The Performance of Bangladeshi Commercial Banks:
The Role of Corporate Governance

A thesis submitted to The University of Manchester for the degree of
Doctor of Philosophy in the Faculty of Humanities

2016

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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>AGM</td>
<td>Annual General Meeting</td>
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<td>AMD</td>
<td>Additional Managing Director</td>
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<tr>
<td>APEC</td>
<td>Asia-Pacific Economic Cooperation</td>
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<td>ARCG</td>
<td>Asian Roundtable on Corporate Governance</td>
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<td>BB</td>
<td>Bangladesh Bank</td>
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<tr>
<td>BCA</td>
<td>Banking Company Act</td>
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<td>BCBS</td>
<td>Basel Committee on Banking Supervision</td>
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<tr>
<td>BDT</td>
<td>Bangladeshi Taka</td>
</tr>
<tr>
<td>BEI</td>
<td>Bangladesh Enterprise Institute</td>
</tr>
<tr>
<td>BLUE</td>
<td>Best Linear Unbiased Estimator</td>
</tr>
<tr>
<td>BoD</td>
<td>Board of Director</td>
</tr>
<tr>
<td>BSEC</td>
<td>Bangladesh Securities and Exchange Commission</td>
</tr>
<tr>
<td>CAMELS</td>
<td>Capital adequacy, Asset quality, Management Efficiency, Earning quality, Liquidity risk, Sensitivity to Market risk</td>
</tr>
<tr>
<td>CAR</td>
<td>Capital Adequacy Ratio</td>
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<tr>
<td>CB</td>
<td>Central Bank</td>
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<tr>
<td>CCG</td>
<td>Codes of Corporate Governance</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>CG</td>
<td>Corporate Governance</td>
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<td>CI</td>
<td>Confidence Interval</td>
</tr>
<tr>
<td>CIB</td>
<td>Credit Information Bureau</td>
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<tr>
<td>CRAB</td>
<td>Credit Rating Agencies Bangladesh</td>
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<td>CRG</td>
<td>Credit Risk Grading</td>
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<td>CRR</td>
<td>Cash Reserve Ratio</td>
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<td>CSR</td>
<td>Corporate Social Responsibility</td>
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<td>DEA</td>
<td>Data Envelopment Analysis</td>
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<td>DFA</td>
<td>Distribution-Free Approach</td>
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<td>DGP</td>
<td>Data Generating Process</td>
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<td>DMD</td>
<td>Deputy Managing Director</td>
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<tr>
<td>DMU</td>
<td>Decision Making Unit</td>
</tr>
<tr>
<td>DSE</td>
<td>Dhaka Stock Exchange</td>
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<tr>
<td>EC</td>
<td>Executive Committee</td>
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<tr>
<td>EFS</td>
<td>Efficient Structure Hypothesis</td>
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<td>EGM</td>
<td>Extraordinary General Meting</td>
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<td>EWS</td>
<td>Early Warning System</td>
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<td>FCB</td>
<td>Foreign Commercial Banks</td>
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<td>FDH</td>
<td>Free Disposal Hull</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>FE</td>
<td>Fixed Effects</td>
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<td>FI</td>
<td>Financial Institutions</td>
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<tr>
<td>FSR</td>
<td>Financial Stability Report</td>
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<td>FSRP</td>
<td>Financial Sector Reforms Programme</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<td>--------------</td>
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<tr>
<td>FY</td>
<td>Financial Year</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GLS</td>
<td>Generalized Least Square</td>
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<tr>
<td>GMM</td>
<td>Generalized Method of Moments</td>
</tr>
<tr>
<td>HR</td>
<td>Human Resource</td>
</tr>
<tr>
<td>ICAB</td>
<td>Institute of Chartered Accountants of Bangladesh</td>
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<tr>
<td>ICMAB</td>
<td>Institute of Cost and Management Accountants of Bangladesh</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
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<tr>
<td>LLP</td>
<td>Loan Loss Provision</td>
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<tr>
<td>LLRS</td>
<td>Large Loan Reporting System</td>
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<tr>
<td>MCR</td>
<td>Minimum Capital Requirement</td>
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<td>MD</td>
<td>Managing Directors</td>
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<tr>
<td>MFI</td>
<td>Micro Finance Institutions</td>
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<tr>
<td>NAF</td>
<td>Non-audit fees</td>
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<tr>
<td>NII</td>
<td>Net Interest Income</td>
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<tr>
<td>NIM</td>
<td>Net Interest Margin</td>
</tr>
<tr>
<td>NBFI</td>
<td>Non-Bank Financial Institutions</td>
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<tr>
<td>NCB</td>
<td>Nationalized Commercial Bank</td>
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<tr>
<td>NGO</td>
<td>Non Government Organization</td>
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<tr>
<td>NPL</td>
<td>Non Performing Loans</td>
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<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
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<tr>
<td>OPM</td>
<td>Other Peoples Money</td>
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<tr>
<td>PCB</td>
<td>Private Commercial Bank</td>
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<tr>
<td>PLS</td>
<td>Profit Loss Sharing</td>
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<td>POLS</td>
<td>Pooled Ordinary Least Square</td>
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<td>PPS</td>
<td>Performance Planning System</td>
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<tr>
<td>QLH</td>
<td>Quiet Life Hypothesis</td>
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<tr>
<td>RE</td>
<td>Random effects</td>
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<tr>
<td>RJSC</td>
<td>Registrar of Joint Stock Companies and Firms</td>
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<tr>
<td>RMP</td>
<td>Relative Market Power Hypothesis</td>
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<tr>
<td>ROA</td>
<td>Return on Assets</td>
</tr>
<tr>
<td>ROC</td>
<td>Return on Capital</td>
</tr>
<tr>
<td>ROE</td>
<td>Return on Equity</td>
</tr>
<tr>
<td>RSS</td>
<td>Residual Sum of Squares</td>
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<tr>
<td>RWA</td>
<td>Risk Weighted Asset</td>
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<tr>
<td>SCP</td>
<td>Structure Conduct Performance Hypothesis</td>
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<td>SDB</td>
<td>Specialized Development Banks</td>
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<tr>
<td>SEC</td>
<td>Securities Exchange Commission</td>
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<td>SFA</td>
<td>Stochastic Frontier Approach</td>
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<tr>
<td>SLR</td>
<td>Statutory Liquidity Ratio</td>
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<tr>
<td>SMA</td>
<td>Special Mention Account</td>
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<td>SME</td>
<td>Small and Medium-sized Enterprises</td>
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<td>SOCB</td>
<td>State Owned Commercial Banks</td>
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<td>TFA</td>
<td>Thick Frontier Approach</td>
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Abstract

Alliance Manchester Business School
Tasmina Mahbub, Doctor of Philosophy (PhD)
The Performance of Bangladeshi Commercial Banks: The Role of Corporate Governance/ 2016

Academic studies of Bangladeshi Private Commercial Banks (PCBs) have identified issues of Corporate Governance relating to ‘crony capitalism’ and political influence. The thesis combines quantitative and qualitative methods. The research employs conventional econometric panel estimation and a novel method of estimating efficiency using a non-parametric bootstrapping technology. The results reveal significant performance differences. To understand the causes underlying the differences in revenue efficiency and profitability, multiple lenses from theories of Corporate Governance are adopted to design semi-structured interviews. Twenty in-depth interviews from a sample of banks, both managers and board members and industry stakeholders are supplemented with documentary analysis.

The quantitative findings reveal a performance gap between 1st Generation PCBs and 2nd and 3rd Generation PCBs in terms of Efficiency and Profitability. 1st Gen PCBs perform worst whereas there is no statistical difference between Gen 2 and Gen 3 PCBs. Moreover, there is no sign of catch-up or improvement for the 1st Generation PCBs. The research demonstrates that an increasing amount of 1st Generation banks’ Non Performing Loans is the main reason for this performance gap.

The interview data relate the performance gaps to inadequate Corporate Governance. The research identifies family dominated boards that have encouraged crony capitalism and featherbedding of employees resulting in excessive Non Performing Loans and higher overhead costs. Also, these 1st Generation banks are excessively large in terms of employees, rural branches and remittance earnings leading to a culture of invulnerability to takeover.
Declaration

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Acknowledgement

At the end of my thesis, my special gratitude goes to the almighty Allaah who made everything possible. Alongside, this is the time to acknowledge those mentors and family members who contributed significantly towards the successful completion of the thesis.

I thank my supervisors for their invaluable and whole hearted inspiration and guidance. Katharine Barker supervised me from the beginning to the end and helped to complete this huge task without much challenge. Her careful guidance and incisive comments on the drafts made the thesis insightful. Indeed, she owns the Thesis. I am also thankful to Professor Maria Neveda for her each and every ‘so what’ remarks, that now I feel was the best way to make me think logically about the research interest and its contributions. Without her advice points would have been missed, clarity would have been lost and the whole project would have been significantly inferior. I am also obliged to the PGR office staffs for their assistances.

I am greatly indebted to my external advisor, Professor Kent Matthews of Cardiff Business School, for his support and guidance. He helped me from the writing-up the proposal phrase till the completion of the thesis with his unique expertise in the area of banking. His selfless and critical advice at the early stage in the research will not be enough to write in few sentences and will be remembered gratefully all the years ahead. He acted as the backbone of my Thesis.

This thesis is the product of several thousand hours of toil and deliberation which has diverted attention from my family over a long period. Therefore, I am sincerely grateful to my parents – Professor Mahbub Ahmed who enlightened me with open discussions on contemporary issues on banking and provided multi-angled critical judgments to bring my thesis to near perfection while Mrs Fauzia Ahmed always offered encouragement for pursuing a PhD and is the source of motivation for all my achievements. I dedicate my PhD thesis to my dear mother. I would also like to thank my younger sister, Miss Hasbina Mahbub, for being so concerned about my well being and for extending her whole hearted love and compassion during my stressed periods. The greatest debt I owe is to my beloved husband, Barrister Md. Iftekhar Jonaed, whose understanding and forbearance is of great assistance in preparing this thesis successfully. I am also grateful to my in-laws for all their trust and profound encouragement during this long journey and finally, I would like to bestow a special adoration to the youngest member of my family, Maryam.

Tasmina Mahbub
September, 2016
Biographical Note

Ms. Tasmina Mahbub is a doctoral programme member of Alliance Manchester Business School of the University of Manchester, United Kingdom. She completed her undergraduate education from Macquarie University, Australia in Accounting and Finance and received an M.Sc. in International Economics, Banking and Finance with Distinction from Cardiff University and Masters by Research (M.Res.) from the University of Manchester, United Kingdom.

Prior to step-in as a researcher in the field of Corporate Governance and Banking, she worked in one of the oldest and largest 1st generation conventional private commercial banks in Bangladesh where she had firsthand experience to work with the Board of Directors and other divisional heads of the bank. Her interest to pursue further studies on the area of Corporate Governance of Banks emerged from the engagements with the board and their decision making strategies. The arrival of the Codes of Corporate Governance provided an opportunity to appraise its effectiveness and the result is the subject of this thesis.

She also showed an interest in the academia and started a career as an academic after experiencing practical knowledge. She used to teach Accounting, Banking, Finance and Strategy in the North South University, the largest private university in Bangladesh as well as in American International University, Bangladesh.

While Ms Tasmina Mahbub started researching on Private Commercial Banks of Bangladesh in a view to find out the real cause and future of this sector as an emerging market, she attended and participated in two workshops in Bangladesh on the evolution of financial market and its impact on the economy. During her PhD programme, she also attended and presented a paper in Asia Conference on Economics and Business research conference in Singapore. Alongside, she is now working to publish a paper on ‘The Relative Profitability of Family Dominated Banks in Bangladesh’ with Ms Katharine Barker of Alliance Manchester Business School and Professor Kent Matthews of Cardiff Business School.
Chapter 1

Introduction
1.1 Introduction

The Bank Company Act, 1991 brought fundamental changes in the banking operations in Bangladesh as it provided detailed guidelines to the Board of Directors (BoDs), Management and Regulators by defining their selection criteria, roles and responsibilities that also substantially impacted on banks’ performance. However, all banks did not incorporate the Acts properly in practice which is reflected from their performances. After two decades of incorporation of the Act, reassessments of performance of bank; particularly, the commercial banks, are very much needed to understand the effect of the Act. This research investigates two performance indicators - Efficiency and Profitability - of 1st, 2nd and 3rd Generations of local conventional Private Commercial Banks (PCBs). By understanding the extant and nature of the performance gap, it identifies the challenges for ensuring better Corporate Governance (CG) practice in the banking sector of Bangladesh.

1.2 Rationale of the Study

Over the last three decades, the Bangladeshi banking system has undergone unprecedented changes, moving away from state control to a market-based open economy, by adopting a more stabilized, liberal and deregulated programme under the influence of the World Bank and the International Monetary Fund (IMF). Prior to 1981, the banking sector was highly concentrated into nationalized banks that later liberalized and fragmented by providing licenses to Private Commercial Banks (PCBs), denationalizing some banks and encouraging entry of foreign banks. Furthermore, for the first time the regulator of these banks, the Bangladesh Bank (BB), issued formal and mandatory guidelines and regulations for all banks in the Bank Company Act, 1991. These liberalization and reform initiatives under the Financial Sector Reforms Programme (FSRP) in 1991 changed the structure of the banking industry to deal with the context and increased competition by the entry of new private banks.

New policies and regulations brought new dimensions and challenges for banks along with greater competition. The strategies and performance of existing and new banks were expected to be different in the short run; however, over the passage of time they should converge. In
this regard, the 1st generation banks which were established prior to the Bank Company Act, 1991 needed to mandate their structure according to the new guidelines and rules. The 2nd and 3rd generation banks were established under new regime after the Act were formed.

There are several causes of performance differences among banks of different generations identified in the literature. Also, various sources have reported irregularities including the existence of omnibus accounts that allowed influential market players to make exorbitant illegitimate loans and enjoy personal benefits at the expense of the depositors. The alarming fact was that the accused individuals held enough power to manipulate the investigation report and the subsequent penalty. If these incidents continue then the country may experience serious failures of banks in the absence of transparency, accountability and stakeholder pressure for good CG.

Thus, after two decades of reforms, it is important to understand and measure the competitiveness and soundness of the banking sector of Bangladesh concentrating on the aspects of corporate governance and ownership influence on banks’ performance. The policies introduced in 1991 with assumptions of achieving greater performance and creating a competitive banking environment, need evaluation and modification according to the local and global conditions. Furthermore, the banking sector contributes a substantial portion to the country’s overall Gross Domestic Product (GDP) besides ensuring domestic resources mobilization, savings generation and investments in productive sectors. It is crucial to understand, appraise and monitor the factors which affect the sector’s performance, in terms of efficiency and profitability using a broad framework of Corporate Governance (CG).

1.3 Importance of the Study

In the underdeveloped economy of Bangladesh, banks are the principal channel of investments and savings. Analysis of the banking sector is needed to ensure transparency, accountability and fairness in reporting and operations besides boosting performance. Thus, measuring performance of banks in the light of different CG and ownership factors is important to oversee the health of these financial intermediaries. The followings are several
important reasons for a comprehensive performance and CG analysis of commercial banks in Bangladesh.

Firstly, it is generally alleged by the social media and newspapers\(^1\) that Private Commercial Banks (PCBs) in Bangladesh are involved in widespread of corruption by the influence of political parties and/or socially influential business people that causes damage to the depositors of the banks and overall social welfare. As PCBs hold the major shares in the banking industry; ensuring their transparency, accountability and soundness are crucial public concerns and these claims require proper investigation. This research particularly focuses on the performance of all 23 conventional PCBs as a complete set from 2001 till 2012 incorporating 1\(^{st}\), 2\(^{nd}\) and 3\(^{rd}\) Generations banks to measure and then understand whether the alleged claims against the PCBs contain any actual truth.

Secondly, it is important to examine the consequence of the Act, particularly relating to CG and ownership, and to analyze whether there is any efficiency and profitability gap among 1\(^{st}\), 2\(^{nd}\) and 3\(^{rd}\) Generation banks. After privatization and denationalization, banks in Bangladesh are classified into different types and generations. These may exhibit differences in their performances, the extent of implementation of the CG Acts and their proper execution. Moreover, until now, studies have been conducted to measure banks’ efficiency, profitability and CG as standalone pieces. This thesis starts from the point of view that CG is intertwined with banks’ performance. This requires a linked study design and analysis where efficiency and profitability are investigated alongside CG.

Thirdly, this study on CG and banks’ performance is not only concerned with corporate affairs. It also evaluates the overall system through which the community and stakeholders are able to distinguish the status of 1\(^{st}\), 2\(^{nd}\) and 3\(^{rd}\) Generation PCBs and can safeguard their deposits accordingly. Due to the country’s weak and less sophisticated capital and debt markets, banks hold the most dominant position in the financial systems as they are usually the main depository of savings, generally accepted means of payment and extremely important engines of economic growth.

\(^{1}\) Like The Daily Star, The Sun, The New Age.
Fourthly, PCBs have been established in different years and are clustered into 1st, 2nd and 3rd Generations\(^2\) based on their year of incorporation. Over the period, banking regulations developed, modified and changed to provide better governance to banks. However, the Bank the Bank Company Act (1991) by the Bangladesh Bank became mandatory for all banks to follow. As all generations of banks have enjoyed enough time to implement the Act, it is relevant to review this.

Finally, there is a rapidly growing literature on issues of CG and organizational performance in developed countries. Although CG in developing economies has recently received a lot of attention, yet corporate governance of banks in developing economies as it relates to financial performance has almost been ignored by researchers (Ayorinde et al., 2012). In case of Bangladesh, a few empirical works of a specialist nature have been done to measure the influence of market structure on banks’ performance. Thus, the findings of this research are very important for the policymakers of the board, banks’ management, the Central Bank (CB), the government, other stakeholders and also for the potential entrants of the banking industry to understand the crucial variables that determine profitability and efficiency. This thesis provides a comprehensive analysis and explains where each generation of PCBs stand in terms of profit performance and revenue efficiency. Furthermore, the thesis posits the causes that hinder the implementation of the Codes of Corporate Governance (CCG) in the banking sector of Bangladesh.

### 1.4 Research Objectives

Research evidence shows that banking sectors’ performances in emerging economies are significantly influenced by ownership structure, market concentration and institutional variables. This thesis investigates the relationship between the performance of PCBs in Bangladesh and ownership composition by applying the traditional industrial organization theories and hypotheses. To explain the efficiency and profitability performance among 1st, 2nd and 3rd Gen PCBs, the study selects and assesses several ownership and governance

\(^2\) The 4th Generation PCBs are incorporated in 2013 and are beyond the scope of this research.
variables to measure their statistically significance. More precisely, the broad objectives of this research are follows:

1. To measure two performance indicators - Efficiency and Profitability – of 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Gen PCBs rigorously from 2001 to 2012 to establish whether there is any generational gap by using significant Corporate Governance variables that could affect the performance of the conventional PCBs in Bangladesh.

2. To explore the impact of the Bank Company Act, 1991 and the effectiveness of the Code of Corporate Governance (CCG) for Bangladesh on 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Gen conventional PCBs and identify the factors that hinder the implementation of the CCG.

3. To recommend policy actions by analyzing the reasons of performance gaps (if any) among 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Gen PCBs, based on the empirical findings.

4. To contribute to empirical and theoretical understanding of corporate governance using multiple lens from different theories to give holistic picture and applying a mixed methods research design to allow examining the causes of performance gap and to demonstrate the links between practices with performances of 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Gen PCBs from 2001 to 2012.

**1.5 Research Contribution**

Over the past half a century, measuring banking performance in the light of Corporate Governance has been of great interest to many researchers. As there is limited number of studies conducted in the banking sector of Bangladesh, any empirical research will be an addition to the extant literature. Particularly, this research provides a holistic view of the overall banking sector and the empirical findings create a nexus between performance of PCBs and their CG practices. It also distinguishes itself from the existing studies on the Bangladeshi banking industry in four major aspects:

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3 Name of the researchers and their research contributions are highlighted in Chapter 3, 4 and 5.
Firstly, it attempts to find the Efficiency and Profitability gap by incorporating a complete set of 23 PCBs as a panel dataset. For more accuracy, the method used bootstrap Data Envelopment Analysis (DEA) to focus on the static effects. None of the previous studies used bootstrapped results to analyze performance of 1st, 2nd and 3rd Gen PCBs nor did they examine the dynamic effects of compliance of codes on different generations. This study creates a bridge among the standalone extant papers by measuring the performance gap, identifying the variables which are causing the gap and then explaining the reasons those are responsible for the gap.

Secondly, as to date, none of the published studies give a holistic view by investigating the complete set of Bangladeshi PCBs’ efficiency and profit performance. A few of them have considered different aspects of CG against some mandatory or regulatory provisions. The Bangladesh Bank initiated major reform of the financial system and the CG policies through the Bank Company Act, 1991 and the Bangladesh Enterprise Institute, 2004 developed the Code of Corporate Governance (CCG). These are voluntary sets of principles, standards and best practice for ensuring transparency and fairness. An understanding of the overall CG issues covering the performance of all conventional PCBs are explored in this thesis which is more comprehensive than a single issue-specific study. Moreover, literature on CG suggests that there is a huge difference between the practices of CG codes in financial and non-financial institutions because the nature of agency problem is substantially different. This study contributes to the existing banking CG literatures by providing evidence from a hitherto unexplored country, Bangladesh where majority of CG research focuses on non-financial firms leaving a gap for the financial sector.

Thirdly, studies on transition and developing countries are mostly based on cross-country analysis to accommodate comprehensive information. However, regulatory and economic differences among countries are not possible to control for. Thus, avoiding the cross-country problem while focusing on country-specific dynamisms, this single-country study pays attention exclusively to the conventional PCBs in Bangladesh to have a better understanding of the efficiency and profitability variables and their impacts. Furthermore, the depth of

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4 The differences between financial and non-financial institutions are elaboration in chapter 5.
banking data in previous research\textsuperscript{5} was limited. The comprehensive data set for 12 years from 2001 to 2012 is a unique period to capture the changes in the banking industry. The long sample period allows the necessary time frame for a thorough analysis of the impact of regulation by identifying impact of market structure, regulatory reforms and generational gaps. Since 2001, the first year of the sample, all generation banks are legally considered as commercial banks under the Bank Company Act, 1991 that ensures homogeneity of data and yields consistent result. The results identify and confirm variables attributed to performance gaps among 1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs. This research reviews the Code of CG that has not been reviewed since its development for ‘Banks’ particularly and provides a rigorous description and analysis of failures in implementation.

Fourthly, different generations of PCBs are not equally efficient and profitable despite operating under the same regulatory framework. Understanding of the CG factors of banks, ensuring transparency, improving efficiency and increasing profitability are essential for their successful survival. As banks provide loans to other non-financial firms\textsuperscript{6}, an extreme difference between cost and return of fund transmits a harmful signal to the monetary policy and creates instability in the economy as a whole. This study contributes significantly not only to the policymakers but also to other stakeholders to understand the need to upgrade quality, enhance financial stability and increase competition in the banking sector of Bangladesh.

\textbf{1.6 Organization of the Thesis}

The study is divided into 6 main chapters. This ‘\textit{Introduction}’ chapter is the prelude of the following chapters and has already highlighted the importance, objectives, research contribution and the overall framework of the thesis as a whole. Alongside the Context in Chapter 2, there are 3 self-contained chapters. To conduct the analysis in those chapters, several research tools are applied where the justifications for using the selected research tools are provided in relevant chapters together with chapter-specific literature review,

\textsuperscript{5} Highlights of previous research works on CG are provided in Chapter 5.

