-2006. He concludes that prepayment of risk increase the ability of US commercial banks performance metrics such as ROE, return on loans and liquid ratio. Brown and Fabrizio (2015) claims that remittance extend bank credit worthiness and ultimately have positive impact on GDP. Their research covers almost 139 countries data for 39 years and revealed that remittance inflows into banking channel increasing the bank's capacity to mobilize and lend funds. However, the regression result shows that there is negative relationship (although statistically insignificant) with GDP growth rate and bank performance indicators like ROE and ROA where as NPL and cost of fund have positive relationship with GDP. Apparently it mean that while GDP has increases, bank overall performance has went into decline. If we look at the table A3 , it is visible that the average GDP growth in 2010-2012 and 2013-2015 was 6.18 and 6.21 respectively which refer that GDP growth rate slightly increased before and after adopting the governance code whereas the ROE , ROA and NPL were became worsen in 2013-2015 comparing to 2010-2012.

This trend reflects in the regression result. Although there is no direct explanation for negative relationship, maybe there are other factors such as increase in banks cost due to stiff competition among banks, central bank regulation for loan rescheduling contributed for deteriorating the bank profitability during the period 2013-2015. It is mentionable here that in 2013 there are new 9 banks have started their operation and central bank has issued new master circular for loan rescheduling which tightening the provision requirement and as a result banks show less profit in their balance sheet. Tan et al., (2012) also found similar findings in empirical research that higher GDP growth leads to lower bank profitability in China during the period 2003-2009. His argument was banks have to pay higher rate of tax in China which lowering the bank's profitability and lower taxation and higher cost efficiency tend to have higher profitability in Chinese Banks. The financial institutions in Bangladesh also had to pay high tax rate (42.5% corporate tax) during the period 2013-2015.

In fact the core limitation of this regression is that using shorter time series of data in the research. For example, we use only six years economic indicators data in the dataset which is absolutely insufficient to judge the economic indicators impact on banking sector performance. But as corporate governance practices have just started from 2010, we have no previous complete data for corporate governance attribute by which we can judge the corporate governance guideline. For this limitation, it is quite difficult to reach in a complete the interpretation with this regression model. But this limitation can be overcome if we consider only bank performance and economic indicator in the regression line.

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Chapter Seven: Discussion on research questions and recommendation

In this chapter we will discuss about the research questions in first two sections and based on the literature review ,empirical findings and discussion of research question , we place some recommendations in the final section.

7.1 Research question #1

In this study, the first research question was to identify the critical factors of the corporate governance guidelines of Bangladesh. We briefly discussed about the corporate governance guidelines of Bangladesh in chapter four. It is vivid while discussion in the chapter four that, the corporate governance code is developed in line with the OECD guidelines and the consultation with development partners like World Bank, IMF, Asian Development Bank. While analyzing the guidelines, this research found the following core attributes in the corporate governance code of Bangladesh:

- i) Specify the number of independent directors in the board (one-fifth of total board for banking companies)
- ii) Restriction of CEO duality for all listed companies to avoid conflict of interest.
- iii) Fixation of CEO bonus to avoid the "opportunistic behavior" of manager.
- iv) Bangladesh Bank specify the duties and responsibilities of board of directors which was not precisely described before 2006.

v) Bangladesh bank also fixed the directors remuneration for banking companies.

vi) Specify the CEO and CFO responsibility in the governance framework.

vii) Mandatory disclosure on corporate governance compliance in company's annual report.

viii) Minimum 30% shareholding by Sponsor directors and mandatory of 2% shareholding to become director of listed companies.

However, the research also found that there are some key factors that are consider as bench mark for corporate governance , which are still absent in the guidelines, such as

i) The role of institutional investors in board.

ii) Different subcommittee such as remuneration committee, nomination committee of board.

iii) There is no penalty will be impose for non-compliance of the governance code.

7.2 Research question #2

To resolve the second research question, this research attempts to analyze the empirical data analysis, which is discussed in the chapter five and six. It is a fact that, corporate governance code introduced in Bangladesh just a decade ago. However, we can say that the revised corporate governance guideline (that comes into effect from January 2013), brings some structural change in banking companies.