\textsuperscript{6} Better governance for banking organisations is arguably of greater importance than for other organizations because of the crucial financial intermediation role of banks in an economy and to achieve and maintain public trust and confidence in the banking system.
methodology with detailed descriptions of the research procedures of data collection, data analysis and interpretation of results. Below the content of each chapter are briefly explained.

Chapter-2 presents the ‘Context’ of the research by elaborately explaining the theoretical background of the banking sector of Bangladesh including different types and generations of banks. This chapter also highlights the present corporate governance conditions prevailing in Bangladesh along with types of reforms and performance of banks. It also identifies gaps in literature, states about the scopes of research, explains how the findings of this study may contribute towards filling those gaps and structures the methods of conducting this research further by dividing the subject matter into 3 individual components.

Chapter-3 measures the ‘Revenue Efficiency’ of all 23 conventional Private Commercial Banks (PCBs) in Bangladesh from 2001 to 2012 as a complete set. It started with a brief description of the background and recent development of the banking industry followed by reviewing the concept, types and measures of banking efficiency in transition economies and in Bangladesh. Using financial data from Bankscope and annual reports, Revenue Efficiency is measured for 12 years for 3 different generations of conventional PCBs. Results are estimated using DEA and bootstrap DEA and are elaborately explained in this chapter. The probable causes of inefficiencies are investigated further in Chapter-5.

Chapter-4 analyses the ‘Profitability’ of 1st, 2nd and 3rd Generation of banks in Bangladesh. The chapter started with providing a brief history of the banking system, their regulation and ownership structure with particular focus on the conventional PCBs. It also explains profitability-related theories and hypotheses including Structure Conduct Performance (SCP) Hypothesis, Efficient Structure (EFS) Hypothesis, Relative Market Power (RMP) Hypothesis and Quiet Life Hypothesis (QLH). Utilizing archival data from the period of 2001 to 2012, this chapter conducts a quantitative research and regresses panel dataset using a statistical package. A comprehensive set of internal and external bank-specific, industry specific, macroeconomic and control variables are selected in the light of CG and ownership structure to address numerical the significance of profitability gap among generations. Nonetheless, to find out the plausible reasons of any profitability gap among 1st, 2nd and 3rd Gen Banks, qualitative analysis has been conducted, reported in Chapter-5.
Chapter-5 is about the ‘Corporate Governance’ of the banking sector of Bangladesh. It covers the theoretical background of CG in the banking system, historical development of CG codes, the principles and content of CG codes. It also explores trends of compliance in both developed and developing economies along with the social, political, economic, legal, cultural and infrastructural background of Bangladesh to understand the country’s socio-economic context. Based on pragmatic philosophy, qualitative research has been conducted by administering a semi-structured questionnaire on 20 interviewees who are selected from regulators and different generations of banks to address two vital research questions. The thematic analysis firstly explores the causes/challenges that hinder proper implementation of corporate governance in the Bangladeshi banking sector. Secondly, it explains in details the causes of the performance gap in respect of efficiency and profitability among 1st, 2nd and 3rd Gen PCBs. Besides highlighting the causes, the respondents provided their personal views and examples relating to the problems of governance, practices and solutions for better governance which are provided in the concluding chapter.

Chapter 6 provides the ‘Conclusion’ combining the research findings of Chapter 3, 4 and 5 for 1st, 2nd and 3rd Gen conventional PCBs in Bangladesh from 2001 to 2012. Merging the quantitative and qualitative data, this chapter also highlights policy recommendations for the stakeholders from the perspective of the different groups of interviewees. It also discusses the limitations of the thesis and potential areas for future research.
Chapter 2
Context of the Thesis
2.1 Introduction

This chapter provides the context for understanding the empirical analysis in subsequent chapters (Chapter 3, 4 and 5). Thus, it covers banking history and the evolution of different types and generations of banks with their characteristics. It also emphasizes on the role of the banks in the financial system and in the economy with particular focus on Corporate Governance (CG), the regulatory regime and the ownership structure of Private Commercial Banks (PCBs).

2.2 The Bangladeshi Banking System

The financial sector of Bangladesh has a history of 44 years post-liberation where huge transformation has taken place after the incorporation of the Bank Company Act in 1991. The number of banks was increased which raised the level of competition and the regulatory authority became stricter to ensure transparency, to guarantee better accountability, to meet the capital adequacy ratio and to reduce the rate of defaults. At present, the Bangladesh financial system is composed of scheduled banks along with Non-Bank Financial Institutions (NBFIs), Micro Finance Institutions (MFIs), insurance companies, cooperative banks and the stock exchange. Though many NBFIs have been established the financial system of the country is still dominated by the banking sector.

2.2.1 Historical Development of the Banks

Prior 1971, the banking system of Pakistan operated between East Pakistan (now Bangladesh) and West Pakistan (now Pakistan). The former State Bank of Pakistan had two branch offices – East Pakistan and West Pakistan - along with 14 Pakistani Commercial Banks and 3 Foreign Banks (FBs) abroad. Only 2 Pakistani Commercial Banks were designated for Bangladeshi interests (Board of Investment Website, 2012).

In 1971, Bangladesh became independent and the new government immediately designated the East Pakistan branch of the State Bank of Pakistan as the Central Bank (CB) and renamed
as the Bangladesh Bank (BB). Besides, the then Government of Bangladesh nationalized the entire banking system, and proceeded to reorganize banking activities. It renamed the existing banks in Bangladesh except the FBs. Thus, after independence, the banking industry in Bangladesh started its journey with 6 nationalized commercialized banks, 2 state owned specialized banks and 3 FBs (Bangladesh Bank Website, 2012).

In the early years, virtually all banking services were concentrated in urban areas. Cooperative credit systems and postal savings offices used to handle services for small individual and rural accounts. During the 1970s, the new banking system in the war-ravaged country managed to accumulate a reasonable amount of credit and foreign exchange which was absorbed to finance trade and the public sector (IMF Country Report, 2010). In the late 1970s, the government encouraged banks to finance agricultural development and the agro-based industries which extended another arena of banking with special attention to farmers. Although it had noble objectives, such state-directed lending in both agro and non-agro sectors gave rise to inefficiencies, chronic loan-defaults and huge NPLs to the banks (Board of Investment Website, 2012; Bangladesh Bank Website, 2012).

A major change in direction occurred in the early 1980s with the adoption of a market-oriented development strategy and liberalization of policy reforms. These reforms were undertaken based on the guidelines of the World Bank and the IMF and implemented under rigid conditionality. Also, the Government allowed the commencement of operation of Private Commercial Banks (PCBs) in 1981 (IMF Country Report, 2010; World Bank Report, 2012). These were limited to influential and moneyed businessmen (Rayhan, Ahmed and Mondol, 2011).

However, it enabled the industry to achieve significant expansion where in 3 years, 5 new licenses issued for PCBs and 2 nationalized banks were privatized (NPLs to the banks (Board of Investment Website, 2012). Until 2012, the banking sector of Bangladesh consists of Bangladesh Bank (BB) as the Central Bank (CB), 4 State Owned Commercial Banks (SOCBs), 4 Specialized Development Banks (SDBs), 9 Foreign Commercial Banks (FCBs) and 30 Private Commercial Banks (PCBs). The names are stated in Appendix-1.
2.2.2 Types of Banks

Prior to 1981, State Owned Commercial Banks (SOCBs) and Foreign Commercial Banks (FCBs) dominated whereas local Private Commercial Banks (PCBs) were incorporated later. The activities of the different types of banks are described briefly below.

**Bangladesh Bank (BB)** is the Central Bank and the main regulatory body for Bangladesh's financial system and monetary system. It was established in Dhaka as an independent organization according to the Bangladesh Bank Order, 1972 (P.O. No. 127 of 1972) which was effective from 16th December, 1971 (Bangladesh Bank website, 2012). The core activities\(^7\) of the BB include –

i. to formulate and implement monetary and credit policies,
ii. to regulate, supervise and monitor financial intermediaries,
iii. currency issuance and circulation across the country,
iv. payment system management,
v. holder and manager of foreign exchange reserve of the country,
vi. bankers to the Government,

vii. to prevent money laundering, to implement Foreign exchange regulation Act, and
viii. to preserve all credit information.

The government brought amendments to the BB Order 1972 and the Bank Company Act, 1991 by the Bank Company (Amendment) Ordinance, 2007 which gave the Central Bank greater autonomy and authority on exchange rate and monetary policy, as well as bank supervision. Despite considerable efforts of the BB, the regulatory and supervisory system falls short of international standards according to the Basel Core Principles for Effective Banking Supervision and there is scope to improve regulations, strengthen enforcement and enhance supervisory practices (IMF Country Report, 2010).

There are 4 State Owned Commercial Banks (SOCBs) operating in Bangladesh whose initial focus was to inspire national growth to facilitate trade and industrial finance (Banks’ names

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\(^7\) Besides the core function, the BB is also responsible for supporting functions which are available on-
http://www.bangladesh-bank.org/
are given in Appendix-1). However, the initiative was not very successful due to the lack of CG and undue political pressure in case of loan disbursements (Rayhan, Ahmed and Mondol, 2011; World Bank Report, 2013) They have expanded credit to priority sectors in response to government directives without due regard to quality, often at interest rates below the bank’s cost of funds which led to inefficient resource allocation and widespread bad loans\(^8\). As a result, from the outset, the SOCBs had a very high NPL ratio and frail solvency which continues today.

Considering the visible legacy of inefficiency, some measures have been undertaken recently by the joint effort of the Government and the BB where the government divests ownership. Although the SOCBs’ finances have improved, they remain much worse than the private banks and are undercapitalized beyond the minimum recommended standard of the Basle Committee (Rayhan, et al, 2011, BIS Report, 2006). The advantage of SOCBs is their extremely large branch network throughout the country which averages 900 branches (total 3,521 branches) in 2012 (Bangladesh Bank Website, 2012). However, the cost of these large branch networks includes lack of monitoring and improper control that reflects in huge inter-branch reconciliation balances and high levels of bad debt\(^9\) (Appendix–2).

The Specialized Development Banks (SDBs) or Development Financial Institutions (DFIs) are formed to meet specific credit needs in agriculture and industrial development (Banks’ names are given in Appendix-1). At present, there are 4 specialized banks. 2 banks promote agricultural development and 2 banks support Small and Medium-sized Enterprises (SME). These banks are also fully or majority owned by the Bangladeshi. Their lending practices are not based on sound principles and use imprudently high equity ratios as basis for lending (Islam et al, 2013). To make them efficient and financially viable, restructuring of these institutions is necessary.

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\(^8\) These banks hold sham securities as collateral and bad loans are masked by inadequate accounting practices. The esteem of these problems reduces the level of investment, the productivity of capital and the volume of savings. This results in reduced economic growth and employment opportunities.

\(^9\) SOCBs have not effectively decentralized control of the branches and the span of control still remains with the Head Office. High default occurs because of poor management, lack of little incentive to make good loans and erroneous Government direction and intervention in making high-risk loans to priority sectors, new entrepreneurs, public corporations, sick industries, borrowers with political influence and enduring loan forgiveness programmes.
After liberation, there were only 2 Foreign Commercial Banks (FCBs) whose scope of work was very limited (Banks’ names are given in Appendix-1). Although currently there are 9 FCBs, they lack the widespread branch networks and their operation is effectively limited to the capital city and some other municipal city areas.

Local Private Commercial Banks (PCBs) were established in the decade of the 1980s, initiated under “ownership reform” program to enhance efficiency of the individual banks (IMF Country Report, 2010). Until 2012, there were 30 local PCBs (Banks’ names are given in Appendix-1) which are classified under two categories based on their operations regarding interest charging structure: the conventional PCBs and Islamic Shariah based PCBs. PCBs dominate the banking sector by accumulating and disbursing major amount and quantity of deposits, assets, advances and loans. The performance of PCBs is much better compared with SOCBs and SDBs in all respects and this has helped the PCBs to capture market share quickly (Islam et al, 2013). Moreover, besides the Central Bank’s adoption and implementation of new policies\textsuperscript{10} for the banking sector, a number of agencies have been set up to supervise and monitor specific aspects related to private sector banking. PCBs make money by investing deposits into profitable ventures through lending to entrepreneurs and they earn interest for loans and commissions and fees for their services (Islam et al, 2013). They also had the highest growth due to the dismal performance of government banks (Rayhan, et al, 2011). At present, the PCBs are classified into four generations (described below) depending on their year of establishment.

\textbf{2.2.3 Generations of Private Commercial Banks}

The banking laws do not mention specific generations; however, in practice, PCBs are classified into generations based on their year of establishment:

- **First Generation banks**: Those established between 1982 to 1990
- **Second Generation banks**: Those established between 1991 to 1998
- **Third Generation banks**: Those established between 1999 to 2012
- **Fourth Generation banks**: Those established after 2013

\textsuperscript{10} Policy guidelines of recent regulatory reform is available on BB website on-http://www.bangladesh-bank.org/
Among the four generations of PCBs, the fourth generation PCBs is relatively new and there is not yet enough data about them; thus, their analysis is beyond the scope of this thesis. A brief description of first three generations is provided below.

**a. Generation 1: Denationalization and Expansion**

The first generation PCBs were incorporated in 1982 when the ownership and control was transferred from the public to the private sector, administered through denationalization and by issuing new banking licenses\(^{11}\). The objectives of these banks were to – (a) reduce the deficit of the government to meet the continuous loss of the public enterprises; (b) release the flow of credit to different economic sectors beyond the priority sectors\(^{12}\); and (c) branch expansion for providing services and mobilizing domestic savings of rural people. In total 8 banks are considered as 1\(^{st}\) generation PCBs where 6 are conventional PCBs and 2 are Islamic Shariah based PCBs (Banks’ generations are classified in Appendix–1).

1\(^{st}\) Gen PCBs experienced enormous lower profitability, operational inefficiency and poor customer service because of the absence of prudential and informational regulation\(^{13}\). No sound project-appraisal system was in place to identify viable borrowers and projects where often instructed by the political authorities than economic reasons. It became more common for borrowers to default loans than to repay them. The incentive system for the banks stressed disbursements rather than recoveries and debt collection systems were inadequate to deal with problems of loan recovery. Also, banks lacked proper guidelines regarding the CG framework, board and management structure (Chowdhury and Ahmed, 2009; Islam et al, 2013; Islam et al, 2014).

On the other hand, the lending rates on priority sectors were very low, which did not cover the risk and cost. Consequently, a huge proportion of assets profile became overdue

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\(^{11}\) The 1\(^{st}\) generation PCBs was established following the amended rules and regulation of BB Ordinance, 1972 which brought problems in administration.

\(^{12}\) Such as agriculture, small scale and cottage industries etc.

\(^{13}\) The regulation primarily covered fixation of interest rate on deposits and credits, directed expansion of banks branches, direction of credit to public sector enterprises and to priority sectors.
and the profitability of the banks declined. Thus, financial repression\(^{14}\) was the main cause for poor performance. The interest rate ceiling and high NPL ratios were the main sources of financial repression which ultimately generated lower investment, poor credit rationing, lesser efficiency and overall lower profitability. As a result of the poor performance of Gen 1 banks, major donor agencies pressurized the government to take immediate action to strengthen internal bank management and credit discipline. In 1987, the National Commission on Money, Credit and Banking recommended broad structural changes with the IMF. In 1991, the new Bank Company Act was enacted and 1\(^{st}\) Generation PCBs took licenses to operate under the new laws.

**b. Generation 2: Reconstruction and Rehabilitation**

Second generation PCBs were established after 1991 with the objective to -

i. ensure balanced regional development through branch networking;

ii. diversify control of ownership;

iii. improve customer service and

iv. foster efficiency of the banking sector.

From 1991 until 1998, a total of nine (9) banks received a license to operate banking activities under Bank Companies Act, 1991 where 7 are conventional and 2 are Islami Shariah based PCBs (Banks’ names and generaions are classified in Appendix–1). Banks established under the newly proposed financial reform program seemed to have more positive impact in the industry. With the implementation of the new banking law, the rate of growth of assets and liability of the banking system has increased to a greater extent. The Second Generation banks introduced transparency in their profit and loss statements and the balance sheets as well as incorporated after the financial reform based on the Bank Company Act, 1991. These banks were concerned about the interest rates that they received on loans and the riskiness of loans (Chowdhury and Ahmed, 2009; Islam et al, 2013; Islam et al, 2014).

\(^{14}\) The features of financial repression are - caps or ceilings on interest rates; government ownership or control of domestic banks and financial institutions; creation or maintenance of a captive domestic market for government debt; restrictions on entry to the financial industry and directing credit to certain industries.
c. Generation 3: Liberalization and Competition

With objectives to introduce competition in all spheres of economic activities, 13 banks obtained a banking license after 1998 and these are considered as the 3rd generation PCBs where 10 are conventional PCBs and 3 are Islami Shariah based PCBs (Bank’ names and generions are classified in Appendix–1). During this period the banking sector as a whole made great progress in reducing classified loans not only by writing off some NPLs but also by implementing more effective credit control processes and systems for the newly formed banks.

The banking regulation become more stringent after the Asian crisis in 1998 that forced newly formed banks to diversify their scope of activities towards non-funded incomes to remain profitable. 3rd generation banks adopted modern and innovative technology-driven products and services rapidly that encouraged and captured customer satisfaction. Their banking policy was dynamic where off balance sheet business played a major role in banks profits besides the traditional activities. Non-interest income for the 3rd generation commercial banks captured a huge portion in their total revenue (Chowdhury and Ahmed, 2009; Islam et al, 2013; Islam et al, 2014).

2.3 Role of Banks in the Economy of Bangladesh

The banking sector plays direct and indirect role in the financial system, the economic growth and the social development of Bangladesh. In the financial system, funds are channeled either through financial markets or through financial intermediaries where banks play the dominant role. They create liquidity by transforming assets and facilitate resource allocation among large and small investors based on their needs.

Banks in Bangladesh offer different banking services including securitization of assets, corporate finance, advisory services, SME financing, syndication of funds, project finance, structured finance, trade finance and working capital finance. The new schemes in retail banking services include bundled savings products, deposit pension schemes, salary accounts,
personal loans, home loans, car loans and credit cards. Clients can deposit their money for quarterly, half yearly or yearly basis and enjoy varied rate of interests respectively. Some branches of the conventional commercial banks also provide Islamic banking services. The loan rate varies from time to time; however, from 2001 to 2012, the highest was 21% and lowest was 8% depending on client’s profile, purpose of the loan and duration of repayment.

Branches of the banks are also growing significantly. Banks have now expanded their networks in rural areas to encourage individuals and rural business organizations use banks to deposit their savings and borrow money. This effort directly helps rural Bangladesh to develop, empower village ladies to save and establishes economic development by investing and producing more in the local area. Agricultural and industrial prosperity cannot be imagined without the existence of an expedient banking system in the country (Chowdhury and Chowdhury, 2011).

Along with that, the banking sector plays an important role in other areas of economic development of the country. Not only by contributing to GDP, also the sector makes an enormous contribution to lowering the burden of unemployment and poverty eradication by generating employment. In 1980, the total number of employees in this sector was 59,235 which increased dramatically and by 2012 reached approximately 156,935 excluding the foreign banks.

The banking sector of Bangladesh has not seen any major collapse during the current global financial crisis because the sector has limited integration to the global financial system, low exposure to foreign exchange-structured products and credit derivatives, has a concentrated ownership structure, and a smaller size of the capital market compared to the region and resilient exports. Moreover, through the banking channels the country earns huge amounts of remittance that contributes to economic and social growth.

### 2.4 Reforms of the Banking Sector

Since the beginning of 1990s, the banking sector of Bangladesh has experienced different reform programmes to upgrade policy guidelines, to improve the institutional capacity and to
enhance legal enforcement. Banks adopted different measures and initiatives under the Banking Sector Reforms Programme that included deregulation of interest rates, loan classification and provisioning requirement, adoption of indirect and market oriented monetary policy instruments, strengthening the operations of the banking system by improving the legal environment, making the currency taka convertible and computerization of bank branches with a view to making the banking system competitive, effective and at an international standard.

With a view to maintaining solvency, efficiency, profitability and stability, the Bangladesh Bank initiated several policy reforms including a greater emphasis on risk management, periodic review of stability, stress testing of banks and other items under three broad categories. Policy Reforms are promulgated by the BB to enhance the effectiveness of the strategic frameworks which includes Risk-Based Capital Adequacy, Loan Classification and Provisioning, Credit Risk Grading, Interest Rate Deregulation (Loan Pricing) and Performance Planning System (PPS). To improve the Institutional Capacity of the financial sector, BB introduced Off-site Supervision, Credit Information Bureau (CIB) and Large Loan Reporting System (LLRS). Fragility in the Legal Framework is one of the major drawbacks of the Bangladeshi financial system where enforcement of legal action is even worse. To strengthen the legal infrastructure of the financial system, the following Acts are enacted: The Bank Company Act, 1991, Artha Rin Adalat Act, 1990 and the Bankruptcy Act, 1997\(^\text{15}\).

In 2004, the Bangladesh Enterprise Institute (BEI) published the first comprehensive Code of Corporate Governance (CCG) for the Financial Institutions and NGOs in Bangladesh (BEI, 2004). This was the catalyst in bringing about policy reforms on CG in the regulatory framework. The objective of the CCG is to improve the general quality of CG practices in Bangladesh by adopting and following the specific steps. Full implementation of the Code in all banks would undoubtedly take a number of years and would require the cooperation of a vast number of relevant stakeholders.

However, after a decade of incorporating the CCG, the implementation of the codes through advocacy and training has not been fully executed. Chairmen, directors and senior

\(^{15}\) Details of these regulatory reform is available on BB website on-\text{http://www.bangladesh-bank.org/}
managements of banks are not yet aware of the cost and benefits of good CG practices. Alongside the BEI guideline, the Bangladesh Securities and Exchange Commission (BSEC) has provided another guideline on CG for listed companies on a “Comply or Explain basis” in February 2006 that particularly emphasizes on board structure and composition, audit committee, internal audit and control and external audit. However, since development, the Codes have not been revised and no panel was formed for discussing the applicability in Bangladeshi banking context (Chowdhury, 2012).

2.5 Present Banking Corporate Governance

According to the Code of Corporate Governance (CCG), the Bangladesh Bank is the main authority body to deal with bank licenses and to monitor their operations by providing periodic guidelines. Other components of the code include policy on capital requirement, loan classification, provisioning and rescheduling, constitution of the BODs, appointment of BODs from the depositors; directors’ fit and proper test criteria; directors’ ownership, duties and responsibilities and restrictions on lending to BODs, rules regarding appointment of the CEO and their responsibilities; formation and responsibilities of the Audit Committee and enhanced disclosure requirements (Details are provided in Appendix 3-12). In reality, due to ineffective implementation and improper evaluation of these codes, many banks have indulged in irregular activities and suffer difficulties that hamper their efficiency and profitability.

Not only the SOCBs but also the PCBs experience pressure from the political parties and the Boards. In 2012, it was reported in the daily newspapers that about Tk 100 billion (GBP 800 million) had been plundered in three years, from which a big chunk allegedly was diverted to politically influential people and much was possibly transferred abroad. It was alleged that loans were given to fake companies because of political pressure, corrupt Boards of Directors and connivance of dishonest bank officials (Jamaluddin, 2012).

Also, the Bangladesh Bank has detected irregularities in disbursement of loans by a commercial bank and the loan recipients’ names were published in newspapers. These loans became a burden for the bank later while no actions were taken against those officials, rather they were promoted. Although many irregularities have been detected by the Central Bank, no
punitive action is taken. Only the major scandals like BASIC Bank and Hall-Mark case\textsuperscript{16} attracted media coverage after repeated irregularities in the banks had remained unnoticed. Almost all banks have cases of cheque forgery, investment fraud and bribery while some loans are sanctioned with insufficient collaterals and without proper risk analysis.

It is also alleged that some Board of Directors (BoDs) interfere in banking activities beyond their authority, which is a violation of the Central Bank’s rules. Collaborating with the political parties, the BoDs directly interfere in the loan sanctioning process to increase their personal net worth at the cost of depositors’ money and some officials cater to the BoDs illegitimate interests for their own benefits (Byron, 2012). As a result, the banking industry holds a large percentage of Non Performing Loans (NPLs) of 11.90% amounted BDT 73.3 billion as of December 2012 (Bangladesh Bank, 2013), which is in fact one of the highest in comparison to the NPL ratios of the neighbouring countries like India of 3.4%, Sri Lanka of 1.8% and Pakistan of 14.5% (World Bank Report, 2013).

This fragile institutional and operating environment contributes to poor performance of banks that could lead to suspension of businesses. However, in reality, the BB prefers to rehabilitate them as it is alleged that there is a coalition between the BB officials and the BoDs to overlook such anomalies. Besides, almost all PCBs boards have current or ex-lawmakers and influential business people with political contacts which make it difficult for the BB to enforce law\textsuperscript{17} \textsuperscript{18} (Harmachi, 2012).

\textsuperscript{16} Wide descriptions of these cases are found in the dailies like the Daily Star, Financial Express etc.

\textsuperscript{17} Politicization are often considered as one of the root causes of loan default or bad loans which are damaging if written off because of poor quality of underlying collaterals will impede the profitability. Moreover, the liberalization has not yet translated into efficiency gains due to lack of proper CG implementation and supervision.

\textsuperscript{18} The BB gave approval for setting up new banks amid huge political pressure by the ruling party Awami League and its allies. There was a condition that the sponsors of the banks would have to submit legally earned money or white money as Tk 400 crore paid-up capitals for setting up the banks. Leaders of the ruling parties and the business people loyal to them got the approval for all the banks. A newly licensed bank, Modhumoti Bank Ltd, whose Chairman of the EC is Barrister Sheikh Fazle Noor Taposh, MP, nephew of Bangladeshi PM. Other BODs are Anwar Group Chairman Anwar Hossain, Labib Group Chairman Salahudding Alamgir, Meghna Group Chairman Mostafa Kamal, Sharmin Group Managing Director Md Ismail Hossian, Bengal Group Director Humayun Kabir and CEO of Modhumoti Bank Md Mizanur Rahman – Source: The Daily Star, the New Age, The Financial Express, bdnews24 etc.
Thus, corruption patronized by political parties, excessive interference from the government, dishonesty of the BoDs, limited autonomy of management, unethical audit practice and weak supervisory role erodes banking performance. All these raise serious concerns about the quality of CG which provides an impetus to explore these issues in detail.

2.6 Selected Performance Indicators of Banks

The performance of the banks has improved by sustaining growth making double-digit profit percentages and surviving cut-throat competition. In the banking sector, the market shares of FCBs and SDBs have not changed much whereas the contributions from PCBs are immense. Also, the growth of local PCBs was huge compared with other categories of banks. In 2001, conventional PCBs had total number of employees of 21,986; number of branches of 1,099; Equity of BDT 16,943 million; total Assets of BDT 343,226 million; Deposit of BDT 279,099 million; Loans of BDT 204,646 million and NPL of BDT 29,546 million.

In 2012, number of employees reached at 60,685; branches expanded to 2,448; Equity raised to BDT 280,418 million; Assets increased to BDT 313,8711 million; Deposit boosted to BDT 2,627,664 million; Loans went up to BDT 196,8405 million and NPL reached at BDT 98,372 million (Bangladesh Bank Website, 2012). In 2012, the local PCBs owned 58.8% of bank assets which are mainly funded by rapid deposit growth and used for trade finance, working capital lending, term loans to industry, large agricultural loans and SMEs.

Prior to the incorporation of 4th Generation banks in 2013, a total of 47 scheduled banks were in operation whose distribution of assets, deposits and branches are provided in Table–1.

<table>
<thead>
<tr>
<th>Type</th>
<th>No</th>
<th>Asset Amount</th>
<th>Asset %</th>
<th>Deposit Amount</th>
<th>Deposit %</th>
<th>No of Branches</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
<th>% of Total Branches Urban</th>
<th>% of Total Branches Rural</th>
<th>% of Total Branches Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCB</td>
<td>4</td>
<td>1384.3</td>
<td>28.5</td>
<td>1044.9</td>
<td>28.1</td>
<td>1243</td>
<td>2161</td>
<td>3404</td>
<td></td>
<td>36.52</td>
<td>63.48</td>
<td>100</td>
</tr>
<tr>
<td>SDB</td>
<td>4</td>
<td>295.4</td>
<td>6.1</td>
<td>183.4</td>
<td>4.9</td>
<td>157</td>
<td>1225</td>
<td>1382</td>
<td></td>
<td>11.36</td>
<td>88.64</td>
<td>100</td>
</tr>
<tr>
<td>PCB</td>
<td>30</td>
<td>2854.6</td>
<td>58.8</td>
<td>2266.5</td>
<td>60.9</td>
<td>1805</td>
<td>1011</td>
<td>2816</td>
<td></td>
<td>64.10</td>
<td>35.90</td>
<td>100</td>
</tr>
<tr>
<td>FCB</td>
<td>9</td>
<td>320.8</td>
<td>6.6</td>
<td>227.1</td>
<td>6.1</td>
<td>62</td>
<td>0</td>
<td>62</td>
<td></td>
<td>0</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Industry</td>
<td>47</td>
<td>4855.1</td>
<td>100</td>
<td>3721.9</td>
<td>100</td>
<td>3267</td>
<td>4397</td>
<td>7664</td>
<td></td>
<td>42.63</td>
<td>57.37</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Bangladesh Bank Website, 2012 (www.bangladesh-bank.org)
The banking sector of Bangladesh showed no market concentration among the big banks where the rate of concentration diminished from 2001 to 2012. In 2001, the Herfindahl-Hirschman Index (HHI) score was 11.05 where it came down to 4.45 in 2012. Similarly, the Concentration Ratio (CR) which is measured on the basis of highest asset size of top 3, 4 and 5 banks showed a negative trend. It is apparent over twelve years market concentration indices show that the banking industry is heading towards healthy competition reflecting a change in the market structure shown in Figure-1.

Figure–1: Concentration Ratio and HHI

Source: Author’s Calculation

2.7 Research Scope and Rationale

There are policies, rules and regulations for every banking activity; however, the implementation of those policies is questionable. Moreover, until today, banking supervision is still compliance-based, relying on checklist rather than forward-looking quantitative and

19 Market concentration is measured employing the Herfindahl–Hirschman Index (HHI) and Concentration Ratio (CRk) to show the extent of market control of the largest banks and to illustrate the degree to concentration. These are widely used summary measure of concentration indices which often serves as a benchmark. HHI is calculated by squaring the market share of each firm competing in a defined geographic banking market and then summing the squares. Concentration Ratio one of the most frequently used measures of concentration which is the summation over the market shares of the k largest banks in the sector. Details are described in Chapter-4.
qualitative judgments to implement policy, execute procedures and ensure CG. Due to weak supervision of the Central Bank, power politics and family dominance exists within PCBs that deteriorates their efficiency and profitability. As banks are considered the main driving force of the economy, it is very important to analyze banks’ performance by identifying the causal factors of CG and ownership structure.

Besides the local need, globalization has created further pressure on the banking sector to ensure the CG standard compatible internationally for attracting FDI. Like other developing countries, understanding banking CG practices and improving the standard is considered a top priority agenda for the financial sector. Moreover, understanding local CG practices is vital for the developing countries because necessary efforts can improve the standard which leads to greater access of lower cost of capital global finance.

Thus, there are ample reasons to examine the impact and to identify the plausible causes of CG non-compliance of 3 different generations of PCBs in Bangladesh. Tracing the gap between the standards and reality of CG practices and ownership structure can be followed by an appropriate action for improvement of PCBs’ efficiency and profitability. Moreover, rigorous research on this area and comprehensive comparative results among different generations will help to uncover the causal mechanism between policies and performance and are expected to raise cautionary flags among the stakeholders.

2.8 A Mixed Method Approach

To understand the overall CG challenges and PCBs’ performance, both quantitative and qualitative data are needed. The quantitative data can demonstrate the efficiency and profitability deviations among 1st, 2nd and 3rd generation PCBs (if any) through numbers whereas qualitative data explores the institutional and organizational reasons through in-depth analysis. This thesis uses a mixed methods approach combining both quantitative and qualitative research techniques to match the needs of the research objectives.

A complete set of 23 local PCBs have been selected from the year 2001 to 2012 for analyzing efficiency and profitability in the light of CG. **Chapter-3** and **Chapter-4** use quantitative
methods and techniques to explore the efficiency and profitability of 1st, 2nd and 3rd generation PCBs whereas Chapter-5 investigates the plausible reasons for the gaps among the generations using qualitative data. As there is no database available about CG in Bangladesh, qualitative data were gathered through interviews of different stakeholders whereas quantitative data were mainly collected from the Bankscope and respective banks’ annual reports. Furthermore, each of these chapters is self-contained in terms of research objective, literature review, methodology, results and analysis of findings and conclusion.

Finally, a triangulation approach is adopted in Chapter-6 merging the qualitative and quantitative findings. As discussed, both types of data facilitate each other to understand the reality, challenges and ways to improve PCBs’ governance standards. However, before drawing any conclusion from the interview data, the thesis reviews related documents, articles and newspapers as a tool for cross verification.

2.9 Chapter Conclusion

In Bangladesh, a series of regulatory, supervisory and prudential frameworks for PCBs are present but the quality of enforcement seems to be dubious. The banking laws permit the CB to penalize banks for malpractices or non-compliances of rules and procedures; however, often regulators fail to execute their duties properly due to the intervention of influential people and political parties. This research aims to uncover the prevailing situation among 1st, 2nd and 3rd generation PCBs regarding the core elements of CG - ownership structure, board issues, management compensation, audit and disclosure. The remaining chapters assess the performance of different generation PCBs and address the challenges that they are facing in the light of CG, emphasizing the accountability and composition of the board and the relationship with the management.
Chapter 3
Efficiency of PCBs
3.1 Introduction

The banking sector of the emerging economies is facing stronger competition due to globalization of the financial system; thus, banking strategies are being formulated based on different measures to improve overall efficiency under a well-functioning Corporate Governance (CG) structure. After the liberalization the efficiency of the banking sector of Bangladesh has emerged as a prime issue to check whether resources are allocated optimally or not. As efficiency\(^{20}\) is linked to banks’ financial performance, it is a great concern to the researchers, bank owners, managers, customers and policy-makers to measure different generations of banks efficiency. This section of the thesis will concentrate on determining the efficiency of all the 1\(^{st}\), 2\(^{nd}\) and 3\(^{rd}\) Generation conventional Private Commercial Banks (PCBs) performance in context of Bangladesh.

3.1.1 Importance of the Study

In the economy of Bangladesh where capital and debt markets are undeveloped, banks are considered the principal channel for investment and saving. Hence, measuring the efficiency of banks is an important indicator to oversee the financial intermediation. After 1982, the fragmentation came through privatization where liberalization and reform of the banking sector changed the structure of the industry and the entry of new private banks increased competition. At present, there are four generations of banks in Bangladesh where the generations are attributed based on their year of incorporation (explained in Chapter-2). Therefore, it is necessary to measure the impact of reforms on different generation of banks’ efficiency in Bangladesh.

Literature on banks’ efficiency in emerging economies showed that banking efficiency improves after deregulation and reform under new ownership and governance structure. Several works had been done to measure efficiency of commercial banks’ in transitional and

\(^{20}\) The concept of efficiency is introduced by Debreu(1951) and Koopmans(1951) and further disaggregated by Farrell(1957) into allocative and technical efficiency where the efficiency score lies between zero and one. If it is equal to one then banks are operating on efficiency frontier using banking input optimally to produce output; otherwise, they are considered to be inefficient in the allocation of resources.
developing countries of the world including Bangladesh; however, no relevant works have been reviewed to understand efficiency differences among 1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd} Generation of banks operating in Bangladesh. Bangladesh adopted the banking reform policy in 1991 and accordingly observed many regulatory and administrative changes on ownership pattern, board composition and bank management that leads to fierce competition and may create efficiency gap among different generations of banks. In case of Bangladesh, a handful of research\textsuperscript{21} has been done in the area of efficiency; which dues ample opportunities to evaluate banking efficiency employing different variables and measures.

Though literatures identified several factors of efficiency differences among banks in transitional countries, this chapter will predominantly concentrate on ownership influence, corporate governance and banking generation to explore the significant determinants of the Bangladeshi banking sector’s efficiency. Efficiency measures on banks predominantly use accounting approaches which have limitations and are inferior approach (Berger and Humphrey, 1997). This chapter presents an alternative approach, the econometric approach, by employing bootstrap\textsuperscript{22} Data Envelopment Analysis (DEA) in determining and comparing revenue efficiency among different generations. This chapter evaluates banks’ efficiency using a superior method where the outcome will be useful to policy makers, directors and managers to formulate future strategies.

### 3.1.2 Objective of the Study

The principal aim of this chapter is to analyze the theoretical foundations of bank efficiency, understand the measures of efficiency briefly and find out the variables affect performance of the Private Commercial Banks (PCBs) in Bangladesh. As extant literatures on emerging economies banking sector showed evidence that efficiency has significantly been influenced by ownership structure, market concentration and institutional variables; the chapter also seeks to identify the statistically significant factors those are applicable to the Bangladeshi conventional PCBs’ efficiency. Using a set of input and output variables of banks, this chapter

\textsuperscript{21} The names of the researchers and their findings are provided in the following section.

\textsuperscript{22} In statistics, bootstrapping is a method for assigning measures of accuracy to sample estimates that allows estimation of the sampling distribution of almost any statistic using the broader class of re-sampling methods.
presents the efficiency difference among three generations of banks where the causes of variation (if any) are further analyzed in Chapter-5 with the light of Corporate Governance.

More precisely, the major objectives of this study are:

1. To measure and investigate whether there is an efficiency gap among 1st, 2nd and 3rd Generation Private Commercial Banks (PCBs) employing bootstrap Data Envelopment Analysis (DEA)
2. To examine the impact of banking sector reforms in 1991 and to assess the significance of deregulation, ownership structure, management technique and size on the revenue efficiency for the conventional PCBs
3. To identify the best practiced bank(s) and the ranks of different generations conventional PCBs based on revenue efficiency

3.1.3 Research Contribution

Over the past half a century, extensive literature has been well established on measuring bank’s efficiency that predominantly focused on the developed countries. Research on developing countries’ banking sector is limited where less research has been conducted on the banking sector of Bangladesh. As there is limited number of studies conducted, any empirical research in this area will be an addition to the extant literature.

Firstly, this chapter attempts to find the efficiency differences among 1st, 2nd and 3rd Generation conventional PCBs in Bangladesh where existing studies focus on static effects of different governance issues and none examines the dynamic effects of governance changes on different generations. This empirical analysis identifies the best practice and ranks banks based on their revenue efficiency. The studies carried out so far on banking sector of Bangladesh did not rank banking generations based on efficiency.

Secondly, researchers mostly used nonparametric DEA to measure banks’ efficiency; however, this chapter uses bootstrap data (explained in details in the later part of this chapter) for the DEA analysis that is considered to be more accurate to identify factors for explaining the concept of revenue efficiency.
Thirdly, the chapter uses data for 12 years which is a sufficient period to encapsulate the far-reaching changes in the banking industry brought by gradually deepened and broadened reforms towards a market-oriented banking system. Since 1991, all generations of banks are legally considered to operate under the Bank Companies Act which ensures homogeneity of data and yields consistent result.

Finally, a recent trend of efficiency study in transitional and developing countries has been based on cross-country analysis. While these studies provide comprehensive information on banking reform across developing countries, criticism arises from the estimation of the cross-border best practice frontier because the fundamental cross-country differences in regulatory and economic sector cannot be controlled. Whereas, a single-country study can avoid the problem by controlling the across-nation differences and better accounts the country's specialties. Thus, this study pays attention exclusively to the conventional Private Commercial Banks (PCBs) in Bangladesh to better understand banks’ revenue efficiency.

3.1.4 Organization of the Study

Apart from the introductory section, the rest of the chapter has 4 sections which are structured as follows. Section 2 is the Review of Literature that provides a brief description of the concept, types and measures of efficiency followed by the studies on banking efficiency in transitional as well as in Bangladesh. Section 3 presents the Methodology which describes about the data set, research method and the model. Section 4 reports the Results of the descriptive statistics and the revenue efficiency estimation which is obtained using bootstrapped DEA on the conventional PCBs in Bangladesh. Finally, Section 5 gives the Chapter Conclusion.


24 Kraft, et al. (2006) differences in regulatory and economic environments across countries and especially developing and transition countries are very strong and it is doubtful to control these variations.

25 Examples of single country analysis:- Kraft and Tirtiroglu(1998); Matousek and Taci(2002); Jemric and Vujcic(2002); Hasan and Marron(2003); Nikiel and Opiela(2002); Kraft, et al. (2006); Gilbert and Wilson(1998); Leightner and Lovell(1998); and Hao, et al. (2001).
3.2 Review of Literature on Efficiency

It is important to understand the concept of efficiency, types, estimation techniques and the selection method of inputs and outputs to measures which are vividly explained in this section. The following part also presents the key findings in the literature on efficiency in other developing countries and in Bangladesh followed by some criticism of extant literature.

3.2.1 Origin and Definition of Efficiency

The concept of efficiency was first discussed in 1951 by Koopmans and Debreu. Later in 1957, Farrell was motivated for developing better methods and models because he observed while solving problems, researchers failed to combine the measurements of multiple inputs into any satisfactory overall measure of efficiency. Responding to these inadequacies, he proposed an activity analysis approach that could adequately deal with the problem and be applicable to any organization while extended the concept of ‘productivity’ to the more general concept of ‘efficiency’.

The term efficiency is a part of the overall performance of a firm that measures the ratio between input and output utilization in the process of producing a product or a service. In other words, at a point in time how much output can be produced from a given stock of resources where producers charge price to customers and the charge is reflected in the cost of the factors of production used to produce the goods or service. In this regard, Hollingsworth and Parkin (1998) defined efficiency as the allocation of scarce resources that maximizes the achievement of aims.

Producers are efficient if they have produced as much as possible with the inputs they have actually employed and if they have produced that output at minimum cost (Greene, 1997). These final goods (=outputs) were to be satisfied in stipulated amounts while inputs were to be optimally determined in response to the prices and amounts exogenously fixed for each output (=final good). Given an economic objective and information on relative prices, an individual optimum is defined as a profit maximizing objective given input and output prices, or cost minimization objective given factor inputs and input prices. However, efficiency
varies depending on technology, production process and differences in the environment where productions occur or services produce. Efficiency can be measured in different ways such as by minimizing cost to produce given amount of output or maximizing output given the quantity of input or maximizing profit by generating more revenues that could offset the cost.

3.2.2 Types of Efficiency

Farrell (1957) categorized efficiency into two major components: (i) technical efficiency - which can be regarded as an output oriented approach (if focus is on obtaining maximum output from a given level of inputs) or an input oriented approach (if focus is on minimizing the quantity of inputs for a given level of outputs) and (ii) allocative efficiency means the optimal use of inputs in respect of given input prices. The basic concept for measuring technical efficiency of a firm is to estimate its production function which is fully efficient (i.e. frontier production function). On the other hand, allocative efficiency reflects the ability to achieve the optimal combination of inputs and outputs for a given level of prices. Thus, the types of efficiency comprises both technical efficiency and allocative efficiency where technical efficiency addresses the issue of using given resources to maximum advantage and allocative efficiency of achieving the right mixture of resources to maximize benefits. Siems and Barr, (1998, p.13) summarized that "technical efficiency is about doing things right, allocative efficiency is about doing right things and economic efficiency is about doing right things right".

a. Technical Efficiency

Farrell extended the Pareto-Koopmans property\(^{26}\) of inputs-outputs and explicitly eschewed any use of prices and/or related "exchange mechanisms". The restricted to meaning "technical efficiency" was then distinguished between "allocative" and "scale" efficiencies. According to

\(^{26}\) According to Koopmans(1951), a producer is considered technically efficient if and only if, it is impossible to produce more of any output without producing less of some other output or using more of some inputs. Technical efficiency is measured as the ratio between the observed output and the maximum output, under the assumption of fixed input or alternatively, as the ratio between the observed input and the minimum input under the assumption of fixed output.
Farrell (1957), technical efficiency means producing maximum output from a given set of inputs. An increase in any output requires a reduction in at least one other output or an increase in at least one other input and vice versa. The technical frontier can be output-oriented and input-oriented which can be measured employing either a nonparametric (mathematical programming) or a parametric (econometric). Technical efficiency index are scored from 0% to 100% where 100% represents full efficiency (the production unit belongs to the production frontier), whereas scores below 100% indicate some relative inefficiency.

Technical efficiency can be measured by two main approaches – (a) the input approach and (b) the output approach. The input approach considers the ability to avoid waste by producing as much output as input usage allows, i.e. evaluating the ability to minimize inputs keeping outputs fixed. In other words, input-oriented technical efficiency or X-efficiency refers to selecting the appropriate inputs, i.e. the optimal scale and mix of inputs; given the output bundle where the most common measures applied is cost efficiency (Farrell, 1957).

On the other hand, output-oriented technical efficiency focuses on increasing output without changing the inputs used which is used for revenue analysis. The output approach considers the ability to avoid waste by using as little input as output production allows, i.e. evaluating the ability to maximize outputs keeping inputs fixed (Farrell, 1957). The output-input oriented efficiency measures differ form Koopman’s measure in the presence of input-output slacks.

**b. Allocative Efficiency**

Farrell’s technical efficiency measure holds the notion of “equal access assumption” that demands less data and distinguishes from “allocative” or “scope” and “scale efficiencies”. Allocative (or price) efficiency refers to the ability to combine inputs and outputs in optimal proportions in the light of prevailing prices and is measured in terms of behavioural goal of the production unit, for example, observed vs. optimum cost or observed profit vs. optimum profit. It is also called social efficiency, means that scarce resources are used in a way that meets the needs in a pareto-optimal way or in the best possible manner. If price information is available, it is possible to compute allocative efficiency from either the input or the output side because it depends on the input mix and the relative input prices. Allocative efficiency is homogenous of degree zero in input quantities and input prices which lies between 0 and 1.
A diagram in Figure–2 explains this concept lot easier. Suppose, the firm produces a single output \((y)\) using two inputs \((x_1\) and \(x_2)\), considering constant returns to scale. The diagram represents the decomposition of the cost efficiency in three components – technical efficiency, slack and allocative efficiency in relation to the input combination \(x_a\). Isoquant \(L(y)\) represents fully efficient firms and can be used as a benchmark to measure technical efficiency of other less efficient firms (Farrell, 1957).

Technical efficiency is the distance to the production frontier that provides the upper boundary of production possibilities which is \(\rho_a x_a\). On the other hand, technical inefficiency is expressed by the distance between \(\rho_a x_a\) and \(x_a\) where all inputs could be proportionally reduced by the distance without affecting output level. In the figure, the technical inefficiency component (T) is shown (between the red and the green line) and the slack component (S) is the displayed (between the green and the black line). Similarly, allocative efficiency of the firm can be measured if the input price information is available which requires the use of right input mix in producing the correct output mix in the light of their respective prevailing prices (Farrell, 1957). The allocative efficiency component (A) is the distance from the isocost line (between the black and the blue line).