The regression result of this research shows that the board size has a significant impact on bank performance (ROA, NPL, COF). However, the table A3 shows that the board size became smaller in 2013-2015 (1.09) comparing to 2010-2012 (1.13). Additionally, independent directors in the board show significant impact on bank performance.

Regarding the impact of board size we may explain the facts in different way. It is mentioned earlier that the code adopted during the period 2013-2015 and the board size was not expanded rather slightly shortened during the same period. The number of independent directors in the board has increased more than 2.5 times (8.19 to 21.22) during the period 2013-2015 comparing to 2010-2012. Most importantly, a good number of financial experts and various professionals were appointed in different banks board as independent director. Hence to reach a concrete interpretation, the qualitative factors of independent directors might be explained to further expansion of regression result. To do so, further qualitative research is required to judge the independent directors professional expertise and intellectual capabilities. But it takes a bit longer time series data. *Hence it is too early to justify the impact of board size (as a corporate governance attribute) on bank performance.*

Regarding the role of independent directors, it is observed that, they were appointed when the code adopted in 2013-2015 by keeping the board size unchanged. Therefore, when the independent directors were appointed, the number of shareholder directors has reduced but the sponsor directors' shareholding position almost unchanged. On the contrary, the performance indicators of the banking industry like ROA, ROE, NPL are further deteriorating during the period 2013-2015 (Table A3). Three core points can be raised from this scenario: firstly, the independent directors were appointed in large quantity in this period, secondly, the control of sponsor directors shareholding in the banks were remain almost unchanged before and after adoption of corporate governance code and finally, the bank performance was not rosy during this time. From this situation analysis we may say that if corporate governance code were not adopted and independent directors were not so largely inducted in the board during the period 2013-2015 , bank performance might be more worse. *Hence we can say that independent directors play a positive role in the banking industry by stopping further deteriorating of industry performance.* Again we can say that it is a limitation of this study that, there is no such qualitative variables are included in the regression to justify the independent directors' capabilities.

From the above analysis we can say that there is a moderate contribution of corporate governance in the bank performance in Bangladesh. Yet there is scope for further research in corporate governance attributes and bank performance in Bangladesh.

7.3 Recommendation

Based on the above discussion in the sub-section 7.1. and 7.2 of this chapter, theoretical analysis of corporate governance in this study, considering the history of Bangladesh banking industry and empirical findings from this study, this research has the following recommendations for enhancing the quality of corporate governance in Bangladesh banking industry:

	Recommendation for governance system of Bangladesh banking industry.
i)	***A clause might be added that, fifty percent (50%) of independent directors will appointed by the central bank and rest are appointed by the shareholders in the annual general meeting (AGM) or alternatively, central bank and Bangladesh Securities of Exchange Commission could jointly establish a pool of independent director from where the banks can pick suitable independent directors for their board. Hopefully this will ensure the check and balance in appointment of independent directors.***
ii)	***Different sub-committees of board such as remuneration committee, ethics committee and nomination committee may be included in the corporate governance guidelines to bring transparencies in board activities.***
iii)	***The role and responsibilities of CEO in the board is unclear in the existing corporate governance guidelines. Therefore, there should be some specific clause***

such as CEO's performance* evaluation methodology, *the maximum limit of CEO's compensation, the ethical ground for termination of CEO could be incorporated in the existing guidelines.

iv) ***There is no clause in the corporate governance code for appointment of female director in the board. But banks are financing to the Women entrepreneurs as well. Therefore, at least one female director should be on bank board.***

v) ***Finally Bangladesh Securities and Exchange Commission and Bangladesh Bank can jointly impose some financial and non-financial penalties for non-compliance of corporate governance code to establish discipline in the market.***

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Conclusion and scope for further research

Research on relationship between corporate governance and firm performance is continuing in different countries. There is no clear cut economic theory to explain the relationship between corporate governance and firm performance. This research attempted to investigate the relationship between corporate governance attributes and banks performance to explore the effectiveness of corporate governance in banking industry of Bangladesh. In this research, we conducted a comprehensive study on corporate governance and bank performance for the period 2010-2015.