**Figure–2: Representation of Allocative Efficiency, Technical Efficiency and Slack**

In Figure–2, the input combination \(x_e\) lies on the isoquant and on the isocost (the blue line) and therefore it is efficient from the allocative and from the technical perspective. The input combination \(x_b\), although technically efficient, exhibits some cost inefficiency that makes it
inefficient from the allocative point of view. Then, $x_a$ is not technically efficient because it is not in the isoquant and consequently it does not satisfy conditions for allocative efficiency\textsuperscript{27}.

### 3.2.3 Measures of Efficiency

There are two most important efficiency measures which are commonly used in literatures namely cost efficiency and revenue efficiency. They are discussed below.

**a. Cost Efficiency**

According to Maudos, Pastor, Perez and Quesada (2002:38), “cost efficiency corresponds to one of two most important economic objectives - cost minimization”. It is derived from a cost function in which variable costs depend on the input prices, quantities of variable outputs and any fixed inputs or outputs, environmental factors, random error and efficiency (Berger and Mester, 1997). As explained earlier that allocative efficiency is necessary but not sufficient for firms to achieve the cost efficiency because technically efficient firm uses inappropriate input mix, given the input price and technology. Thus, cost efficiency is measured as the ratio between minimum cost and observed cost. The cost efficiency of bank is estimated as the cost needed to produce output vector if the bank is as efficient as the best-practice bank in the sample facing the same exogenous variables divided by the actual cost of bank, adjusted for random error (Berger and Mester, 1997).

In Figure–3, AA` (blue line) shows the factor input price line ratio that shows a variety of combinations of inputs required the same level of expenditure where $X_1$ and $X_2$ are the two factor of production. This price ratio line AA` shows that any combination of the two inputs can be chosen to produce given level of output with same expenditures. The red line SS` is the

\textsuperscript{27} Technical efficiency is a necessary but not sufficient condition for allocative efficiency while allocative efficiency implies technical efficiency because by assumption input combinations requires price which is on the left of the isoquant. Moreover, the correct identification of slacks is much more important in allocative efficiency analysis since they are one component of cost inefficiency. Similarly, the same conclusions would be obtained under the output approach of allocative efficiency.
isoquant that shows the combination of factor inputs to produce optimal level or maximum level of output if it is perfectly efficient (Coelli, 1996).

The firm attains the equilibrium at point Q*, the price line (blue line) makes tangent with isoquant curve (red curve). The point Q* is technically and allocatively feasible level of output because it is the equilibrium point where price ratio is equal to the marginal rate of technical substitution producing optimal level of output without wastage of resources.

Figure–3: Cost Efficiency

Thus, technical efficiency is measured by the ratio OQ/OP and technical inefficiency can be expressed by the distance QP and measured by the ratio OQ/OP = 1 - QP/OP where all inputs could be proportionally reduced by the distance QP without affecting output level. Similarly, allocative efficiency is located at point P and can be measured by the ratio RQ/OQ that requires the use of right input mix in producing the correct output mix in the light of their respective prevailing prices (Coelli, 1996).

Cost efficiency has a positively sloped cost function that indicates positive relationship between cost and factor input prices. If factor input belongs to input requirement set then cost efficiency lies between 1 and 0. It is homogenous of degree -1 in inputs. Cost efficiency is non-decreasing in output and homogenous of degree 0 in factor input prices and depends on relative factor input prices (Coelli, 1996).
b. Revenue Efficiency

In contrast to cost efficiency, standard profit efficiency or revenue efficiency refers the ability to generate revenues by varying outputs and inputs. The profit function from which revenue efficiencies are obtained does not hold all output quantities statistically fixed at their observed inefficient levels (Isik and Hassan, 2002). Standard profit efficiency is the proportion of maximum profits earned which is also known as Revenue Efficiency. Berger and Mester (1997) considered the revenue efficiency concept superior to the cost efficiency concept for evaluating the overall performance of a firm²⁸.

Sometimes, firm does not maximize revenue due to technical inefficiency or inappropriate output mix that hampers revenue generation. Revenue efficiency is measured as ratio between observed revenue and maximum revenue. This is explained in Figure–4.

![Figure–4: Revenue Efficiency](image)

If firm produces output at point Q* then it is in equilibrium point where marginal revenue is equal to price ratio. If it produces output inside the production possibility frontier at point ‘P’

²⁸ Primarily, it is based on the notion of profit maximization which maximizes marginal revenue reducing marginal costs. Second, it deals with both input and outputs inefficiencies whilst the cost function accounts for only inefficiencies in inputs (Vivas, 1997). Finally, Isik and Hassan (2002) highlighted that cost efficiency models ignore the possibility that a bank can be inefficient if it produces too few or a non-optimal mix of outputs given the inputs used and the prices faced; thus can misrepresent the nature and extent of efficiency.
then it is a technically and allocatively inefficient whereas if it produces the output at point ‘R’ then the firm will obtain higher revenue than at point ‘P’. Thus, revenue efficiency is the ratio of revenue generating ‘y’ selling output at point ‘P’ to revenues generated by selling output at ‘Q*’. It is the ratio between observed revenue and maximum revenue which lies between 0 (zero) and 1 (one). It is non-increasing in input prices and homogenous of degree 1 output prices. Revenue inefficiency is not only due to technical inefficiency (OQ/OP) but also due to allocative inefficiency (RQ/OQ). Output produced at point ‘Q’ is technically efficient but it is not revenue efficient (Coelli, 1996).

3.2.4 Estimation Techniques of Efficiency

Essentially there are two main methodologies for measuring efficiency: the econometric (or parametric) approach, and the mathematical (or non-parametric) approach. The difference between methods are based on the assumptions of the data relating to “(a) the functional form of the best-practice frontier, (b) whether random error is taken into account or not and (c) if there is random error, the probability distribution assumed for the inefficiencies” (Berger and Humphrey, 1997, p. 5). The two techniques use different methods to envelop data and in doing so they accommodate random noise and ensure flexibility in the structure of production technology.29 30 In the literature, they have been applied to calculate efficiency and estimate frontier functions. This research is based on non-parametric technique and prime focus will be given on that while brief descriptions of the parametric techniques are also provided below.

a. Parametric Approach

Parametric approach presumes an explicit functional form to estimate the frontier of either cost or profit functions. According to Molyneux and Iqbal (2005, p 202), “This approach is

29 The long and gradual process of the development and the application of efficiency analysis technique found in Daraio(2009)

30 The econometric approach is stochastic and attempts to distinguish between the effects of noise and the effects of inefficiency while the linear programming approach is deterministic and under the voice inefficiency melt noise and real inefficiency. Secondly, the econometric approach is parametric and suffers from functional form misspecification while the programming approach is non-parametric and so it is immune to any form of functional misspecification.
stochastic since it allows random disturbance along with inefficiency residuals to be accounted for when estimating the efficient frontier”. The drawback is the parametric approaches lies on imposing a specified functional form that assumes the shape of the frontier. If it is mis-specified, the calculated efficiency may be confounded with specification errors.

There are three major parametric frontier techniques, i.e Stochastic Frontier Approach (SFA), Distribution-Free Approach (DFA) and Thick Frontier Approach (TFA). SFA\textsuperscript{31} separates technical inefficiency from noise\textsuperscript{32} assuming that random shocks affect the production process which come from weather changes, economic adversities, labor productivity variation, machinery performance or plain luck and are not directly attributable to the producer or the underlying technology. SFA\textsuperscript{33}, on the other hand, specifies a functional form for cost, profit or production relationship among inputs, outputs and environmental factors allowing random errors (Berger and Humphrey, 1997). DFA\textsuperscript{34} emerged following the criticism of SFA which specifies a functional form for the frontier but separates the inefficiencies in a different way.

It estimates inefficiency using cross-sections and time-series panel dataset assuming managerial inefficiency is persistent and does not change over time while random errors tend to cancel or average out in the course of time (Berger, Hunter and Timme, 1993). To avoid the restrictive assumption of SFA, Berger and Humphrey (1992) considered TFA\textsuperscript{35}. It is less structured than SFA and disseminates less information which starts with sorting of the data on the average costs\textsuperscript{36}. It estimates the cost function in the lowest average cost quartile (thick-frontier) and compares it with the highest average cost quartile while the difference is denoted as inefficiencies (Molyneux and Iqbal, 2005).

\textsuperscript{31} Examples of SFA studies- Yildrim and Philippatos(2007);Drake and Hall(2003);Reinhard,Lovell and Thijssen(2000);Aigner,Lovel and Schimdt(1977);Meeusen and Van den Broeck(1977);Jondrow,Materov and Schmidt(1982)

\textsuperscript{32} The “noise” term is symmetrically distributed and has normal distribution with 0 mean and constant variance

\textsuperscript{33} Studies using SFA on banks are done by Berger and Mester(1997);Maudos,et al.(2002) etc.

\textsuperscript{34} Studies using DFA include the work of Prateanu-Podpiera,Weill and Schobert(2008);Hardy and di Patti(2001);Maudos, Pastor,Perez, and Quesada(1999);Berger and Mester(1997) and others.

\textsuperscript{35} A few researchers who employed this method are Bauer, Berger, Ferrier and Humphrey(1998), Lozano-Vivas(1997) and Mahajan, Rangan and Zardkoohi(1996)

\textsuperscript{36} The firms lying in lower quartile are considered to be efficient firms and form the thick frontier, whereas firms in upper quartile are considered to be inefficient firm relative to thick frontier.
b. Non-Parametric Approach

Non-parametric or linear programming approach does not specify functional form to estimate the best practice frontier and does not allow for any random disturbances. Rather it designates the best practice firms on the frontier where other firms are considered less efficient relative to the ones allying on the frontier. However, the non-parametric methods have two major drawbacks. Firstly, they generally assume there is no statistical measurement error and luck as factors that may affect the outcomes\(^\text{37}\) (Vennet, 2002) and secondly, they ignore prices and therefore can only account for technical inefficiency (Berger and Mester, 1997). The application of nonparametric method is very popular among researchers\(^\text{38}\) while investigating banks’ efficiency\(^\text{39}\). Most commonly two techniques are used under non-parametric approach to measure efficiency, i.e Data Envelopment Analysis and Free Disposal Hull.

*Data Envelopment Analysis*\(^\text{40,41}\) (DEA) was developed by Charnes, Cooper and Rhodes (1978) which is defined as, “A linear programming technique where the set of best-practice or frontier observations are those which no other decision making unit or linear combination of units has as much or more of every output (given inputs) or as little or less of every input (given outputs)” (Berger and Humphrey, 1997, p. 5). It computes a ratio of outputs to inputs for each Decision Making Unit (DMU). It is only possible to compute technical efficiency measures using DEA, but when prices are also available, economic efficiency can be computed and decomposed into its technical, allocative and slack components. The result is

\(^{37}\)Studies on the US banks that used nonparametric techniques reported lower efficiency means than those using parametric techniques with much greater variation.

\(^{38}\)It has been used in studies in developed countries’ banks: such as -by Ferrier and Lovell(1990); Miller and Noulas(1996); Ferrier, Grosskopf, Hayes and Yaisawarng(1993) and Fixler and Zieschang(1993) for the US banking industry; Clarke,et al.(2001) for the UK banking industry; Fukuyama(1995) for the Japanese banking industry; Schaffnit, Rosen, and Paradi(1997) for the Canadian banking industry as well as developing countries: such as- Bhattacharya, Lovell and Sahay(1997) for India; Al-Faraj, Alidi, and BuBshait(1993) for Saudi Arabia; Isik and Hassan(2002) for Turkey etc.

\(^{39}\)According to Ikhide(2000), non-parametric methods typically focus on technological rather than economic optimization. They are therefore not suitable for comparing firms specializing in different inputs or outputs.

\(^{40}\)Examples of new studies using DEA approach are Tahir, Bakar, and Haron(2009); Gaganis, Liadaki, Doumpos, and Zopounidis(2009); Donatos and Giokas(2008); Hussein and Ahmad(2007); Porembski, Breitenstein, and Alpar(2005); Drake and Howcroft(2002) and others

\(^{41}\)In a survey done by Berger and Humphrey(1997), they found that 53% of the 130 studies used DEA technique. Another 46% employed the SFA approach.
reported as the relative efficiency score which ranges between 0 (zero) and 1 (one) or 0% and 100% (Avkiran, 1999) where the DMU that scores 1 (one) is fully efficient while those with results lower than 1 (one) are considered inefficient relative to the other unit.

The DEA frontier is shaped as the piecewise linear combinations that join the set of best practice observations, ceding a convex production possibilities set. Because of that, it does not require the explicit specification form of the underlying production relationship (Berger and Humphrey, 1997). DEA is used by researchers to estimate the efficiency of the firms or DMUs in terms of optimal utilization of inputs to produce given level of output in the case when production function is not known to firm.

Figure 5 exhibits a DMU of single output (y) and two inputs (x₁ and x₂) where the unit isoquant (yy) shows the various combinations of the inputs to produce one unit output. The firm at point E is productively efficient choosing the cost minimizing production process given the relative input price WW$. The DMU at Q is allocatively inefficient in choosing an appropriate input mix while the DMU at R is both allocatively inefficient (by the ratio OP/OQ) and technically inefficient (by the ratio of OQ/OR) because it requires an excessive amount of both inputs x compared with a firm at Q producing the same level of output, y (Coelli, 1996).

Figure–5: Data Envelopment Analysis for Two-Input and One-Output Model

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42 Name of the researchers and their findings using DEA are provided in Appendix–13.
However, under constant return to scale assumption, Q will experience either increasing or decreasing return to scale where the technical efficiency ratio QO/OR can be decomposed into Scale Efficiency of QO/OS and pure Technical Efficiency of OS/OR. In the case of multiple input and/or multiple output, DEA uses linear programming to construct a non-parametric piece-wise surface (or frontier) over the data to calculate efficiencies without parameterize the technology (Coelli, 1996).

One of the benefits of DEA is its ability to create prospective improvements for inefficient units and identify the units for benchmarking (Avkiran, 1999). It also does not require information about the process or relationship between the inputs and outputs that made it capable of being used with multiple input-output measurements (McEachern and Paradi, 2007). Hence, DEA is more flexible compared to the parametric approach as there is no need to explicitly specify any mathematical form for the production function. For that reason, DEA is quite popular among researchers and is proven to be useful in uncovering relationships that remains hidden for other methodologies.

Some of the disadvantages of DEA includes that the results are sensitive to the selection of inputs and outputs which made it difficult to test for the best specification (Daraio, 2009). Moreover, the number of efficient firms on the frontier tends to increase with the number of inputs and output variables (Daraio, 2009). Another limitation of DEA is that it does not assume white noise term and all outliers in the data leads to biased results of efficiency as it assigns the upper bound to be efficient.

To overcome the shortcoming of noise effect of DEA, researchers use bootstrap procedure that is simply re-sampling the sample\(^4\) which was proposed by Simar and Wilson (1998) for nonparametric frontier models. Bootstrapping is based on the notion that if the data can be viewed as a random sample from an underlying population then by the process of continuous random draws from the sample, a new set of data can be generated through Data Generating Process (DGP), which will also be a random sample from the population.

\(^4\) Recent applications of the bootstrap approach to banking have been Casu and Molyneaux(2005); Dong and Featherstone(2006) and Matthews, Guo and Zhang(2007).
By Monte Carlo simulation, the DGP executed to create pseudo-sample and a group of new benchmarks for computing the efficiency score at a given point. The 'naive' bootstrap yields inconsistent estimates; thus, the homogeneous bootstrap procedure is followed by researchers for consistent values (Matthews, Xiao and Zhang, 2009). The great advantage of bootstrap is its simplicity because it is a straightforward way to derive estimates of standard errors and confidence intervals for complex estimations. Moreover, it is an appropriate way to control and check the stability of the results. However, increasing the number of samples cannot increase the amount of information in the original data; it can only reduce the effects of random sampling errors which can arise from a bootstrap procedure itself.

Another non-parametric approach is *Free Disposal Hull* (FDH). It was introduced in 1984 by Deprins, Simar and Tulkens which differs from the DEA as it does not take into account the convexity assumption. The FDH analysis distinguishes between efficient and inefficient producers. All efficient producers are assumed to be on the production possibility frontier which indicates the maximum output at a given level of input. The degree of inefficiency is measured by the efficiency score which measures the distance of the efficient producer to the production possibility frontier. The major advantage of FDH analysis is it imposes weak restrictions on the production technology while comparing efficiency levels among producers where major disadvantage is ignoring the random error (Molyneux and Iqbal, 2005).

### 3.2.5 Efficiency Concepts in Banking

There exists a wide range of efficiency concepts from various angles for banks which can be analyzed from the point of economic theory and organization theory. Siudek (2008) presented different possible views on bank efficiency, which included distinction between ‘*organizational efficiency*’ that deals with organization goals, resources, internal and external environment and business performance through time; ‘*financial efficiency*’ that examines financial items (included in banks’ financial statements) using financial ratios and ‘*economic efficiency*’ that determines how close bank’s costs lie to the efficient cost frontier for given inputs and output ratios.

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44 Researchers who employed FDH are Cummins and Zi (1998); Borger and Kerstens (1996)
Banking efficiency is important at both macro and micro levels and in order to allocate resources effectively, banks should be sound and efficient (Hussein, 2000). The efficient and effective use of resources is a key objective of every banker; however, the presence of inefficiencies is considered as an inherent feature of banking. According to Turati (2003) banks are regarded as firms that emerge as a result of some sort of market imperfections, hence they bring about a certain degree of inefficiency with respect to perfect competitive outcomes.

Commercial banks have been operating in an increasingly competitive environment, thus the long term viability of commercial banks’ operation depends on how efficiently they are being run (Mester, 1997). In this regard, global trends such as increasing competition for financial services, deregulation, technological innovations and banking consolidation has brought more attention on controlling costs and providing products and services more efficiently (Spong, Sullivan and De Young, 1995).

In general, the study of banks’ efficiency is important for three reasons. Firstly, an improvement in cost efficiency means achieving higher profits and increasing the chance of survival in deregulated and competitive markets. Secondly, customers are interested in knowing the prices and the quality of bank services as well as new services that banks could offer and these are strongly influenced by a bank’s overall efficiency of operations. Thirdly, an awareness of efficiency features is important to help policy makers formulate policies that affect the banking industry as a whole (Mester, 1997).

a. Banking Efficiency in Developing Countries

Although a voluminous literature on bank efficiency has been documented, the majority of studies have been undertaken in developed countries. In last two decades, bank efficiency in

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45 In conventional banking literature, researchers had linked efficiency to different factors where the aspects based on: First, cross-country comparisons of conventional banks efficiency (Bonin, et al., 2005); Second, efficiency scores of foreign-owned banks with domestic-owned banks (Isik and Hassan, 2002); Third, efficiency of conventional banks based on their nature (kind) whether is large or small, specialized or diversified, retail or wholesale banks; Fourth, government ownership versus private ownership (Cornett, et al., 2000); Fifth, new bank versus old bank efficiency (Fries and Taci, 2005); Sixth, merger and acquisition (Hughes, et al., 1999); Seventh,
developing and transitional economies has received much attention. There has been a rapid development of empirical research because of bank reform has been taken place in most of these countries in the last two decades.

Different from those of developed countries, most studies in underdeveloped economies have focused on the effect of deregulation and financial liberalization, foreign bank entry, management capability, technological advancement, ownership characteristics and privatization on determining bank’s efficiency. A recent study by Fang, Hasan and Marton (2011) identified three major factors that tend to affect banking efficiency of developing economies which are reforms, ownership characteristics and organizational structure. Aligning with other literatures, the following section highlights these issues in the context of developing economies.

**i. Institutional Reforms and Deregulation**

In the banking literatures, it is well established that banks behave differently and banking efficiency varies under different institutional settings in developed as well as in transition economies. During the past two decades policy changes and market reforms have contributed to important changes in the institutional framework (Haselmann and Wachtel, 2010).

Sturm and Williams (2004) and Berger and Humphrey (1997) explained banks’ efficiency and performance with regard to financial reform of transitional economies arguing that the nature of financial reform and the structure of the financial system are the two influential factors deciding the result of banks’ efficiency in a country. It is also important to mention that single-country analysis are not always reflecting the similar result simply because of the differences in sample periods, sample sizes and techniques of efficiency measurement which is evident from research on Korean Banks.

In a multi-country study, Demirguc-Kunt and Detragiache (1998) concluded that success of liberalization attempt is dependent on legal behavior, contract enforcement and effective prudential regulation and supervision. Griogorian and Manola (2002) argued that different post financial crisis in 1997 (Chen,2004);Eighth, deregulation and liberalization on banks’ efficiency (Chen,et al.,2005).
regulatory measures affect cost efficiencies differently considering the factor that higher minimum capital requirement for banks’ improved cost efficiency but limits on exposure to a single borrower. Fries and Taci (2005) analyzed the banking reforms in 15 transition economies from 1994–2001 and found that during the early stages of regulatory reforms, costs decrease but over time with the implementation of reforms costs increase.

Thorne (1993) reported that transitional countries that have encouraged the establishment of new private banks, introduce new regulation and supervision and enhanced banks competition show an improvement in the allocation of credit and minimization of loss. Similar finding was noticed by Ali, Tony and Hang (2004) in a study where they make a comparative analysis by employing DEA for measuring the efficiency in terms of resource utilization for credit expansion and income generation of all commercial banks in India and Pakistan and found an improvement in bank efficiency in both the countries in post-financial reform period.

Research by Gilbert and Wilson (1998) employing Malmquist Index\textsuperscript{46} measured changes in efficiency and productivity of Korean banks from 1980 to 1994 and described that technological progress along with the deregulation play an intensive role in improving productivity of individual Korean banks. At a later year, Hoe et al. (2001) expanded the work by incorporating parametric stochastic cost frontier approach for the time period from 1985-1995 with 9 nationwide and 10 regional banks to investigate the determinants of productive efficiency of the banking sector. They identified that nationwide banks with higher rates of assets growth, fewer employees per million, larger amounts of core deposits, lower expense ratios and lesser classification were more efficient and also noticed financial deregulation had little or no significant effect on the level of the sample banks’ efficiency no sign of positive affiliation between efficiency of banks and financial liberalization.

The importance of financial sector reform, development and privatization received renewed attention in transition economies to restructure the banking sector and to overcome the burden of bad debts, massive under-capitalization and high concentration. Regarding the effect of privatization, Kraft, Hofler and Payne (2006) analyzed the Croatian banking sector and stated

\footnote{The \textbf{Malmquist Index} (MI) is a bilateral index that is used to compare the production technology of two economies.}

- 59 -
that privatization did not improve efficiency immediately whereas the method and the timing of privatization matters, as early-privatized banks were found to be more efficient than those privatized later. Besides privatization effect, entry of foreign banks is a new addition to the deregulation programme where Sabi (1996) reported superior performance by the foreign-owned banks over domestic institutions comparing financial ratios. It is mainly due to their risk-adverse behaviour regarding the Non-Performing Loans (NPLs) where domestic-owned banks inherit NPLs at their formation.

In context of Bangladesh, most of the large local banks in are owned by the state where some had been denationalized and the numbers of Private Commercial Banks (PCBs) are increasing. With the change of the critical variables like the management in previous years, effect of privatization, restructuring of NPLs, entry of foreign banks in the market and relaxation of regulatory restrictions with regard to banking operation; the sector warrants a comprehensive initiative to understand the performance and to measure the efficiency of different generation of banks.

**ii. Ownership Structure and Competition**

After financial reform, the change in ownership structure creates new opportunities to conduct research and since then a large number of studies have been done to analyze the impact of foreign and domestic ownership on bank efficiency. Research also investigated the total number of banks that operate in a country to determine competition, found a positive relationship between market competition and bank efficiency.

A study by Fang, Hasan and Marton (2011) on six transitional countries of South-Eastern Europe over the period 1998–2008 found that the degree of individual banks’ competitiveness has a positive association with both cost and profit efficiency in conjunction with institutional development. Using the stochastic frontier approach, their analysis revealed that the average cost efficiency is 68.59% and profit efficiency is 53.87% where foreign banks are associated with higher profit efficiency but moderately lower cost efficiency and government banks are associated with lower profit efficiency.
Another study by Thierno, Santos, Laetitia and Amine (2005) investigated the impact of changing ownership structure and bank efficiency using DEA by accumulating data of 80 commercial banks of Hong Kong, Indonesia, South Korea, Malaysia, the Philippines and Thailand during the post Asian crisis period of 1999-2004 and reported that banks with minority domestic private ownership and foreign ownership perform better than the state-owned banks and the banks with concentrated ownership.

An interesting finding by Alejandro, Ugo and Monica (2004) comprise data of 50,000 banks during the period 1995-2002 and measured the effect of ownership on bank performance. They noticed a positive relationship between ownership and bank performance in developing countries and no relationship in developed or industrialized countries because in developing countries foreign banks lead the banking sector by obtaining higher spread and profits, whereas the case is opposite in developed countries. However, the empirical evidence on the role of banking competition on efficiency in transition economies is inconsistent because Central and Eastern Europe banking sectors has positive influence on cost efficiency but is associated negatively with profit efficiency (Yildirm and Philippatos, 2007).

Studies on single country found that foreign banks perform better, followed by domestic private and state-owned banks (Fang, Hasan and Marton, 2011). Their higher efficiency is explained by superior management skills, advanced technology, access to lower costs of funds from the parent company, less subject to domestic credit allocation rules, lack of legacy costs (such as: non-performing loans from former periods) and differences in clientele (such as: larger share of foreign-owned companies) than that of domestically owned companies (Demirguc-Kunt and Huizinga, 2000). Moreover, it is also argued that foreign banks tend to cherry pick the most profitable opportunities.

In contrast, there is evidence of not finding significant cost efficiency differences between foreign and domestically owned banks (Mamatzakis, et al., 2008). Inadequate information about local conditions and markets and the difficulties to establish relational networks tend to result in higher costs in the new market for foreign banks (Buch, 2003). However, over time, improvement in the institutional environment tends to reduce these cultural and informational barriers and allows foreign banks to take full advantage of their greater expertise compared to domestic banks (Haselmann and Wachtel, 2010).
Based on the monitoring and advising roles of the corporate board, firms with high-quality board experience smaller losses than firms with low-quality boards; as a consequence substantial empirical research exists on the relationship between corporate Boards of Directors (BoDs) on firm performance. Aside from financial experts on the board, other board characteristics such as board size, board duality, board density, board shareholding also affect board efficiency and firms’ performance (Shivdasani, 1993; Adams and Ferreira, 2009).

Pi and Timme (1993) conducted studies linking efficiency with the agency cost investigating whether the concentration of decision, management and control in one hand brings about any deterioration of efficiency. They found the efficiency of banks where the Chief Executive Officer (CEO) and the chairman of the board is the same person is significantly lower than those banks without similar governance structure. Besides duality factors, board diversity and board shareholdings are also affect banks’ efficiency and performance (Adams and Ferreira, 2009). These findings were supported by Isik and Hassan (2002) indicating a strong link between management structure and efficiency.

### iii. Bank Size and Management

Efficiency estimates reflect the extent of efficient use of output and input by banks which reveals in the magnitude of superior management of resources. A study by Spong et al. (1995) suggested that the main differences between the “most efficient” and the “least efficient” bank is mainly related to staff expenses where superior management can be obtained by analyzing operations, service quality and profitability simultaneously. Inefficient banks always have lower levels of equity/assets and higher levels of NPLs where efficient banks assign more attention and resources to loan origination, monitoring and other credit judgment activities.

Yiwei et al. (2011) found that there is no clear relationship between the size of assets and bank efficiency because the average profit efficiency of Eastern Europe and Central Eastern Europe regions is alike but average cost efficiency leaves considerable room for improvement. However, according to Isik and Hassan (2002), the bank size is an important driver for variations of efficiency across banks. To operate optimally by obtaining scope and
scale, banks must possess a certain degree of size. They showed that average cost and profit efficiency decrease with increasing bank size where the plausible reason is that overhead costs for small bank are relatively low because they often operate in few branches and possess operational advantage which contributes to higher efficiency. Besides that, larger banks often extend loans to a larger number of people that may raise their servicing and monitoring costs.

In contrast to these findings, Berger and Mester (1997) and Berger, Hancock and Humphrey (1993) noted a slight increase in cost efficiency and the highest level of profit efficiency for small banks incorporating the competitive pressures. The conclusions drawn by Berger and Mester (1997: 936), was “as banks grow larger, they are equally able to control costs but it becomes harder to create revenues efficiently”. Research by Kraft et al (2002) found that cost efficiency does not vary much across bank size categories.

Burki and Niazi (2010) provided a comprehensive analysis and concluded that sub-Saharan African countries’ bank with higher leverage or lower equity are associated with higher profit efficiency. In terms of bank size, smaller banks are more profit efficient whereas medium size and larger banks are cost efficient. In case of a single country analysis by Akhtar et al. (2011) employing DEA analysis on 12 commercial banks of Pakistan found that by improving the handling of operating expenses, advances, capital and by boosting banking investment operations, the less efficient banks can successfully endorse resource utilization efficiency.

b. Banking Efficiency in Bangladesh

So far, there are fair numbers of research that studied banking efficiency in the developing countries\cite{ref1}. Unfortunately, research works on efficiency of the Bangladeshi banking sector are scares. Insufficient research works conducted by a handful of researchers and institutions do not provide the whole scenario of the country’s banking efficiency. Also, none of research has measured and analyzed the efficiency gaps (if any) among 1st, 2nd and 3rd Gen PCBs.

\cite{ref1} For example: Malaysia(Sufian and Ibrahim, 2005), Pakistan (Limi, 2004), Turkey (Isik and Hassan,2002), Jordan (Isik et al., 2005), Kuwait(Limam, 2002) etc.
Nevertheless, a recent work by Ahmed and Liza (2013) investigated the segmented and overall efficiency of management, earnings, cost control, liquidity, debt and leverage and market operation of 35 commercial banks from 2002 to 2011 by using Data Envelopment Analysis (DEA). Their result revealed an intensive competition exists among the 2nd and 3rd Gen banks but the 3rd Gen local commercial banks are most efficient along with a foreign bank which has been maintained consistently throughout the sample period.

Yasmeen (2011) conducted a study to find out the technical efficiency and productivity growth of 35 banks in Bangladesh from 2003-2007 examining four ratios: two for input and two for output. The findings provided indication on dynamic convergence of banks’ performance and challenges amid rising competition due to efficiency differences of private, public and foreign banks in Bangladesh.

Another work by Khanam and Nghiem (2003) also measured efficiency of 48 banks in Bangladesh using DEA incorporating data of only one year of 2003 considering seven ratios of which five were inputs and two were outputs. They concluded that the technical efficiency score of banks in the sample is 67% which is below the international average, reviewed by Berger and Humphrey (1997). There is ample of room for the PCBs to improve performance of the industry to catch up with the world’s best practice.

Uddin and Suzuki (2011) had undertaken a study to investigate banks’ performance after the financial reform. They considered data from 2001-2008 of 38 banks including state owned, private owned, Islamic and foreign banks considering three inputs and two outputs to measure efficiency. Their findings indicated that income efficiency and cost efficiency have increased by 37.84% and 15.28% in 2008 and 2001 respectively. On the other hand, private ownership has favorable impact on income efficiency, Return on Assets and NPLs whereas has a negative impact on cost efficiency.

### 3.2.6 Criticism of Previous Research

Several studies have been conducted on the cross-cultural transitional countries to measure banks’ efficiency; however, it is important to note that these countries are heterogeneous in
terms of their legacy, political condition, law and regulations, transition process, nature of operation and ownership characteristics. In transitions economies, political events cause delay in implementation of major economic reforms and inadequate bank regulation and supervision lead to accumulate a large amount of NPLs. Thus, measuring efficiency on a heterogeneous sample may not reflect true efficiency of banks of a single country. It is also difficult to find the identical countries in all dimensions to conduct cross-country banking efficiency analysis.

Research by Gilbert and Wilson (1998) on Korean banks found that technological progress along with deregulation played an intensive role in improving productivity of banks. The same study was expanded by Hoe, et al (2001) incorporating parametric stochastic cost frontier approach and noticed no relationship with financial deregulation. In this regard, use of different model, time and sample gave different results to Korean banks.

Research conducted on the Bangladeshi banking sector by investigating the banking practices, performance and privatization experience. Most of these studies are limited to descriptive analyses which are based on simple descriptive statistics and ratio analysis of different banks. Efficiency evaluation using economic measures give concrete findings for further research, than the traditional accounting measures such as ROA and ROE.

As Bangladesh is a transitional economy, restructuring of NPLs and entry of foreign banks in the market increase competition. It is of interest to explore how banks have approached or adjusted their highest operational capability or relative efficiency to meet the challenges. This research focuses on a time period when a predominantly private-owned banking sector was established and almost all previously state-owned commercial banks were privatized.

The recent work by Ahmed and Liza (2013) investigated the segmented and overall efficiency of 35 commercial banks of Bangladesh for 10 years. The banks they had selected were heterogeneous in their policies of doing business, ownership characteristics and regulations. In their study, they employed DEA to measure of management, earnings, cost control, liquidity, debt and leverage and market operation using a total of 20 input variables and 23 output variables which lead the sample close to efficiency frontier.
In other words, too many input-output variables make each bank fully efficient which can not be judged against the best one based on the efficiency score. Moreover, due to having too many input-output variables, the degree of freedom is less and their research endures the ‘curse of dimensionality’. Besides that, they have used DEA to measure efficiency where the results have the white noise effect which can be eliminated by using bootstrap data. Apparently, no study has been conducted so far using bootstrap data in Bangladeshi banking sector. Thus, this study estimates conventional commercial banks’ efficiency using a number of different inputs and outputs variables applying the bootstrap sample for the DEA.

3.3 Methodology

The theoretical arguments have been placed in the previous section while this section highlights the description of the method and the model, the data set and the research plan.

3.3.1 The Method and Its Rationale

In recent years, frontier based methods have been applied by the researchers for measuring bank performance (Appendix-13 provides a list of studies employing DEA in the banking sector of different countries). These approaches distinguish from each other with respect to the shape of the efficiency frontier, the treatment of random errors and the distributing assumptions imposed on random errors and inefficiency (Berger and Humphrey, 1997).

Like other research works are provided in Table-2, this study employs the non-parametric frontier based DEA approach to estimate the revenue efficiency of the conventional PCBs in Bangladesh.

48 The term curse of dimensionality was coined by Richard E. Bellman when considering problems in dynamic optimization. There are multiple phenomena referred to by this name in domains such as numerical analysis, sampling, combinatorics, machine learning, data mining and databases.
Parametric techniques require prior estimation of the functional form and availability of large data for determining efficiency, which is not always possible in the context of a developing country like Bangladesh whereas DEA approach does not require any specification of an econometric model. It simply uses the observed data to define the efficient frontier as the envelopment of “best practice”. Moreover, there is every possibility that restrictive atmosphere and market imperfections distort the prices of inputs and outputs to a great extent.
in developing countries that makes the application of parametric techniques more complicated (Bhattacharyya et al., 1997) where application of non-parametric approach gives better outcome as it is free from prior assumptions\textsuperscript{49}.

DEA is a mathematical programming approach for the construction of production frontiers and a measurement of efficiency. DEA frontier is formed as the piecewise linear combination that connects the set of ‘best-practice observations’ in the data set yielding a convex Production Possibility Set (PPS). The convexity assumption ensures that given feasible input-output combinations, any weighted average of the input bundles can produce a similarly weighted average of the corresponding output bundles (Ray and Das, 2010).

This approach measures the efficiency of a decision-making unit (DMU) relative to other similar DMUs with the simple restriction that all DMUs fall on or below the efficiency frontier (Berger and Humphrey, 1997). If a DMU lies on the frontier, it is referred to as an efficient unit; otherwise it is labeled as inefficient.

The efficiency score generated by DEA varies from 0 to 1. If a DMU holds an efficiency score of 1, it will be treated as the best practice firm\textsuperscript{50}. Each DMU is assigned a single efficiency score which allows ranking amongst the DMUs in the sample and highlights the areas of improvement for each single DMU. Also, estimations under parametric approach produce fixed ranking that do not change from year to year which means a bank cannot improve its position, whereas parametric approach can be applied on yearly basis provided there is sufficient data available\textsuperscript{51}.

\textsuperscript{49} DEA does not require a preconceived structure or specific functional form to be imposed on the data in identifying and determining the efficient frontier, error and inefficiency structures of the DMUs. In addition, parametric approach requires the specification and estimation of a cost function or production function where errors arise due to misspecification of the function and the underlying stochastic process; whereas, DEA permits the inclusion of random errors if necessary. Since efficiency is measured in a relative way, the analysis is confined to the sample set used which means that an efficient DMU found in the analysis cannot be compared with other DMUs outside of the sample.

\textsuperscript{50} An efficiency score of 0.90 for a DMU means that the firm is 90 percent efficient compared to the best practice firms. In other words, the firm is 10 percent less efficient compared to the firms lying on the efficient frontier.

\textsuperscript{51} Compared to other approaches, DEA is a better way to organize and analyze data since it allows factors to change over time and requires no prior assumption on the specification of the best practice frontier. Avkiran(1999) stated that this technique allows the researchers to choose any kind of input and output of managerial interest, regardless of different measurement units where there is no need for standardization.
However, Xue and Harker (1999) pointed out that efficiency scores generated by DEA models are clearly dependent on each other in the statistical sense. The reason for dependency is a well-known fact that the DEA efficiency score is a relative efficiency index, not an absolute efficiency index. Because of the presence of the inherent dependency among efficiency scores, one basic model assumption required by regression analysis, independence within the sample, is violated. As a result, the conventional procedure, followed in the literature, is invalid and thus they propose a bootstrap method to overcome this problem.

The bootstrap is a computer-based method for assigning accuracy to statistical estimates. Bootstrap data is a random sample which generates from the sample under a specific model named Data Generating Process (DGP). The process of continuous random draws from the sample under DGP also random draws from the population which is known as pseudo-sample. The bootstrap data generated by empirical distributions creates new benchmarks to compute the efficiency score of individual firms (Ray and Das, 2010). As a consequence, the DEA efficiency score for a specific DMU is not defined by an absolute standard but it is defined as a relative set to other DMUs in the specific data set.

For the research, the data are enveloped in such a way that radial distances to the frontier are minimized. The analysis under bootstrap DEA is concerned with understanding how each DMU is performing relative to others, the causes of inefficiency and how a DMU can improve its performance to become efficient. In that sense, bootstrap DEA calculates the relative efficiency of each DMU in relation to all other DMUs who are providing similar services and having similar size, instead of focusing on a predetermined benchmark of performance measurement by using the actual observed values for the inputs and outputs. Studies have been done using DEA to measure banks efficiency but obtaining results by applying bootstrap DEA on conventional PCBs of Bangladesh is an addition to the literature.

### 3.3.2 The Model

Banks produce multiple outputs by using various inputs; thus, the measurement of relative efficiency involves multiple inputs and outputs to set a frontier of most efficient DMUs and then to measure how far from the frontiers are the less efficient units. By implying DEA
method, the performances of each bank can be measured relative to the best practice bank where separate weights are attached to inputs and outputs of each bank. There is an increasing concern in measuring and comparing efficiency of banks under different environments and activities. One of the simplest and easiest ways to measure efficiency is:

Efficiency = \text{weighted sum of inputs/weighted sum of outputs}

By using usual notations, this efficiency measure can be written as:

Efficiency of unit j = (u_1 y_{1j} + u_2 y_{2j} + \ldots\ldots)/(v_1 x_{1j} + v_2 x_{2j} + \ldots\ldots)

where:

u_1: is the weight given to output 1.
y_{1j}: is the amount of output 1 from unit j.
v_1: is the weight given to input 1
x_{1j}: is the amount of input 1 to unit j

This measure of efficiency assumes a common set of weights to be applied across all units. A typical DMU have multiple inputs and outputs where efficiency is measured by using a weighted average of the outputs and a weighted average of inputs. When comparing efficiency between DMUs, the above measure can be most readily applied when a common set of weights for the DMUs is applicable.

3.3.3 The Data Set

The present study is based on secondary data, collected from the annual reports of respective banks and \textit{Bankscope} International Bank Database\textsuperscript{52}. BankScope is the main data collection source; however, some missing data were collected from the annual reports\textsuperscript{53}. Given the mix

\textsuperscript{52} BankScope is the main source which provides data for a huge number of banks in many countries of the world in the forms of balance sheets, income statements, various ratios and ownership information.

\textsuperscript{53} While annual reports published by various banks served as a complementary source of data; however, limitations exists with regard to accessibilities of these reports and adequacies of the range of information depending on the operative patterns and practices of various banks.
of the different generation of banks, this study uses both Bankscope database and annual reports for compiling the final sample set of conventional commercial banks of Bangladesh.

It covers a period of twelve years from 2001-2012 because the analysis includes all the 1st, 2nd and 3rd generation local conventional Private Commercial Banks (PCBs) in Bangladesh. Since, the DEA technique envelope data and identifies efficiencies of all banks relative to the best practice bank(s), the estimated efficiencies are sensitive to sample selection; hence, the sample size for measuring banks’ efficiency consist a complete set of 23 conventional PCBs. All variables are measured in millions of Bangladeshi Taka (BDT).

Deliberately, the Islamic Private Commercial Banks, Foreign banks, Government banks and Specialized Development Banks are excluded because of two reasons. Firstly, the rules and regulations of the Islamic banks, foreign banks, government banks and development banks are different than the conventional PCBs; though, they are an integral part of the overall banking sector. Secondly, the objective and operation system of the excluded groups are different from the conventional PCBs. Thus, inclusion of those banks might not exhibit the true level of efficiency of the conventional PCBs. Moreover, the efficiency scores of the conventional PCBs will be benchmarked among generations, not within the entire banking sector.

In order to ensure quality and reliability of the research findings, data from BankScope have been carefully edited, complied with and cross-checked for consistency. Moreover, by the data generating process, data have been bootstrapped for 50,000 times for individual DMUs each year to address the random error effect.

### 3.3.4 Research Hypothesis

In the banking literature, a strong relationship has been reported between bank efficiency and their year of establishment (Fries and Taci, 2005). Thus, one of the focuses of this research is to measure efficiency gap (if exists) between the three generations. For that:

54 Data are fetched with all good intention and the analysis should take into account the limitation of human error.
**Hypothesis 1** – $H1_{a(a)}$: There is no Revenue (In)Efficiency gap between Gen 1, 2 and 3 conventional PCBs from 2001-2012

$H1_{a(b)}$: There is no Revenue (In)Efficiency gap between Gen 2 and 3 conventional PCBs from 2001-2012

The relationship between banks’ size and their efficiency is mixed in the literatures\(^{55}\). The empirical evidence on the potential impact and significance of size on banks’ efficiency yields no consensus. The results are subtle and sometimes ambiguous about the direction of the possible effect. Intuitively, it is expected to have a positive relationship between size and revenue efficiency arising from the fact that larger banks are more able to develop technical, financial, human and material resources to enhance their efficiency.

In a reverse direction, since agency problem exists, coordination and dysfunction problems are more accentuated in bigger banks that will facilitate smaller banks to generate inefficiency scores lower than those of larger banks. They are decreasing with size up to a certain value of total assets and unit costs rise beyond a level, indicating that it is the medium-sized banks that seem to have a more efficient than large and small banks\(^{56} \)\(^{57} \) (Mester, 1997).

However, no clear relationship between estimated efficiencies and size has been proved for the Bangladeshi PCBs yet. Thus, it is of interest to assess the size effect on PCBs revenue efficiency. For that:

\(^{55}\) However, some literatures on banks efficiency on developing countries indicated that banks suffer from serious problems of pure technical inefficiency involving a total average waste of resources due to the size of banks except the largest banks where high levels of scale inefficiency exists. Others argued that investment banking is one segment of banking activities where size seems to bring superior efficiency.

\(^{56}\) Similar results were found on Indian banks by Ali, Tony and Hang(2004) where higher average efficiencies for medium-sized banks were observed, followed by large banks. Small banks appeared the less efficient which show that relationship between size and efficiency is not positively monotonic. In contrast, in the study of Allen and Rai(1996), the largest banks have been marked by higher levels of inefficiency for the majority of the 15 countries studied.

\(^{57}\) Other empirical evidence on Size and Bank Efficiency are by Miller and Noulas(1996) arrived to establish a significant positive correlation between the size and pure technical efficiency of banks. The largest banks have appeared to be relatively more efficient in the study of Hasan and Marton(2003) on Hungarian banks. A positive relationship between the size and the overall efficiency of banks was also found for Australian banks by Sathye(2001). On Turkish banks, Isik and Hassan(2002) have arrived to an opposite results where the relationship between size and efficiency has emerged strongly negative. According to Berger and Mester(1997), larger banks have shown a slightly higher efficiency than small ones considering efficiency on the cost side but in terms of revenue efficiency smaller banks appeared more efficient.
Hypothesis 2 – $H_2$: There is no relationship between PCBs’ Revenue (In)Efficiency and sizes in Bangladesh from 2001-2012

According to the banking literature, a bank is revenue efficient when it generates a relatively high volume of income from its services and intermediation operations with a given level of inputs. This is the basis to measure and compare revenue efficiency of banks; depending on which banks can be ranked over the years. For that:

Hypothesis 3 – $H_3$: There is no change in Bangladeshi conventional PCBs’ ranking in terms of Revenue (In)Efficiency from 2001-2012

3.3.5 Selection of Inputs and Outputs Variables

Efficiency measurement for the DEA requires the specification of inputs and outputs. Sathye (2001) stated that the selection of inputs and outputs is crucial as the outcome obtained from DEA is very much responsive to the specification of inputs and outputs. The specification can be done either through using production approach or through intermediation approach and the banking literature has been dominated by these two approaches (Neal, 2004).

This study adopts the most commonly employed intermediation approach. This approach is preferred over the production approach because it suits the nature of the banking industry more than the production approach. Moreover, the intermediation approach is superior for evaluating the importance of frontier efficiency since the minimization of total costs is needed to maximize profits (Iqbal and Molyneux, 2005). It treats banks to use labour, physical capital and fund to produce earning assets where service flows are treated as output. Deposits are considered as inputs in the production of earning asset output, along with capital, materials and labour inputs. In other words, it views bank as an intermediator of financial services and

58 In the Production Approach, banks are treated as firm (bank) where they produce outputs like number of deposits and loan accounts by using inputs like labor and capital. In this approach, decision making unit (DMU) or a bank produces different types of accounts by processing its deposits and loans while using labor and capital as a factor input and incurs cost of it. Production approach considers output as a flow that is produced per unit of time where inflation bias problem is mitigated (Berger, Henweck and Humphrey, 1987).
assumes that banks collect funds (deposits and purchased funds with the assistance of labour and capital) and transform these into loans and other assets.

Thus, all conventional banks, within the intermediation framework, are modeled as multi-product firms, producing outputs employing inputs as summarized in Table-3. The database with data for each bank is created in Excel in order to form panel data and then use in the Stata 11.1 software package for determining revenue efficiency for each bank in each year.