One notable findings of this study is that board size is significantly related with bank performance. It is observed from the empirical study that the relationship between board size and bank performance has significantly positive. *One of the reason behind this may be resource dependency theory exists in this relationship.* Resource dependency theory refers that the network governance system can reduce the transaction cost of the firm and board of director act as an agent to connect the firm internal competences with external environment of the firm. As independent directors were appointed by largely in the board during code adoption period, we can say that they might bring diverse expertise and experience which contribute the board positively. Pfeffer and Salancik (1978), Donaldson and Davis (1991), Williamson (1985) has support this statement. Young (2009) in his thesis found that diversified board has the power of collectiveness in strategy formulation and decision making. However, further research is required to explain this issue more elaborately.

Another finding is that independent director has a relation with bank performance. While adopting the governance code, independent directors were just replace the shareholder directors in proportionate rate i.e. the banks were not enlarge their board size rather added the independent directors by cut off the existing shareholder directors. But the ownership control (40%) by sponsor directors was almost same before and after adoption of code. Hence *the argument in favor of the claim is that if independent directors were not appointed largely in the board, the bank performance might be severely deteriorated as the percentage of ownership were not changed during the code adoption period (2013-2015).* Previous research such as Wang et al., (2015) in his empirical research claims that industry expert independent directors have ability to perform their monitoring function effectively.

In fact, there are scopes for further research that strengthen the corporate governance framework in Bangladesh such as explore the effectiveness of independent directors through qualitative research, comparing the effectiveness of independent directors between state-owned banks and private commercial banks and comparing the board size between state-owned bank and private commercial banks might help to reform the governance code. Moreover, the term of reference (ToR) of independent directors in the banking industry of Bangladesh should be reconsidered as ownership of the firms control by the sponsor directors.

To recapitulate we can say that, the introduction of corporate governance code in Bangladesh just passed over one decade and the country's banking industry is promising and growing. Therefore, this research work can be consider as ground work for further research to ensure good governance system in the banking industry as well as other listed firms in the stock exchanges.

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Appendix- A

Table A1 Descriptive statistics

Variables	Observations	Mean	Std. Div.	Minimum	Maximum
ROA_{it}	126	0.013841	0.0067304	0.0035	0.0363
ROE_{it}	126	0.146339	0.0656092	0.0096	0.3622
NPL_{it}	126	0.042959	0.0179653	0.009453	0.0973
COF_{it}	126	0.09149	0.0177366	0.0414	0.1367
BS_{it}	126	1.108886	0.1535498	0.69897	1.39794
AS_{it}	126	0.613323	0.1023215	0.30103	0.7781513
IB_{it}	126	0.1471516	0.1185956	0	60
IA_{it}	126	0.3238095	0.1963153	0	75
SS_{it}	126	0.401246	0.1694439	0.0837	0.87
CPI_{it}	126	1.222783	0.147543	1	1.4366
BM_{it}	126	0.16725	0.021347	0.1485	0.2107
RP_{it}	126	0.061583	0.020029	0.0317	0.0944
GDP_{it}	126	0.06195	0.003538	0.0557	0.0655
PR_{it}	126	0.09195	0.008232	0.0788	0.1059

Table A2 Pearson correlation coefficient

Correlations[a]