<table>
<thead>
<tr>
<th>Efficiency Measure</th>
<th>Variables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inputs</td>
<td>1. Deposits</td>
<td>Deposit includes short-term customer deposits and long term deposits. The more the deposit attracted, the more the profits could be earned by extending loans or investments. A positive effect of deposit on performance is expected.</td>
</tr>
<tr>
<td></td>
<td>2. Staff No</td>
<td>Staffs are the main resource of banks. They represent the competences, operating ability and scale of a bank.</td>
</tr>
<tr>
<td></td>
<td>3. Fixed Asset</td>
<td>Fixed assets (physical capital) reflect the bank ability to provide service to its customers which is expected to have a positive effect on output.</td>
</tr>
<tr>
<td>Outputs</td>
<td>1. Total Interest Revenue</td>
<td>Total Interest Revenues is the operating income for banks generated from its assets consist of all forms of personal and commercial loans, mortgages and securities.</td>
</tr>
<tr>
<td></td>
<td>2. Total Non Interest Income</td>
<td>Non-interest income makes up a significant portion of most banks' revenue where the income derived primarily from deposit and transaction fees, insufficient funds (NSF) fees, annual fees, monthly account service charges, inactivity fees, check and deposit slip fees, etc.</td>
</tr>
</tbody>
</table>

Sources: Author compiled from the web sourced definitions

3.4 Results

Results first exhibit the descriptive statistics of the input and output variables of the panel dataset. The second section tests the revenue efficiency hypotheses using selected variables. The third section provides the analysis of the findings.
3.4.1 Descriptive Statistics

As a snapshot of the variables used, Table-4 presents the summary statistics of the input-output data which are Deposits, Staff Number, Fixed Asset Total Interest Revenue and Total Non Interest Revenue for 12 years of 23 PCBs.

Table-4: Output-Input Variables for Revenue Efficiency (in million BDT)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Mean (All)</th>
<th>Mean (Gen 1)</th>
<th>Mean (Gen 2)</th>
<th>Mean (Gen 3)</th>
<th>Standard Deviation (All)</th>
<th>Standard Deviation (1st Gen)</th>
<th>Standard Deviation (2nd Gen)</th>
<th>Standard Deviation (3rd Gen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“N”</td>
<td>Observations</td>
<td>276</td>
<td>72</td>
<td>96</td>
<td>108</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEP</td>
<td>Deposits</td>
<td>45478.06</td>
<td>58622.59</td>
<td>46884.80</td>
<td>35464.60</td>
<td>38113.02</td>
<td>39933.48</td>
<td>46807.08</td>
<td>31599.89</td>
</tr>
<tr>
<td>STAFF</td>
<td>Staff No</td>
<td>1602.29</td>
<td>2961.94</td>
<td>1180.81</td>
<td>1070.49</td>
<td>1439.49</td>
<td>1395.98</td>
<td>819.35</td>
<td>1387.81</td>
</tr>
<tr>
<td>FA</td>
<td>Fixed Asset</td>
<td>1054.19</td>
<td>1626.89</td>
<td>1119.64</td>
<td>614.20</td>
<td>1363.77</td>
<td>1402.09</td>
<td>1395.59</td>
<td>891.74</td>
</tr>
<tr>
<td>INTREV</td>
<td>Total Interest Revenue</td>
<td>4955.33</td>
<td>5985.44</td>
<td>5301.84</td>
<td>3960.57</td>
<td>4921.35</td>
<td>5294.94</td>
<td>5192.77</td>
<td>3844.07</td>
</tr>
<tr>
<td>NII</td>
<td>Total Non Interest Income</td>
<td>1510.50</td>
<td>2008.69</td>
<td>1572.81</td>
<td>1116.99</td>
<td>1332.87</td>
<td>1407.59</td>
<td>1363.98</td>
<td>1096.70</td>
</tr>
</tbody>
</table>

Sources: Author calculations from the web sourced data

The descriptive statistics is measured on 276 observations where 1st, 2nd and 3rd Gen PCBs have 72, 96 and 108 samples respectively. The statistics showed the mean value for all the input variables (Deposits, Staff No and Fixed Asset) and the output variables (Total Interest Revenue and Total Non Interest Income) are the highest for 1st Gen PCBs followed by Gen 2 and Gen 3 banks. It is also interesting to observe that the mean value of Gen 1 is higher than the combined mean values of three generations which implies that value of the variables under Gen 1 PCBs are bigger than that of 2nd and 3rd Gen PCBs.

Standard Deviation for Deposit and Total Interest Revenue is the highest for Gen 2 and lowest for Gen 3 banks. Fixed Asset exhibits the highest standard deviation for Gen 2 banks as well; however, gives the lowest for Gen 1 banks. The standard deviation for the Total Non Interest Income is the highest for Gen 1 banks followed by 2nd and 3rd Gen; whereas the standard deviation for Staff Number is highest for 3rd Gen PCBs followed by 1st and 2nd Gen PCBs.

Table-5 is a summary of the descriptive statistics for all the banks in the sample. On average, there is a considerable level of Revenue Inefficiency exists among banks found in this study.
These results suggest that PCBs have slacks in using the resources efficiently to produce the same outputs. The aggregate levels of Revenue Inefficiency are 19.2%, 11.1%, and 12.7%, respectively for 1st, 2nd and 3rd Gen PCBs in producing the outputs. Hence, the same outputs could have been produced by using fewer inputs. In other words, on average 1st, 2nd and 3rd Gen PCBs are actually utilizing 80.8%, 88.9% and 87.3% of their resources to produce the same level of output. They have wasted their inputs or could have saved to produce the same outputs.

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**Significance Level at the 5% and Confidence Interval (CI) at the 95%

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59 The relationship between Efficiency (E) and Inefficiency (IE) is IE= (1-E)/E. Thus, as an example, the 91.8 percent Efficiency implies 8.9 percent Inefficiency; not 8.2 percent or (1 - 0.918).
level of outputs. Hence, there was substantial room for significant revenue generation for these banks if they have had employed their inputs more efficiently.

The mean scores of Revenue Efficiency can be viewed graphically in Figure–6 which shows that 1st Gen PCBs are the least Revenue Efficient where Gen 2 and 3 PCBs are better Revenue Efficient in the sample period from 2001-2012. In other words, Gen 1 banks are the most inefficient to generate revenues. Moreover, the efficiency gap between 1st with 2nd and 3rd Gen PCBs is noticeable visually whereas the gap between Gen 2 and Gen 3 PCBs are nominal. It is also interesting to notice that Revenue Efficiency of 1st Gen PCBs is affected more insistently than 2nd and 3rd Gen PCBs to handle shocks (ie. in the years 2009 and 2011).

However, it is also visible from the graph that efficiency of all three generations of PCBs improved gradually over the time period where in 2012 the Revenue Efficiency of Gen 1 is at parley of Gen 2 and Gen 3 PCBs.

Figure–6: Revenue Efficiency of Gen 1, Gen 2 and Gen 3 Banks
### 3.4.2 Hypothesis Testing

The Revenue Efficiency scores are obtained using Deposits, Staff No and Fixed Assets as Input Variables; and Total Interest Revenue and Total Non Interest Income as Output Variables allowing the efficiency score to fluctuate for each bank in each year.

#### a. Banking Generations and Efficiency

There is an efficiency gap between the three generations of PCBs in Bangladesh which is visible from the mean distribution. To measure the significance of the gap, the Mann-Whitney test is conducted which is a relevant test for two independent samples coming from populations having the same distribution.

The tests are run by Stata-version 11.1 (Statistical Software) where the bootstrapped and the ordinary DEA results of Revenue Efficiency for 1st, 2nd and 3rd Gen PCBs are regressed which is presented in Table-6.

<table>
<thead>
<tr>
<th>Results</th>
<th>Bootstrap DEA</th>
<th>Ordinary DEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation</td>
<td>1 &amp; 2 &amp; 3</td>
<td>2 &amp; 3</td>
</tr>
<tr>
<td>Observation</td>
<td>72 &amp; 204</td>
<td>96 &amp; 108</td>
</tr>
<tr>
<td>Mean</td>
<td>0.8078 &amp; 0.8805</td>
<td>0.8891 &amp; 0.8728</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.1297 &amp; 0.0917</td>
<td>0.0826 &amp; 0.0988</td>
</tr>
<tr>
<td>Z</td>
<td>4.401*** &amp; -0.872</td>
<td>5.383*** &amp; -1.305</td>
</tr>
<tr>
<td>Prob. &gt;</td>
<td>z</td>
<td></td>
</tr>
</tbody>
</table>

*** Significance Level at the 1%***

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60 To interpret the output from the Mann-Whitney test, analysts need to consider the Z score and two-tailed p-value

61 The results of Bootstrapped DEA is found that most of the regressed scores of the DMUs were merged or outside the Lower bound of the confidence interval under Ordinary DEA measure whereas under Bootstrapped DEA measure, all DMUs’ scores were distributed nicely within the spread of Upper and Lower Confidence Intervals (CIs).
Though the results obtained from the ordinary DEA and the Bootstrapped DEA is not much different; however, results obtained from Bootstrap DEA are more reliable as it lies with in the CI and is error-free. Both the results showed that there is a clear gap between 1\textsuperscript{st} Gen PCBs with 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs because the $p$ value is 0.000 at 1\% significance level.

However, both the scores confirmed that there is no revenue efficiency gap between Gen 2 and Gen 3 PCBs as the $p$ value for the Bootstrapped DEA and the Ordinary DEA is 0.3832 and 0.1920 respectively which is greater than the standard level at 5\%.

\textit{b. Bank Size and Efficiency}

As discussed earlier in this chapter that the literature contains some inconclusive evidence on the relationship between banks’ revenue efficiency and their size. However, there is no discussion found in the literature on the relationship between size and revenue efficiency of the conventional PCBs of Bangladesh comparing their generations from 2001 to 2012 as done in this study.

The most relevant efficient measure for this study is the X-Inefficiency that refers to the ‘black box’ of production connecting inputs to outputs where inefficiency can be reduced by organizing people or production processes more effectively. As X-inefficiency analyzed well by using DEA method, this part of the chapter deals with Revenue Inefficiency which in other words is (1 - Revenue Efficiency).

\textbf{Table-7} summarises the results on the relationship of Revenue Inefficiency\textsuperscript{62} and their size depending on PCBs’ generations.

\textsuperscript{62} A more efficient estimator or test needs fewer samples than a less efficient one to achieve the given performance. Efficiency scores lie between 0 to 1 or between 1\% to 100\% where 1 or 100\% means fully Efficient (E) and anything less than that is Inefficient (IE) by (1-E) or (100\% - E\%).
This research considers the Total Asset and the number of Branch as the proxy of size factor where size and revenue inefficiency showed a strong relationship at 1% significance level. The finding from the Bootstrap data confirms that there is a negative relationship between Total Asset and Revenue Inefficiency where the larger the asset size of a bank the less revenue inefficient that bank is. In other words, banks with larger amount of Total Assets are more revenue efficient.

Further to confirm the significance of Total Asset proposition, this research has regressed Total Asset as an independent variable using the base year and the lagged year. The reason for using the lagged year is to consider the endogenous relationship of revenue generation and asset. Both, Total Asset (lta) and Lagged Total Asset (ltal), exhibit negative relationship with Revenue Inefficiency (binef) at 1% significance level which confirms banks with large asset size have positive relationship with Revenue Efficiency. However, the relationship is negative.
up to a certain amount of total asset. Testing the log format of the square of total asset ($lnastsq$), results at 10% significance level, reveals the optimal point of total asset is 143,630 million BDT where the convexity of the asset curve turns upward.

The other size proxy that is Branch ($branch$) also shows a strong relationship with Revenue Inefficiency. Differ from Total Asset ($lta$), Branch ($branch$) reveals a positive relationship with Revenue Inefficiency ($binef$) at 1% significance level which means that the higher the number of branch, the more Revenue Inefficient the bank. It can be said that banks with more branches are less Revenue Efficient.

Among other independent variables, Cost to Income ($ci$) ratio and lagged of Cost to Income_1 ($cil$) ratio has strong positive relationship at 1% significance level with the Revenue Inefficiency ($binef$) that indicates the higher the ratio the more inefficient a bank is. In other words, Revenue Efficient banks are expected to have lower Cost to Income ratio.

Two other independent variables - the lagged Non Performing Loan_1 ($npl_1$) and the lagged Loan Loss Provision_1 ($llp_1$) also showed relationship at 1% significance level with the Revenue Inefficiency ($binef$) where NPL is negatively related and LLP is positively related. From the results, it can be said that Revenue Efficient banks have lesser NPL and more LLP.

However, the NPL Ratio ($nplrat$) is calculated by Total NPL / Loans, LLP Ratio ($llprat$) is calculated by Total NPL / Loans and Equity Multiplier ($eqmult$) is calculated by Equity / Total Asset provided different results. LLP Ratio ($llprat$) consistently showed negative relationship at 1% significance level with Revenue Inefficiency ($binef$) while there is no significant relationship exists between Equity Multiplier ($eqmult$) and Revenue Inefficiency ($binef$).

On the other hand, NPL Ratio ($nplrat$) also exhibits negative relationship with Revenue Inefficiency ($binef$) at 1% and 5% significance level considering the lagged of Total Asset ($lta1$), Cost to Income_1 ($cil$) ratio and Total Asset ($lta$), Cost to Income ($ci$) ratio

$\text{Calculation of the Optimal Point of Total Asset in the convex curve:}$

\[binef = -0.19\ln Ast + 0.008(\ln Ast)^2\implies \frac{dbinef}{d\ln Ast} = -0.19 + 0.016 \ln Ast = 0 \implies (0.19/0.016) = \ln Ast^2\]

Thus, optimal inefficiency level is 143630 million BDT at 10% significance level.
respectively. In conjunction with LLP Ratio (llprat) and lagged of Total Asset (lta1), Cost to Income_1 (cil) ratio; NPL Ratio (nplrat) does not reflect any statistically significant relationship with the Revenue Inefficiency (binef). Whereas, in standalone cases both NPL Ratio (nplrat) and LLP Ratio (llprat) hold significant relationship with the Revenue Inefficiency (binef) regardless of other independent variables.

As a dummy variable, the research considered ‘Generations’ where it found a consistent result with the 1st hypothesis. The test findings showed that only Generation 1 (gen 1) has strong positive relationship with Revenue Inefficiency at 1% significance level. Other than that Generation 2 (gen 2) and Generation 3 (gen 3) has no relationship with Revenue Inefficiency (binef). In other words, Generation 1 (gen 1) banks are not Revenue Efficient.

c. Banks’ Ranking and Efficiency

As mentioned earlier, no literature has been found that conducted Rank Correlation Analysis for the commercial PCBs of Bangladesh. The present research has filled out the gap by computing the rank correlation for all 23 conventional PCBs operating in Bangladesh from 2001 till 2012 by using Spearman's Rank Correlation Coefficient or Spearman's Rho. The results of the rank correlation has presented in Table-8.

Table-8: Rank Correlation

| Years       | Observation | Spearman's Rho | Prob > |t| |
|-------------|-------------|----------------|--------|---|
| 2001        | 2005        | 23             | 0.4674** | 0.0245 |
| 2005        | 2009        | 23             | -0.1324 | 0.5470 |
| 2009        | 2012        | 23             | 0.0504  | 0.8194 |
| 2001        | 2012        | 23             | -0.3310 | 0.1229 |

***Significance Level at the 1%, **Significance Level at the 5% and *Significance Level at the 10%

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64 Spearman's rank correlation coefficient is a nonparametric measure of statistical dependence between two variables that assesses how well the relationship between two variables can be described using a monotonic function. The value Spearman Correlation lies between +1 to -1 where a perfect relation of +1 or -1 occurs when each of the variables is a perfect monotone function of the other.
From the results, no relationship of consistency among conventional PCBs’ ranks has been found in the entire sample period. These results mean that during 2001-2012, the conventional PCBs were not following the order of rankings of the previous years. However, a positive but weak correlation\textsuperscript{65} of 46.74% is observed in 2001-2005 with a probability of 2.45% under 5% significance level which signifies that during 2005 the conventional PCBs were faintly following the rankings of 2001.

But over the time, the pattern erodes and 2012 does not follow the banks’ ranking of previous years. It is also interesting that despite Gen 1 banks are bigger in size and operating for longer period compared with Gen 2 and Gen 3 PCBs; they themselves are not holding their positions as benchmark in the rank matrix where the Gen 2 and 3 banks are crowding at the top in the ranking index.

3.4.3 Analysis and Interpretation of Results

Revenue (\textit{In})efficiency scores are calculated for 23 PCBs from 2001 to 2012 by using a nonparametric DEA technique where reported scores represent banks’ observed revenue deviation from the frontier assuming a common frontier with pooled sample data. The bootstrapped efficiency scores are estimated using three inputs (Deposits, Staff Number and Fixed Asset) and two outputs (Total Interest Revenue and Total Non Interest Revenue). Results for revenue (\textit{in})efficiency measures the technical efficiency of the banks under constant returns to scale.

\textbf{Hypothesis 1} measures the revenue efficiency gap among different generations of conventional PCBs in Bangladesh from 2001-2012 and found a significant finding. The results revealed an efficiency gap between Gen 1 PCBs with Gen 2 and 3 PCBs whereas there is no efficiency gap found between 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs. Thus, basing on the results presented in Table-6, \textit{H1}_{a(a)} is rejected and \textit{H1}_{a(b)} is not rejected.

According to Fries and Taci (2005), revenue efficiency and banks’ year of establishment has a strong relationship which it is evident in case of Bangladeshi PCBs where the older the banks

\textsuperscript{65} As a rule of thumb, any relationship below 50% is considered as weak relationship.
are the more revenue inefficient they become. Generation 1 banks are the oldest and are serving for more than three decades in the banking sector found revenue inefficient compared with Generation 2 and Generation 3 banks.

From the results of the **Hypothesis 1**, it has proved that despite holding larger asset components in the book of accounts, Gen 1 banks are not utilizing those resources properly to generate as much output as Gen 2 and Gen 3 PBCs which has created an efficiency gap and made them inefficient. On the other hand, the PCBs of Gen 2 and Gen 3 are employing their resources properly to earn more revenue and to reduce cost; thus, comparatively 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs are not revenue inefficient and there is no efficiency gap exists.

This can be justified by the consequences of the difference in time period experienced in different banking generations. The superior performance of 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs may cause due to their advantage of learning from the experiences of 1\textsuperscript{st} Gen PCBs. Added to this, Gen 3 PCBs did not experience the difficult times during the financial crisis of 1997 to 1998 as they were established after that period. However, to survive the increasingly competitive industry, 1\textsuperscript{st} Gen PCBs need to work seriously to improve their efficiency.

The results of the **Hypothesis 2** presented in Table-7 measures the relationship between banks’ revenue (in)efficiency and their sizes for the conventional PCBs of Bangladesh from 2001 - 2012 and found a positive correlation with size and revenue efficiency. In other words, revenue inefficiency is negatively related to size. Thus, basing on the results $H2_{o}$ is rejected.

Logarithm of Total Asset ($lta$) and Number of Branches ($branch$) are the proxy for banks size, showed inverse relationship with the dependent variable, Revenue Inefficiency ($binef$), in all estimates. It reflects that bigger banks are relatively more revenue efficient for the PCBs in Bangladesh during 2001 to 2012. Though literature provided mixed findings on the relation of size and revenue efficiency, DeYoung and Nolle (1998) explained that due to the ability of large banks to attract and retain better managers they can be revenue efficient.

Large banks experience economies of scale and scope from growth and joint production resulting in lower inefficiency. They can also maintain a diverse asset portfolio consisting of both retail lending and investment in financial instruments to help to achieve more revenue
efficiency. Furthermore, large PCBs enjoy advantage of having more assets, more experience, wider spread between lending-borrowing rates and better reputation and public confidence which jointly help them to reduce revenue inefficiency (DeYoung and Nolle, 1998).

The result of size factor is inconclusive without taking into consideration the ‘Generation’ dummy variable because all the big sized banks are into Gen 1 category. The Generation dummy variable revealed a negative and significant association with Revenue Inefficiency (binef) variable in all estimates. It suggests that PCBs of Gen 1 (Gen 1) are associated with a positive relationship with Revenue Inefficiency (binef) means that Gen 1 PCBs are not revenue efficient. Whereas, regressing against Revenue Inefficiency (binef), Generation 2 (Gen 2) and Generation 3 (Gen 3) dummy variables provided statistically insignificant results means PCBs fall under Gen 2 and Gen 3 category are revenue efficient.

According to the Hypothesis 1, it was found that efficiency gap exists among the generations and from the results of the Hypothesis 2, it is reconfirmed that Gen 1 PCBs are not making the best use of their assets to generate enough revenue which made them revenue inefficient. Consistent with results of Hypothesis 1 and Hypothesis 2, it can conclude that bigger banks in Gen 2 and Gen 3 are revenue efficient. Perhaps, this is due to the ability of banks’ management to better control the usage of resources rather than controlling the outcomes which is normally influenced by external factors such as competition, regulations and other macroeconomic factors (Fries and Taci, 2005).

As Gen 1 PCBs are old, experienced and also larger in size than the comparatively new Gen 2 and Gen 3 PCBs, they are more able to control their costs but difficult to be efficient in creating income and generate profit, in accordance to Berger and Mester (1997). In case of Bangladesh, based on Assets and Number of Branches, the large size PCBs of Gen 2 and Gen 3 may fall under the medium-sized banks in the overall banking sector of Bangladesh which found the most revenue efficient. Consistent with Srivastava (1999) where revenue efficiencies for medium-sized Indian Banks were found the highest, PCBs in Bangladesh are also exhibiting the similar results.

During regression of Revenue Inefficiency (binef), Equity to Total Asset ratio (eqmult) did not provide any statistically significant result whereas Cost to Income ratio (ci) provided a
significant finding in all estimations. Regardless size and Generation factors, Cost to Income ratio ($c_i$) has a strong positive relationship with Revenue Inefficiency ($binef$) which means that the higher the ratio the more revenue inefficient the bank is. It is understandable that banks can generate more profit if they can minimize costs which lower the Cost to Income ratio ($c_i$) and increase revenue efficiency. In theory, it is one of the main key performance indicators of banks’ efficiency where operating costs like salaries and administrative expenses are controlled to make banks more revenue efficient.

As expected, the two other independent variables - the lagged Non Performing Loan_1 ($npl 1$) and the lagged Loan Loss Provision_1 ($llp 1$) - showed significant relationship with Revenue Inefficiency ($binef$). Non Performing Loan ($npl$) is negatively and Loan Loss Provision ($llp$) is positively related to Revenue Inefficiency ($binef$) meaning that revenue efficient banks have lesser NPL and more LLP. One of the important aspects of the prudential norms of banking is the requirement of maintaining provisions against default loans. An analysis of the LLP of PCBs reveals that they failed to book the required level of provisions since the adoption of prudential norms of the new Bank Company Act, 1991.

Although PCBs have improved maintaining the required amount of LLP; this provisioning shortfall position depicts erosion of banks’ capital, one of the inherent weaknesses of the banking system in Bangladesh. Thus, big amount of NPL increases the NPL Ratio ($nplrat$) and keeping large provision against the NPL raises the LLP Ratio ($llprat$) which lowers the revenue efficiency.

Alongside other independent variables, LLP Ratio ($llprat$) and NPL Ratio ($nplrat$) are negatively related to Revenue Inefficiency ($binef$) meaning less revenue inefficiency or revenue efficiency. While LLP Ratio ($llprat$) and NPL Ratio ($nplrat$) are regressed in single estimation; LLP Ratio ($llprat$) still provides negative relationship whereas NPL Ratio ($nplrat$) does not reflect any significant relationship with Revenue Inefficiency ($binef$).