		ROA	ROE	NPL	COF	BS	AS	IB	IA	SS	CPI	Broad money (M2) growth rate	Risk premium on lending	GDP growth rate	Personal remittance on GDP
ROA	Pearson Correlation	1	.774**	-.514**	-.244**	.129	-.294**	-.398**	-.351**	.005	-.636**	.709**	.504**	-.521**	.129
	Sig. (2-tailed)		.000	.000	.006	.151	.001	.000	.000	.953	.000	.000	.000	.000	.150
ROE	Pearson Correlation	.774**	1	-.461**	-.230**	.030	-.350**	-.291**	-.274**	.202*	-.566**	.646**	.426**	-.501**	.112
	Sig. (2-tailed)	.000		.000	.010	.737	.000	.001	.002	.023	.000	.000	.000	.000	.211
NPL	Pearson Correlation	-.514**	-.461**	1	-.190*	-.183*	.150	.327**	.353**	.002	.496**	-.450**	-.462**	.197*	-.142
	Sig. (2-tailed)	.000	.000		.033	.040	.093	.000	.000	.979	.000	.000	.000	.027	.113
COF	Pearson Correlation	-.244**	-.230**	-.190*	1	.162	.260**	-.162	-.064	.053	-.027	-.170	-.220*	.178*	.322**
	Sig. (2-tailed)	.006	.010	.033		.069	.003	.070	.477	.558	.761	.057	.013	.046	.000
BS	Pearson Correlation	.129	.030	-.183*	.162	1	.341**	-.550**	-.324**	-.098	-.163	.141	.152	-.046	.061
	Sig. (2-tailed)	.151	.737	.040	.069		.000	.000	.000	.275	.068	.117	.090	.610	.498
AS	Pearson Correlation	-.294**	-.350**	.150	.260**	.341**	1	-.062	-.122	-.408**	.337**	-.422**	-.227*	.295**	-.061
	Sig. (2-tailed)	.001	.000	.093	.003	.000		.490	.175	.000	.000	.000	.010	.001	.496
IB	Pearson Correlation	-.398**	-.291**	.327**	-.162	-.550**	-.062	1	.780**	.123	.569**	-.500**	-.377**	.164	-.306**
	Sig. (2-tailed)	.000	.001	.000	.070	.000	.490		.000	.170	.000	.000	.000	.066	.000
IA	Pearson Correlation	-.351**	-.274**	.353**	-.064	-.324**	-.122	.780**	1	.120	.543**	-.450**	-.294**	.112	-.359**
	Sig. (2-tailed)	.000	.002	.000	.477	.000	.175	.000		.181	.000	.000	.001	.211	.000
SS	Pearson Correlation	.005	.202*	.002	.053	-.098	-.408**	.123	.120	1	-.012	.019	-.008	-.027	.009
	Sig. (2-tailed)	.953	.023	.979	.558	.275	.000	.170	.181		.890	.830	.925	.765	.918
CPI	Pearson Correlation	-.636**	-.566**	.496**	-.027	-.163	.337**	.569**	.543**	-.012	1	-.864**	-.419**	.463**	-.667**
	Sig. (2-tailed)	.000	.000	.000	.761	.068	.000	.000	.000	.890		.000	.000	.000	.000
Broad money (M2) growth rate	Pearson Correlation	.709**	.646**	-.450**	-.170	.141	-.422**	-.500**	-.450**	.019	-.864**	1	.383**	-.606**	.409**
	Sig. (2-tailed)	.000	.000	.000	.057	.117	.000	.000	.000	.830	.000		.000	.000	.000
Risk premium on lending	Pearson Correlation	.504**	.426**	-.462**	-.220*	.152	-.227*	-.377**	-.294**	-.008	-.419**	.383**	1	-.207*	-.284**
	Sig. (2-tailed)	.000	.000	.000	.013	.090	.010	.000	.001	.925	.000	.000		.020	.001
GDP growth rate	Pearson Correlation	-.521**	-.501**	.197*	.178*	-.046	.295**	.164	.112	-.027	.463**	-.606**	-.207*	1	-.021
	Sig. (2-tailed)	.000	.000	.027	.046	.610	.001	.066	.211	.765	.000	.000	.020		.816
Personal remittance on GDP	Pearson Correlation	.129	.112	-.142	.322**	.061	-.061	-.306**	-.359**	.009	-.667**	.409**	-.284**	-.021	1
	Sig. (2-tailed)	.150	.211	.113	.000	.498	.496	.000	.000	.918	.000	.000	.001	.816	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

a. Listwise N=126

Table A3 Year wise mean of variables:

Variables	2010	2011	2012	Av (2010-2012)	2013	2014	2015	Av (2013-2015)	Average
ROA	2.43	1.64	1.04	1.70	1.09	1.1	1.01	***1.07***	***1.39***
ROE	24.15	16.14	11.63	17.31	12.32	12.2	11.37	***11.96***	***14.64***
NPL	2.78	2.9	4.85	3.51	4.89	5.37	4.98	***5.08***	***4.3***
COF	8.05	9.49	10.28	9.27	9.88	9.05	8.15	***9.03***	***9.15***
BS	1.14	1.15	1.1	1.13	1.1	1.084	1.084	***1.09***	***1.11***
AS	0.514	0.611	0.6336	0.59	0.6345	0.644	0.63	***0.64***	***0.61***
IB	4.9	5.74	13.93	8.19	19.95	21.83	21.88	***21.22***	***14.71***
IA	18.97	18.57	27.69	21.74	39.52	44.68	44.84	***43.01***	***32.38***
SS	41	39.32	40.23	40.18	40.24	40.5	39.6	***40.11***	***40.15***
CPI	100	110.71	117.58	109.43	126.44	135.28	143.66	***135.13***	***122.28***
BM	21.07	16.92	17.01	18.33	14.85	15.61	14.89	***15.12***	***16.73***
RP	7.72	9.44	3.17	6.78	4.92	5.76	5.94	***5.54***	***6.16***
GDP	5.57	6.46	6.52	6.18	6.01	6.06	6.55	***6.21***	***6.2***
PR	9.41	9.38	10.59	9.79	9.24	8.67	7.88	***8.60***	***9.2***

Table A4: The effect of independent /explanatory variables on dependent variable Return on Assets (ROA_{it})

```
Fixed-effects (within) regression               Number of obs      =       126
Group variable: BankID                          Number of groups   =        21

R-sq:  within  = 0.7206                         Obs per group: min =         6
       between = 0.0171                                        avg =       6.0
       overall = 0.5490                                        max =         6

                                                F(10,95)           =     24.50
corr(u_i, Xb)  = -0.1120                        Prob > F           =    0.0000

------------------------------------------------------------------------------
         ROA |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          BS |   .0099031   .0073816     1.34   0.183    -.0047512    .0245574
          AS |   .0015641   .0058996     0.27   0.791    -.0101482    .0132763
          IB |   .0073587   .0078091     0.94   0.348    -.0081443    .0228617
          IA |   .0014669   .0044352     0.33   0.742    -.0073381    .0102718
          SS |   .0027765   .0106412     0.26   0.795     -.018349    .0239019
         CPI |  -.0321239   .0175165    -1.83   0.070    -.0668987    .0026508
          BM |   .1045976   .0480983     2.17   0.032     .0091104    .2000847
          RP |  -.0052197   .0602513    -0.09   0.931    -.1248337    .1143943
         GDP |  -.0505939   .1800886    -0.28   0.779    -.4081149    .3069272
          PR |  -.3594674   .2098893    -1.71   0.090    -.7761503    .0572156
       _cons |   .0575233    .043677     1.32   0.191    -.0291866    .1442332
-------------+----------------------------------------------------------------
     sigma_u |  .00323624
     sigma_e |  .00371702
         rho |  .43118465   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(20, 95) =      3.65             Prob > F = 0.0000
```

Table A5: The effect of independent /explanatory variables on dependent variable Return on equity (ROE_{it})

```
Fixed-effects (within) regression               Number of obs      =       126
Group variable: BankID                          Number of groups   =        21

R-sq:  within  = 0.5894                         Obs per group: min =         6
       between = 0.3071                                        avg =       6.0
       overall = 0.1685                                        max =         6

                                                F(10,95)           =     13.64
corr(u_i, Xb)  = -0.5846                        Prob > F           =    0.0000
```