According to the literature, inefficient banks always have lower levels of Equity to Total Asset ratio ($eqmult$) and higher levels of NPLs where efficient banks assign more attention and resources to loan origination, monitoring and other credit judgment activities. At present, Bangladesh follows “overdue criteria” and “qualitative criteria” to deem a loan classified or
Banking literature found banks are revenue efficient if they can generate income from its services by operating with given level of inputs; depending on which banks can be ranked. **Hypothesis 3** measures the changes in ranks of the conventional PCBs’ Revenue (In)Efficiency from 2001-2012. The results, presented in **Table–8**, showed that there is no consistency of banks’ ranking for the sample period as it does not provide statistically significant results and thus **H3** is rejected.

The rankings of the banks vary for different internal and external reasons. According to Shivdasani (1993), substantial empirical research exists on the relationship between banks’ performance and corporate Boards of Directors (BoDs) where the monitoring and advising roles of the corporate board with high-quality board experience significant smaller losses than banks with low-quality boards.

Aside from that other internal factor on board characteristics such as board size, board duality, board density, and board shareholding also affect revenue efficiency and banks’ performance. Among the external factors, the competitive market structures and the economic condition related to inflation and exchange rate are the major contributing factor to tremble the PCBs’ ranking from 2001 to 2012.

Despite Gen 1 banks are bigger in size, experienced and operating for longer period of time in the banking sector compared with Gen 2 and Gen 3 PCBs; they themselves proved to be inefficient in terms of revenue efficiency and are not considered as the best benchmark for other banks from 2001 to 2012. On the other hand, the performance of bigger banks in Gen 2 and Gen 3 are superior among all the PCBs in the same sample period in terms of revenue efficiency and they can be considered as the benchmark for all generations of banks.

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66 With some exceptions, the banking sector follows a norm of six months overdue for deeming a loan nonperforming. All troubled loans are then further reclassified as Special Mention Account (SMA), substandard, doubtful and bad/losses to comply with international norms of loan classification where the rate of provisions are 5%, 20%, 50% and 100% respectively.

67 The categories are continuous loan, demand loan, term loan payable within five years, term loan payable in more than five years and short-term agricultural credit/micro credit.
Consistent with **Hypothesis 1** and **Hypothesis 2**, it can be said that not only size but also Generation of banks is important to measure Bangladeshi PCBs’ Revenue Efficiency. As it has seen that there exists an efficiency gap between 1st Gen PCBs with 2nd and 3rd Gen PCBs according to **Hypothesis 1** and also found that the big sized banks are revenue efficient proved in **Hypothesis 2** brings a conclusion in **Hypothesis 3** that comparatively big PCBs of Gen 2 and Gen 3 are revenue efficient and the benchmark for all generation of banks.

### 3.5 Chapter Conclusion

Bank efficiency in Bangladesh is a worthy topic of consideration because the capital and the debt markets are yet undeveloped where banks are the principal conduit for economy wide investment and saving. The efficiency of banks is an indicator of the efficiency of financial intermediation and the efficiency of governance of the banks. Moreover, the banking sector of the Bangladesh is facing stronger competition due to the globalization of the financial system, trend of deregulation, recent economic reforms and increasing domestic competition.

This chapter measures Revenue Efficiency of Private Commercial Banks (PCBs) in Bangladesh by using a DEA non-parametric frontier approach on a complete sample of 23 PCBs from the period of 2001-2012. The study investigated three propositions and provided plausible reasons are further discussed in **Chapter-5**. In this chapter, it outlined the extent of revenue efficiency of Bangladeshi PCBs and provided areas of concerns.

Firstly, the chapter measured the efficiency gap among 1st, 2nd and 3rd Gen PCBs and found an efficiency gap between Gen 1 PCBs with Gen 2 and 3 PCBs while there is no efficiency gap between Gen 2 and Gen 3 PCBs. Due to the difference in time of incorporation and learning from the experiences, 2nd and 3rd Gen PCBs provided superior performance than 1st Gen PCBs. Under the same regulatory framework, having a gap in Revenue Efficiency level among PCBs is a serious concern and requires a thorough analysis to understand the causes of such a gap in efficiency level (Detailed analysis is provided in **Chapter-5**).

Secondly, this study measures the relationship of banks’ revenue (in)efficiency and their sizes where a positive correlation with size and revenue efficiency was observed. The proxies of
size factor showed an inverse relationship with revenue inefficiency. For some PCBs, the number of branches is not proportional to the range of activities they do where they have more branch networking and hire excess people than required. Such banks should accordingly implement policies aiming at enhancing efficiency and reactivation of the work morale.

As Gen 1 banks are old, experienced and also larger in size than the comparatively new conventional Gen 2 and Gen 3 banks, they are more able to control their costs but they are not necessarily revenue efficient. Rather the large size banks of Gen 2 and Gen 3, that may be the medium-sized banks in the overall banking sector, found the most revenue efficient due to the ability of banks’ management to better control the usage of their resources.

Finally, this chapter looked at the changes in ranks of the conventional PCBs regard to Revenue (In)Efficiency from 2001-2012. PCBs showed no statistically significance results which refer PCBs are not following any order of the previous years due to internal and/or external reasons. Interesting it was observed that Gen 1 banks are not considered as benchmarks either for themselves or for other generations. Rather, Gen 2 and Gen 3 banks are the benchmark for themselves and for others. Individual banks in Gen 1 will definitely be interested to know where they are lagging that need improving and simultaneously, the benchmark banks’ of Gen 2 and Gen 3 should emulate their course of activities to be efficient.

The chapter is the first attempt to analyze the efficiency of conventional PCBs in Bangladesh and brought some significant results. However, the inputs and outputs used in this study are purely quantitative while inclusion of qualitative inputs like policy implementation method, quality of services provided level of technological advancement etc. could have been provided better understanding and analysis. Thus, Chapter-5, in this regard, employs alternative strategy by using qualitative methods to find out the answers of Revenue Efficiency discrepancies among different generation of PCBs in Bangladesh.
Chapter 4
Profitability of PCBs
4.1 Introduction

Banks, particularly, in transitional and developing countries are the main channel and principal congregator of funds for economic operation, growth and development. This is also true for Bangladesh where banks are the sole providers of finances and their stability is of paramount importance to the financial system. As such, an understanding of the determinants of their profitability is essential and crucial for the stability of the economy of Bangladesh.

4.1.1 Importance of the Study

New dimensions have emerged in the banking sector of Bangladesh with the initiation of economic reforms in 1991 (discussed in Chapter-2) where the industry had opened to greater competition by the entry of new private banks and liberal entry of foreign banks. Research commented that there are ample of research avenues in the area of competition and concentration of the sector and stressed on further investigation on the profitability using a broad framework, incorporating banks’ regulatory reforms and institutional structure.

New regulations for banks create to a competitive environment where all banks follow a variety of strategies to cope with the emerging market conditions and to remain profitable. After two decades of reforms, it is important to understand and measure the competitiveness and soundness of the sector; particularly, the 1st Generation banks because they incorporated prior the implementation of the Bank Company Act, 1991. New policies introduced in 1991 with assumptions of achieving greater efficiency to increase and extend a competitive banking environment, direly need an evaluation and modification depending on the local and global needs. It is crucial to understand, appraise and monitor the factors affect different generation of banks’ profitability for a developing like Bangladesh.

68 Like Katib(2004); Al-Muharrami and Mathews(2009); Bhatti and Hussain(2010); Bal(2010) etc.

69 The major strategies applied by the banks under the new business conditions include differentiating products/services and creating strategic entry barriers through advertising, widening customer base through promotional activities, diversification of product/service portfolio to reduce risks of operation, enhance efficiency for better management and enhance capital base to avoid liquidity risk.
Besides that there is rapidly growing literature on market structure in developed countries where very little attention has been paid so far to the developing countries. There is only a few empirical works of specialist nature to determine the market structure in conjunction with Corporate Governance (CG) to measure commercial banks’ profitability in Bangladesh where the profitability analysis depending on banking generations is missing. Thus, it is important for the Board of Directors (BoDs), policymakers of the Central Bank (CB) and the government and also for the existing players, the potential entrants and other stakeholders of the banking industry to figure out and address the issues that influence 1st, 2nd and 3rd generation banks’ profitability.

4.1.2 Objective of the Study

The objective of this chapter is to examine the bank-specific, industry-specific and macroeconomic variables of profitability across 1st, 2nd and 3rd Generation banks in Bangladesh for twelve (12) years. The study examines the degree of concentration and performance of the Bangladeshi banking industry by using the pooled estimator for the period of 2001 to 2012. It will examine and provide recommendation only on the Private Commercial Banks (PCBs) category because of their hefty profit growth.

In Bangladesh, banks of different generations are not equally efficient and profitable despite they are operating under the same regulatory framework. Understanding of these banks’ profit factors is essential for their successful survival because a big difference between cost of fund and return on fund is very harmful for the financial system. Moreover, increased concentration intensifies the market power of large banks by fostering collusive behaviour which therefore hinders both competition and efficiency. In order to judge the implications of the structural changes and developments, it is imperative to examine current market structure of the banking sector to understand the impact of changes.

Applying the traditional industrial organization theory and hypotheses, this study investigates the level of concentration, competition and profit performance of Gen 1, 2 and 3 banks. The basic purpose of figuring out the significant variables and assessing them basing on their generations is to make the Bangladeshi banking sector locally competitive and to crate awareness among stakeholders.
4.1.3 Research Contribution

This chapter focuses on 1st, 2nd and 3rd Generation of PCBs and identifies factor(s) that may have influence on profitability. Thus, the research contributions are as follows:

First, a comprehensive data set is used to study and analyze the relationship between profitability and some specific variables. The results are expected to show consistent outcome of the previous chapter (Chapter-3) and to confirm that 1st Gen PCBs are not only inefficient but also less profitable compared with Gen 2 and 3 banks.

Second, previous studies have incorporated proxies of efficiency measures to formulate banks’ profitability function. However, this chapter uses bootstrapped revenue efficiency scores (obtained from Chapter-3) to investigate the influence of efficiency on Gen 1, 2 and 3 banks’ profitability. The regression results using technical efficiency exercises greater control over the dependent and independent set of variables in determining and differentiating profit performance among generations. Using the revenue efficiency score, it will also show a strong association of efficiency with profitability.

Third, using ROA (Return on Assets) as a proxy for profitability, this chapter highlights that concentration and market share do not have significant relationship with profitability whereas all bank-specific determinants significantly affect profitability. Therefore, it rejects the traditional market power hypotheses and concludes that neither market power/ share of individual banks nor market concentration have meaningful associations with banks’ profitability in Bangladesh.

Fourth, the depth of banking data in previous research was limited whereas a comprehensive data set from 2001 – 2012 has been constructed for this chapter. This longer sample period provides the necessary time to all the generation of banks to comprehend and thoroughly apply the changes of regulation. The panel estimation using this dataset incorporates the dynamisms of the banking sector for 12 years and exhibits generational gaps more clearly.

Fifth, this study accounts for a variety of variables which will be useful not only for the policymakers but also for the existing players, the potential entrants and other stakeholders of
the banking industry. The evidence provides a menu of important determinants of Gen 1, 2 and 3 banks’ performance to guide towards upgrading quality and enhancing the stability of banking industry that is the core of economic development.

### 4.1.4 Organization of the Study

Apart from the introductory section, this study is presented in four sections where the **SECOND** part is the “**Literature Review**” that states the definition, market structure hypotheses and theories on banks’ profitability. In addition, this section examines some important factors that received attention in theoretical research; regulation and ownership structure in the banking sector of Bangladesh. The **THIRD** part is the “**Methodology**” which outlined the method, the model, the data set including the selection of variables and the research hypotheses. The **FOURTH** section is the “**Results**” that describes explicitly the significance obtained from each variable for the period of 2001-2012. The **FINAL** section is the “**Chapter Conclusion**” that summaries the overall chapter and results.

### 4.2 Review of Literature on Profitability

This section is built on literature review on banks’ profitability in the light of regulation, Corporate Governance and ownership. It discusses the concepts of profitability for banks, the theoretical frameworks and the relationship between macroeconomic, industry-specific, bank-specific factors with banks’ profitability.

#### 4.2.1 Concept of Profitability for Banks

In commercial banks, the profit is defined as the difference between total income and total expenditure. Income and expenditure sources of the commercial banks are grouped under two heads: interest and non-interest sources. The difference between interest income and interest expenditure is known as ‘spread’ and the difference between non-interest expenditure and non-interest income is known as ‘burden’. Alternatively, profit is also defined as the difference between spread and burden.
Profitability connotes a situation where the income generated during a given period exceeds the expenses incurred over the same length of time for the sole purpose of generating income (Banwo, 1997; Sanni, 2006). According to the accounting principle of ‘Matching Concept’, the fundamental requirement is the income and the expenses must occur during the same period of time and the income must be a direct consequence of the expense.

In order to determine banks’ profitability, the simple elaboration of indicators is not enough; rather, they need to be compared with similar indicators of other banks of the same period to understand the real position of profit performance. The concept of profitability can also be viewed from vertical coordinates which account short term financial efficiency of branches where horizontal coordinates analyse of one certain part of bank's activity of the strategic level.

4.2.2 Hypotheses on Banks Profitability

The literatures concentrate on two types of hypotheses - the structural and the non-structural approaches – concerning the profitability of the banking sector (Berger et al., 2005). Both the structural and non structural hypotheses are described below. Also, Appendix-14 provides a list of studies using single hypothesis or a combination of hypotheses to measure bank’s profitability.

a. Structure Conduct Performance (SCP) Hypothesis

The Structure-Conduct-Performance (SCP) hypothesis is based on the proposition of market concentration which was modified by Bain (1951)\textsuperscript{70}. According to Neuberger (1997), the SCP model is concerned about trilateral connection which relates the three poles of structure, conduct and performance (Appendix-15) where structure of the market (concentration, conditions on entry, etc.) influence performance of banks (profits, growth, etc.) via their conducts (price and non-price behaviour). Traditional SCP framework suggests that the possibility of collusive behaviour increases when the market is concentrated in the hands of a

\textsuperscript{70} SCP was initially propounded by Mason(1939).
few firms and the higher the market concentration is, the larger the profitability of the firms of that industry referring to a positive relation between market concentration and profitability.

The assumption is that the degree of concentration exerts a direct influence on competition among firms where highly concentrated market will lower the cost of collusion and foster tacit and/or explicit collusion. As a result of this collusion, all firms in the market will earn monopoly rents\textsuperscript{71}. SCP hypothesis assumes a causal relationship running from the structure of the market to the price setting behaviour of firms and ultimately to profitability through the market power channel (Prasad and Radhe, 2011). Basically, the SCP implies that concentration in the banking industry can generate market power allowing banks to earn monopolistic profits by offering lower deposit rates and charging higher loan rates. The SCP approach assumes that the structure of the industry determines the behaviour of firms and has influence on their profitability.

Many studies have attempted to test the validity of the basic proposition that market concentration lowers the cost of collusion between firms and results in higher profits. Gilbert (1984) measured bank performance to a change in market concentration and found that concentration significantly effected performance and profitability in the predicted direction. The SCP relationship in the banking sector is well explored in the literature where studies summerised that market concentration significantly influence the performance of banks\textsuperscript{72} \textsuperscript{73}.

\textsuperscript{71} According to the logic of the SCP, market concentration reduces cost of collusion between firms and produces hyper normal profits. The less there are firms in the market(concentrated structure),the less competitive the firm’s behaviour(price levels are elevated and/or weak output)will be which will generate surplus profits from exploitation of market power. This reflects the setting of prices less favourable to consumers in more concentrated markets as a result of collusion or other forms of noncompetitive behaviour. The more concentrated the market, the less the degree of competition. The smaller the number of firms and the more concentrated the market structure, the greater is the probability that firms in the market will achieve a joint price-output configuration that approaches the monopolistic solution(Staikouras and Koutsomanoli-Fillipaki,2006;Berger and Hannan,1989).

\textsuperscript{72} A large number of these studies find evidence in support of the hypothesis that market concentration enhances banks’ profitability likely Edward(1964);Phillips(1967);Brucker(1970);Vernon(1971);Gilbert(1984);Podenda(1986);Evanoff and Fortier(1988);Molyneux and Thornton(1992);Lloyad-Williams et al.(1994);Molyneux and Forbes(1995);Katib(2004). More particularly, the most recent studies on emerging banking markets that have found support for the SCP hypothesis are Katib(2004) on Malaysia;Al-Muharrami and Mathews(2009) on Arab Gulf Cooperation Council(GCC);Bhatti and Hussain(2010) on Pakistan and Sharma and Bal(2010) on India.

\textsuperscript{73} Contrary to SCP observation includes studies by Smirlock, 1985; Miller and VanHoose, 1993 that either do not support or reject the hypothesis that market concentration has a positive impact on performance of banks. Similarly, the studies by Bhattacharya and Chowdhury(2003);Varma and Sainir(2010) etc did not find evidence in support of this traditional SCP hypothesis.
Studies showed that market concentration in banking sector affects the price which consumers pay for banking services and this in turn influences their financial performance. The more concentrated the market, the more market power banks have which means they can be inefficient (i.e. avoid minimising costs) without being forced out of the market.

The theoretical predictions of the SCP approach appear to be difficult to conciliate with the reality of the evolution of markets structures and the performance of banks. Indeed, research has been focused on new explanations of profit and has witnessed the particular appearance of the works of Demsetz (1973), Peltzman (1977), Brozen (1982) and Smirlok (1985) who brought the theoretical foundation for the counter hypothesis to the SCP model, i.e. Efficient Structure (EFS) Hypothesis which is explained below.

**b. Efficient Structure (EFS) Hypothesis**

Demsetz (1973) formulated an alternative explanation of market structure-performance relationship and proposed the Efficiency Structure (EFS) Hypothesis. Applied to banking sector, this hypothesis stipulates that a bank which operates more efficiently than its competitors gains higher profits resulting from low operational costs and holds an important share of the market. Consequently, differences at the level of efficiency create an unequal distribution of positions within the market and an intense concentration. Since efficiency determines market structure and performance, the positive relationship between these two seems superficial.

Proponents to the EFS hypothesis believe that market concentration is not a random event, rather the result of a large market share of efficient firms where the most efficient firms are those who have low costs. They earn market shares as a consequence and this market share is retained as a proxy to efficiency.

Since more efficient firms are expected to capture a higher market share, one way of distinguishing between the market power and efficient structure hypothesis is to include both market share and concentration in the profitability equation (Eichengreen and Gibson, 2001). If concentration becomes insignificant, this goes against the SCP hypothesis and refers that market share has influence on profitability.
Several studies have been conducted on EFS Hypothesis\textsuperscript{74} and suggested that measurements of market concentration and market share must be jointly examined in empirical studies to test the relationship of the market and firms performance. They also strongly contest employing market share as a proxy for efficiency and strongly recommend the employment of a direct measure of efficiency given that market share captures the effect of other variables other than efficiency\textsuperscript{75}. Efficiency hypothesis prevails when there is a significant positive correlation between market share and profitability and higher market concentration is the main source of market power. Further, the EFS Hypothesis extended a new version of efficiency measure, the Relative Market Power (RMP) Hypothesis which is described below.

\textbf{c. Relative Market Power (RMP) Hypothesis}

Shepherd (1986) criticized Efficient Structure (EFS) method\textsuperscript{76} and emerged a new hypothesis - Relative Market power (RMP) Hypothesis where banks with a higher market share and well-differentiated products exert more market power and earn higher profits, independent of how concentrated the market is. It is unique to have banks with a large market share and diversified products that can exert their market power to determine prices and make profits.

The RMP hypothesis is empirically proved when concentration introduced in the explanatory equations of performance and is found non-significant in contrast to market share which should be positively and significantly correlated with price and/or profitability. A bank with a strong position in the market may either reinforce its domination over the market or achieve a higher efficiency. RMP hypothesis posits that the more efficient firms earn supernormal profits. A consequence of greater efficiency could be higher output. Like SCP, the relative efficiency hypothesis predicts a positive profits concentration relationship.

\textsuperscript{74} Namely-Shepherd(1986);Schmalensee(1987);Timme and Yang(1991);Berger(1995);Sathye(2005);Park and Weber(2006);Byeongyong(2002);Byeongyong and Welss(2008);Chortareas,et.al(2009);Seelanatha(2010).

\textsuperscript{75} Efficiency is the key factor of competitiveness that receives a multidimensional interest justified by the coexistence of well-defined capacities and skills, namely-training processing, relational networking, predicting and selecting right human capital and cost shrinking.

\textsuperscript{76} Shepherd(1986) criticized Efficient Structure(EFS) method by considering that the direct source of market power is the domination of participants in the market which is independent from the ultimate sources power.
The empirical evidence on RMP hypothesis is mixed\textsuperscript{77}. Some empirical studies test the SCP and RMP hypotheses by analyzing the profit-concentration relationship (market share) but these studies were incapable of favouring one of the two hypotheses\textsuperscript{78}. Another problem might arise from RMP hypothesis that inconsistently with the theory as efficiency and concentration are negatively correlated. In this case, a significant and positive coefficient of market structure might be fallacious.

\textit{d. Quiet Life Theory}

Hicks (1935) first suggested an alternative linking between market structure and efficiency where producers forego such rents in return for inefficiencies. This has been proposed the "Quiet Life Hypothesis" (QLH) since agents might prefer to use their market power to behave systematically inefficient. The QLH is a particular case of market power hypothesis where a bank management with a large market share is less centered on efficiency as the exploitation of market power in terms of fixing prices automatically derives benefits (Hicks, 1935).

An increase in market power comes with a deterioration of efficiency which makes banks unable of earning higher profitability. It is posited that firms with greater market power opt for a more relaxed environment in which less effort is put into maximising cost efficiency at the expense of lower profits. As a result of this slack management, banks with greater market power are inefficient. The QLH puts forward an explanation in the case of the absence of a presumed relationship between profitability and market structure.

Hicks (1935) argued that monopoly power allows managers a quiet life free from competition; therefore, increased concentration brings a decrease in efficiency\textsuperscript{79}. Several banking studies suggest that concentration does not substantially increase bank profitability as predicted by the SCP hypothesis (Berger, 1995). To explain these contradictory findings, Berger and Hannan (1998) argued that banks in more concentrated markets take advantage of market

\textsuperscript{77} From studies of Gilbert(1984);Lloyd-Williams and Molyneux(1994) and Molyneux and Forbes(1995).

\textsuperscript{78} The reason is that the effects of market power and efficiency might be simultaneously present in the variables describing market structure and they are neutralized at the level of the concentration coefficient (market share).

\textsuperscript{79} Leibenstein(1966) argued inefficiencies reduced by increased competition as managers respond to the challenge.
power in pricing not for earning higher profits but to allow costs to rise as a consequence of slack management. Increased concentration, if it leads to increased marked power, has therefore a negative impact on bank efficiency and profitability.

Furthermore, instead of extracting rents in a monopolistic market, firms use their market power to allow for inefficient allocation of resources rather than maximizing their profits since management's subjective cost of reaching the optimal profit might very well outweigh the marginal gains. According to Rhoades and Rutz (1982), the QLH should apply in particular to banks since they often avoid to exhibit large abnormal returns with respect to their fiduciary duties and due to their regulated status.

4.2.3 Theories Influence Banks’ Profitability

This section presents the theoretical explanations and describes the relationships between regulation, ownership structure and profitability. Banks’ profitability is affected by the prevailing regulation, board formation and management of accounts combining with macroeconomic, industry-specific and bank-specific determinants. Primarily, banking regulations and banks’ profitability has a direct relationship with proper regulations where better supervision helps to overcome Moral Hazard\(^{80}\) problem and reduce Information Asymmetry\(^{81}\).

On the other hand, the relationship between the ownership structure and profitability is related where the theoretical explanation is based on the Agency Theory\(^{82}\) by Jensen and Meckling (1976). Their results suggest that the ownership structure and corporate governance structure influence bank’s performance where banks with more stringent and value based owners are likely have better profitability than state-owned banks. Banks’ managers with different capital

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\(^{80}\) In economic theory, a moral hazard is a situation where a party will have a tendency to be more willing to take a risk, knowing that the potential costs or burdens of taking such risk will be borne, in whole or in part, by others.