ROE	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
BS	.0637781	.0881244	0.72	0.471	-.1111709	.2387271
AS	.0790066	.070432	1.12	0.265	-.0608186	.2188318
IB	-.0212285	.0932282	-0.23	0.820	-.2063099	.1638528
IA	-.0064588	.0529489	-0.12	0.903	-.1115758	.0986581
SS	-.1820281	.1270391	-1.43	0.155	-.4342327	.0701765
CPI	-.2846487	.2091197	-1.36	0.177	-.6998038	.1305064
BM	.9404058	.5742169	1.64	0.105	-.1995588	2.08037
RP	-.4531874	.719305	-0.63	0.530	-1.881188	.9748136
GDP	-1.702875	2.149971	-0.79	0.430	-5.971108	2.565358
PR	-3.964208	2.505745	-1.58	0.117	-8.93874	1.010324
_cons	.7941047	.5214344	1.52	0.131	-.2410735	1.829283
sigma_u	.05741396					
sigma_e	.04437531					
rho	.6260267	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(20, 95) =      1.70              Prob > F = 0.0465
```

Table A6: The effect of independent /explanatory variables on dependent variable Percentage of nonperforming loan to total loan and advances (NPL_{it})

```
Fixed-effects (within) regression               Number of obs      =       126
Group variable: BankID                          Number of groups   =        21

R-sq:  within  = 0.5688                         Obs per group: min =         6
       between = 0.0001                                        avg =       6.0
       overall = 0.3245                                        max =         6

                                                F(10,95)           =     12.53
corr(u_i, Xb)  = -0.1360                        Prob > F           =    0.0000
```

NPL	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
BS	-.0272155	.0217343	-1.25	0.214	-.0703636	.0159325
AS	.0191545	.0173708	1.10	0.273	-.0153309	.0536398
IB	-.0673975	.0229931	-2.93	0.004	-.1130445	-.0217505
IA	.0335343	.0130589	2.57	0.012	.007609	.0594595
SS	.0213317	.0313319	0.68	0.498	-.04087	.0835334
CPI	.113084	.0515756	2.19	0.031	.0106935	.2154746
BM	.0614762	.1416203	0.43	0.665	-.2196755	.342628
RP	-.0072334	.1774036	-0.04	0.968	-.3594242	.3449573
GDP	-.9490073	.5302518	-1.79	0.077	-2.00169	.1036757
PR	.9947704	.6179969	1.61	0.111	-.2321085	2.221649
_cons	-.1289019	.1286024	-1.00	0.319	-.38421	.1264062
sigma_u	.01160966					
sigma_e	.01094437					
rho	.52947179	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(20, 95) =      6.00              Prob > F = 0.0000
```

Table A7: The effect of independent /explanatory variables on dependent variable cost of fund (COF_{it})

```
Fixed-effects (within) regression               Number of obs      =       126
Group variable: BankID                          Number of groups   =        21

R-sq:  within  = 0.7322                         Obs per group: min =         6
       between = 0.0457                                        avg =       6.0
       overall = 0.1294                                        max =         6

                                                F(10,95)           =     25.98
corr(u_i, Xb)  = -0.1893                        Prob > F           =    0.0000
```

COF	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
BS	-.0229195	.011736	-1.95	0.054	-.0462183	.0003793
AS	.018019	.0093798	1.92	0.058	-.0006022	.0366402
IB	.0038305	.0124157	0.31	0.758	-.0208177	.0284788
IA	-.0047823	.0070515	-0.68	0.499	-.0187812	.0092167
SS	-.0146971	.0169184	-0.87	0.387	-.0482845	.0188902
CPI	.0076946	.0278495	0.28	0.783	-.0475937	.0629829
BM	-.3383358	.0764713	-4.42	0.000	-.4901506	-.186521
RP	.137401	.0957935	1.43	0.155	-.0527731	.327575
GDP	-.4800653	.2863225	-1.68	0.097	-1.048487	.0883567
PR	1.254997	.3337026	3.76	0.000	.5925135	1.91748
_cons	.0657946	.069442	0.95	0.346	-.0720652	.2036545
sigma_u	.01634733					
sigma_e	.00590968					
rho	.88441748	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(20, 95) =     33.25              Prob > F = 0.0000
```

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