\(^{81}\) It is a situation in which one party in a transaction has more information than another.

\(^{82}\) According to the Agency Theory, a principal-agent relationship exists between the owners and the managers where both differ in needs and preferences.
structures tend to choose different activities which are sometimes conflicting from the view of the Board of Directors (BoDs). Agency theory argues that directors are seeking to maximize their personal benefit and thus take actions that are advantageous to themselves but detrimental to shareholders (Tricker, 2009).

In contrast to agency theory, Stewardship Theory believes that directors do not always act to maximize their own personal interest because they have a fiduciary duty to act as stewards of the shareholders’ interest. Moreover, to mitigate the obvious theoretical argument between the relationship of the ownership structure and profitability; capital market discipline does strengthen owner’s control over management by giving banks’ management more incentives to be efficient and profitable.

However, the banking sector is not perfect and it has agency problem, information asymmetry and transaction costs which distorts the perfect market composition. Because, the perfect market structure does not hold, there could have a negative relationship with capital structure and profitability. Banks with higher equity financing are expected to have lower ROE and higher ROA. Furthermore, Grigorian and Manole (2002) proved for transitional courtiers that well capitalized banks, foreign owned banks as well as banks with higher market share, attract more deposits at lower costs due to their reputation and too big to fail attributions.

Contrary to the previous justification, there are also theoretical explanations reveals that a higher equity-to-asset ratio has a positive effect on profitability. These explanations are based on the concept of Signaling and Bankruptcy Cost Hypothesis. According to Signaling Theory, higher equity ratio is a positive signal to the market because less profitable banks will not be able to achieve such signals since this will further deteriorate their earnings (Heid, Porath and Stolz, 2004). Similarly, lower leverage indicates that banks perform better than their competitors who cannot raise their equity without further deteriorating the profitability.

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83 Most of the empirical research proved that well-capitalized banks have higher ROA or/and NIM (Abreu and Mendes-2002; Athanasoglou, Brissimis and Delis-2005; Athanasoglou, Delis and Staikouras-2006; Demirgüç-Kunt and Huizinga-1998; Kosmidou, Tanna and Pasious-2006; Košak and Čok-2008; Mamatzakis and Remoundos-2003; Ramlall-2009; Sufian and Razali Chong-2008) and some of them proved the same for ROE (Abreu and Mendes-2002; Goddard, Molyneux and Wilson-2004).

84 Signaling theory is useful for describing behavior when two parties (individuals or organizations) have access to different information. Typically, one party, the sender, must choose whether and how to communicate (or signal) that information, and the other party, the receiver, must choose how to interpret the signal.
On the other hand, *Bankruptcy Cost Hypothesis* suggests that banks hold more equity to avoid the periods of distress where bankruptcy costs are unexpectedly high (Berger, 1995). In case of bankruptcy, bank owners only lose their equity invested, under the assumption that no government interventions take place, due to the limited liability, while large part of the bankruptcy costs is born by depositors or deposit insurance schemes.

### 4.2.4 Determinant of Banks Profitability

An extensive body of literature seeks to identify the determinants of commercial banks’ profitability; while some studies focus on the understanding of bank profitability in a particular country, others concentrate their analysis on a panel of countries\(^8\). According to the banking literature, no matter whether it is a single country or a panel of countries study, Ramlall (2009) divided the determinants of banking profitability into two groups - *Internal Factors* and *External Factors*.

#### a. Internal Determinants

Internal determinants of bank profitability are defined by those factors which are influenced by managements’ decisions affecting the operating results of banks. Internal determinants are broadly classified into two categories, i.e. financial statement variables\(^9\) and non-financial statement variables\(^10\). Internal determinants basically reflect the differences in bank management policies and decisions regarding the source and the use of funds, capital and liquidity management and expense management. Although a good quality of management team leads a bank to make profit; however, it is difficult to assess management quality directly and implicitly because it is assumed that quality of management will be reflected in

\(^{85}\) Empirical studies on the determinants of banks profitability have focused on panel of countries include Bourke(1989);Molyneux and Thornton(1992);Demirguc-Kunt and Huizinga(2000);Bashir(2000);Bikker and Hu (2002);Abreu and Mendes(2002)etc. and on individual country includes Berger(1995);Afanasieff,etal(2002);Angbazoi(1997);Naceur and Goaied(2001);Guru,etal(2002);Neely and Wheelock(1997);Koeva(2003);Sanyal and Sankar(2007) etc.

\(^{86}\) The financial statement variables relate to the decisions which directly involve items from the balance sheet and income statement

\(^{87}\) The non-financial statement variables involve factors that have no direct relation with the financial statements like number of branches, status of the branch (e.g. limited or full services branch unit branch or multiple branches), location of the bank etc.
the operating profit. Thus, it is common to examine a bank’s profitability in terms of some key financial variables found in the balance sheet and income statement.

Several factors have been identified in the literature as internal determinants of banks’ profitability but factors identified by Bourke (1989), Molyneux and Thornton (1992) received the most attention. Among them the **Capital Ratio** captures the general safety and soundness of banks which has long been used as a valuable tool for assessing capital adequacy\(^{88}\). Capital structure includes shareholders’ funds, reserves and retained profit affect the profitability of commercial banks because of its effect on leverage and risk where banks’ assets are financed by either capital or debt.

In theory an excessively high Capital Adequacy Ratio (CAR) signifies a bank is operating over-cautiously and ignoring potentially profitable investment opportunities. According to Molyneux (1999) banks with high level of equity can reduce their cost of capital and that could impact positively on profitability. Berger (1995) also asserted that lower level of capital put the banks into risky position and impact negatively on bank’s profitability\(^{89}\). Sufian et al (2008) argued that banks in developing countries needs a strong capital structure because it provides them strength to withstand financial crises and offers depositors a better safety net in times of bankruptcy and distress macroeconomic conditions\(^{90}\).

Another internal determinants is **Liquidity Ratio** that measures solvency by using liquid assets and liabilities and assesses whether the bank has sufficient cash or equivalent current assets to

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\(^{88}\) Capital adequacy refers to the minimum required amount that banks need to hold with the Central Bank which protects depositors and ensures stability in the industry.

\(^{89}\) Studies that use capital ratios as an explanatory variable observed a positive relationship. Athanasoglou, et al.(2005) added that capital is better modeled as an endogenous determinant of bank profitability as higher profits may lead to an increase in capital. Short(1979) believed that scarcity of capital can be used to measure the economy-wide profitability of all industries in a particular country and thus one of the important profitability determinants.

\(^{90}\) Naceur and Goaied(2001) on Tunisian banks’ performances that the best performing banks are those who have struggled to improve labour and capital productivity and able to reinforce their equity; Karkrah and Ameyaw(2010) on Ghana revealed that the equity ratio which is the measure of the capital strength of the banks posted a positive relation with the banks ROA and supported Sufian,et al(2008) stating positive relation between level of capitalization and profitability. The result was also consistent with the finding of Berger(1995), Demirguc-Kunt and Huizinga(1999);Pasiouras and Kosmidou(2007);Bikker and Hu(2002) and Goddard, et al.(2004) linked capital ratio to banks’ size and argued that higher capital ratios reflect the soundness and safety of banks and with increase in capital, profitability rises because relatively large banks tend to raise less expensive capital thus appearing to be more profitable.
be able to pay debts in short-run. Liquidity risk arises from bank’s inability to accommodate liabilities in short run. According to Rasiah (2010) commercial banks are required to hold a certain level of liquid assets by the regulators to make sure that they possess enough liquidity to be able to deal with dues. A bank holding a relatively high proportion of liquid assets is unlikely to earn high profit but is also less exposed to risk; therefore, shareholders should be willing to accept a lower return on equity (Goddard et al., 2004).

**Asset-Liability Portfolio Mix** is another variable that represents loans and deposits of a bank which are the most important balance sheet indicators. Although bank loans are the main source of revenues and are expected to affect profits positively, findings from various studies are not conclusive.

**Costs/ Overhead Expenses** is found in almost all the studies which are categorized into interest and non-interest expenses. The effect of expenses on bank’s profitability is mixed. In the literature, operating expense is viewed as an indicator of management’s efficiency and is expected to have a negative correlation with profitability.

**Non-Interest Income**, which is also termed as revenue diversification, represents other sources of earnings besides from interest earnings from loans of commercial banks that include fees earned from offering other services. It is an important driver of commercial

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91 Contradictory results obtained by Molyneux and Thornton(1992);Rasiah(2010) and Gur, et al.(1999) which stated a negative relationship between banking profitability and liquidity. They asserted that the lower returns on liquid assets and excessive fund which has not been invested negatively affect the profitability of banks. It is not prudent for commercial banks to hold huge amount of idle funds because it deprives banks from income generation and profitability(Eichengreen and Gibson, 2001).

92 Studies on Asset Liability Portfolio Mix includes Rhoades and Rutz(1982);Abreu and Mendes(2000);Naceur and Goaited(2001);Rasiah(2010);Vong et al(2009);Bashir and Hassan(2003);Staikouras and Wood(2003);Smirlock(1985);Sufian, et al.(2008).

93 One of the major expenses incurred by the commercial banks is interest paid out to depositors while generating revenues which is termed as interest expenses. On the other hand, non-interest expenses are not directly related to interest expense which includes overhead expenses, operating expenses, salaries and wages paid to employees and miscellaneous expenses.

94 Studies on Costs/Overhead Expenses includes Rasiah(2010);Vong et al(2009);Bourke(1989);Jiang et al.(2003);Karkrah and Ameyaw(2010);Abreu and Mendes(2001);Molyneux and Thornton(1992);Guru, et al.(2002)

95 According to Stiroh(2002) noninterest income is a heterogeneous category that can be broken down into four primary components fiduciary income (e.g., administering investments for others), service charges (revenue directly related to deposit accounts like ATM or check usage fees), trading revenue (income from trading cash
banks’ profitability and there exists a positive relationship because banks have gradually moved towards providing other financial services as result of on-going financial globalization and liberalization enabling them to increase income and profit.

\textit{b. External Determinants}

External determinants of bank’s profitability are beyond the control of management and represent events outside the influence of the bank. However, the management can anticipate changes in the external environment and try to position the institution to take advantage of anticipated developments. The two major components of the external determinants are macroeconomic or environmental factors and financial structure factors.

\textit{i. Macroeconomic/ Environmental Variables}

Macroeconomic factors or environmental variables exhibit the disturbances anywhere in the economy which affect banking profitability. Banks are exposed to many potential sources of distress rooted in cyclical developments. Generally, a higher demand for bank credit in times of economic boom is observed than in times of recession. Therefore, measuring and monitoring macroeconomic indicators are considered an important component in determining banks’ profitability.

\textit{Market Concentration and Competition} is the most common determinants of macroeconomic variables based on the structure-conduct-performance (SCP) hypothesis and defines the

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96 DeYoung and Roland (2001) suggests three reasons for the positive association between non-interest income and the volatility of bank earnings. First, bank loans are mostly relationship based and thus have high switching costs. Second, for an ongoing lending relationship; to increase total product (produce more loans) the main input needed is variable (interest expense) whilst in contrast the main input needed to produce more fee based products is typically fixed or less variable (labor expense). This implies fee based activities may require greater operating leverage than lending activities which makes bank earnings more vulnerable to declines in bank revenues. Third, most fee based activities require banks to hold little or no fixed assets so unlike interest based activities like portfolio lending fee based activities like cash management require little or no regulatory capital. Thus, fee based activities are likely to employ greater financial leverage than lending activities.

97 Studies on Non Interest Income and Diversification includes Rasiah (2010); Karkrah and Ameyaw (2010); Gischer and Juttner (2001); Klein (1971); Hughes, et al (1998); Odesanmi and Wolfe (2007)

number and size of firms operating in the market. In the literature\(^99\), the effects of concentration have a significant positive effect on the dependent variable as concentrated industry holds market power and earns monopolistic profits. However, contradictory results also evident and thus it should be viewed as a dynamic process of rivalry in developing countries banking sector.

Another macroeconomic variable is **Market Share** derived from Efficient Structure (EFS) hypothesis that assetains a positive relationship between market share and profitability. Market share can be acquired by superior performance by controlling the operating expenses and thus it has a positive relationship with profitability\(^100\).

**Banking Regulation** is another variable that covers the areas of restructuring, rehabilitation and privatization of state-owned banks, liquidation of insolvent institutions and improvement in administrative efficiency and capability of the sector. Studies showed mixed results\(^101\) while literature indicated that regulations have a profound impact on banks’ balance sheet structures and risk taking attitude.

**Inflation** and **Gross Domestic Product (GDP)** are other factors those cause variations in bank’s profitability because high and variable inflation creates difficulties in planning the operating expenses and in negotiation of loans. However, the effect of inflation depends on whether it is anticipated or unanticipated. If inflation is fully anticipated and interest rates are adjusted accordingly then a positive impact on profitability will be resulted. Alternatively, unexpected rise in inflation will cause cash flow difficulties for borrowers which will lead to premature termination of loan arrangements and sudden loan losses\(^102\). On the other hand, a

\(^99\) Literature on Market Concentration and Competition includes Emery(1971); Fraser and Rose(1971); Vernon(1971); Heggested(1977); Short(1979); Kwast and Rose(1982); Smirlock(1985); Bourke(1989) and Molyneux and Thornton(1992); Naceur(2003); Karasulu(2001); Rhoades(1982); Lindley, et al.(1992); Steinherr and Huveneers(1994); Vickers(1995); Bhanumurthy and Dev(2008).

\(^100\) Studies on Market Share includes Mullineaux(1978); Heggested and Mongo(1976); Smirlock(1985); Short(1979); Demirguc-Kunt and Huizinga(1999).

\(^101\) Studies on Regulation includes Creane, et al.(2003); Peltzman(1968); Claessens, et al(1997); Chiuri, Ferri, and Majnoni(2002); Barth, Caprio, and Levine(2004); Barth, Nolle and Rice(1997); Laeven and Levine(2009); Saunders, et al.(1990); Edwards(1977); Fries and Taci(2002); Greenidge and Browne(2000).

high asset-to-GDP\textsuperscript{103} ratio implies that financial development plays an important role in the economy which is reflected by a higher demand for banking services and attracts potential competitors. The literature found a mixed relationship of Inflation and GDP with profitability.

In most of the studies, the \textit{Interest Rate} is considered as an external variable and a significant positive macroeconomic determinant because changes in interest rates are mostly caused by the economic policies and demand-supply of money. The extent and speed of change impacts on bank’s short and long term portfolio because net interest income (the deference between interest income and interest expenses) has enormous impact on profitability. A rise in interest rate leads to higher profit by increasing the spread; thus, have a positive relationship\textsuperscript{104}.

Bank profitability is sensitive to \textit{Market Growth and Money Supply} despite greater geographic diversification and larger use of financial engineering. Generally, higher economic growth encourages banks to lend more and to charge higher margins. Studies\textsuperscript{105} indicated that market growth attributes to higher level of entry barriers which ensures banks to earn higher profits\textsuperscript{106} and holds a strong positive effect on bank earnings.

On the other hand, money supply is implemented and manipulated by the government which changes when there is any change to the reserves\textsuperscript{107}. If the Central Bank tighten or reduce money supply through tools of monetary policy, it will either increase or decrease the interest rate. Therefore, money supple is affected by interest rates because increase of interest rate

\textsuperscript{103} Studies on GDP includes Demirguc-Kunt and Huizinga(1999);Mercia,Evren and Hassan(2002);Panayiotis,Athanasoglou,Brissimis and Mathaios(2005);Wong,Fong, and Choi(2006);Staikouras and Wood(2004);Ramlall(2009);Sufian(2011);Shaher,Kasawneh, and Salem(2011);Goddard,Molyneux and Wilson(2004);Flamini,McDonald, and Schumacher(2009);Al-Tamimi(2010);Damena(2011);Davydenko(2011);Saksonova and Solovjova(2011);Zeitun(2012);Athanassoglou,Delis, and Staikouras(2006);Scott and Arias(2011);Hoffmann(2011);Alper and Anbar(2011);Sharma and Mani(2012).

\textsuperscript{104} Studies on Interest Rate includes Bobakova(2003);Demirguc-Kunt and Huizinga(1999);Staikouras and Wood(2003) and Cheang(2005);Uhomoibhi(2008);Sufian,et al.(2008);Kosmidou,et al(2006);Rasia(2010)

\textsuperscript{105} Further studies on Market Growth and Money Supply are Neely and Wheelock(1997);Demirguc-Kunt and Huizinga(2000);Bikker and Hu(2002);Smirlock(1985);Rhoades(1982);Bourke(1989);Molyneux and Thornton(1992);Karkrah and Ameyaw(2010)

\textsuperscript{106} The reason for this argument stem from Micheal Porter’s argument where the market is growing it attracts new entrants into the market and these new firms have the desire to gain some market share. When this happens it makes the market to be very competitive which result in low profitability of the firms in the industry (Harvard Business Review,2008). The higher level of competition within the industry has resulted in the reduction of concentration.

\textsuperscript{107} Reserves are assets for banks but liabilities for the Federal Reserve or Central bank.
leads to a decrease of amount of loan demanded, which gives effect to the deposits, in turn changes in deposits affect the movement of money supply by slowing down and vice versa.

**ii. Financial Structure Variables**

Many studies have investigated the relative importance of financial structure in determining banking profitability. Bank Size is one of the important and non-linear profit variables that alone does not guarantee the earning of excess returns and controls the cost differences. In the developing market, by increasing the size of a bank cost saving is possible and provides a positive effect on profitability up to a certain limit. Contrarily, due to bureaucratic control, diseconomies of scale and management inefficiency big banks can have lower profitability.

Recently, the importance of Ownership Structure on banks’ profitability is also considered as an important factor and has gained much attention in policy making strategies in developing economies. But, the effect of ownership structure on bank profitability is not yet fully resolved and provides a mixed result. To measure differences in bank profitability, home advantage hypothesis is often being tested where foreign owned banks found more profitable compared to domestic banks in developing countries. Studies on state versus private ownership of banks showed empirical evidence that state-owned banks charge lower interest rates, have higher overhead costs and NPLs, are immune from the threat of takeover and have poorer corporate governance than privately owned banks which lower their profitability. In

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110 The regulatory framework in the developing countries significantly increased the attractiveness of for foreign investors that have an impact on bank profitability due to a number of reasons: First, the capital brought in by foreign investors decrease fiscal costs of banks’ restructuring. Second, foreign banks bring expertise in risk management and a better culture of corporate governance, rendering banks more efficient (Bonin, et al.,2005). Third, foreign bank presence increases competition, driving domestic banks to cut costs and improve efficiency (Claessens, et al.,2001). Finally, domestic banks have benefited from technological spillovers brought about by their foreign competitors.
single bank analysis, studies showed that owner-controlled banks did not earn higher rates of return on invested capital compared to management-controlled banks because large shareholders use their control rights to achieve private benefits.

c. Other Determinants of Profitability

Besides the above mentioned internal and external factors, there are some determinants those were found in several studies have influenced banks’ profitability directly and/or indirectly. **Merger**\(^{111}\) is a factor where merged banks enjoy an increase on profit efficiency compared to other banks due to a range of factors including shifting outputs from securities to loans and improvements on higher value product. Similarly, **Conglomerates** and **Universal Banks**\(^{112}\) are found to be more revenue efficient than specialized competitors in terms of cost and profit efficiency. Also, increased **Labour Productivity**\(^{113}\) contributes to greater revenues generation and in this way the overall profitability gives a positive effect.

Besides, **Age of Banks, Number of Branches** and their **Locations**\(^{114}\) are found to have link with bank’s profitability. Another factor which has been noted by only a few authors to increase banking profitability is the **State of Information Technology**\(^{115}\) (IT) in banks where all the results indicate a positive relationship between the level of investment on bank’s IT system with its profitability.

**4.2.5 Banks Profitability in Developing Countries**

There is a large literature which has examined bank’s profitability in developed countries. However, fewer studies have looked at bank’s performance in developing economies. This

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\(^{112}\) Studies on Conglomerates and Universal Banks includes Vennet (2002); Benston (1990) and Sauders and Walter (1994); Hansen (1982)


\(^{114}\) Studies on Age of Bank, Number of Branches and Location includes Anthanasoglou, et al (2005); Hester and Zoellner (1966); Emery (1971); Vernon (1971); Kwast and Rose (1982)

\(^{115}\) Studies on State of Information Technology includes Porter and Millar (1985); Holden and El-Bannany (2006); Daniel and Storey (1997)
section reviews the empirical research on developing economies bank’s profitability and gives a comprehensive overview about the influence of regulation and ownership structure.

A study by Bonin, Hasan and Wachtel (2005) examined the effect of three ownership variables (strategic foreign, majority foreign and state) on bank performance for 11 transaction countries in a panel of 225 banks from 1996 to 2000. The study generated an interesting result because none is significant when ROA is the dependent variable. This is because such measure provided mixed signals about bank performance, given the undeveloped and evolving nature of the banking sector in transition economies.

Another study by Guru, Staunton and Balashanmugam (2002) examined bank’s profitability in Malaysia consisting internal and external determinants using a sample of 17 commercial banks from 1986 to 1995. The profitability determinants were divided into two main categories where internal determinants were liquidity, capital adequacy and expenses management, and external determinants were ownership, firm size and economic conditions. They reported that efficient expense management was one of the most significant factors in explaining high profitability while capital–assets ratio has a positive relation with profitability. Among the macroeconomic indicators, high interest ratio was associated with low bank profitability and inflation was found to have a positive effect on bank performance.

Javaid et al. (2011) analyzed the internal profitability determinants of top 10 Pakistani banks’ from 2004 to 2008 using the pooled ordinary least square (POLS) method to investigate the impact of assets, loans, equity and deposits on Return on Asset (ROA)\textsuperscript{116}. The empirical results found that these variables have a strong influence on profitability. However, the results showed that higher total assets do not necessarily lead to higher profits due to diseconomies of scales. Also, higher loans contributed towards profitability but their impact is not significant whereas equity and deposits have significant impact on profitability.

\textsuperscript{116} Similar results found by Gull, et al. (2011) who examined the relationship between bank-specific and macro-economic characteristics over bank profitability using data of top 15 Pakistani commercial banks from 2005-2009. The paper used the POLS method to investigate the impact of assets, loans, equity, deposits, economic growth, inflation and market capitalization on ROA, ROE, ROCE and NIM separately. Results showed strong evidence that both internal and external factors have a strong influence on the profitability.
Naceur and Goaied (2001) investigated the impact of banks’ characteristics, financial structure and macro-economic indicators on net interest margins and profitability on the Tunisian banking industry from 1980 to 2000. They found individual bank characteristics explain a substantial part of the within-country variation in interest margins and net profitability. High net interest margin and profitability tend to be associated with banks’ that hold a relatively high amount of capital and large overheads. Size impacts negatively on profitability which implies that Tunisian banks are operating above their optimum level.

Imad et al. (2011) studied a balanced panel dataset of 10 Jordanian banks from 2001 to 2010. Using Return on Assets (ROA) and Return on Equity (ROE), their results showed that high bank profitability tends to be associated with well-capitalized banks, high lending activities, low credit risk and the efficiency of cost management. Results also showed that the estimated effect of size did not support the significant scale economies for Jordanian banks.

Finally, Demirguc-Kunt and Huizinga (1999) used the bank level data for the period of 1988 to 1995 for 80 countries to examine how bank characteristics and the overall banking environment affect both interest rate margins and bank returns. Their study provided a decomposition of the income effects of a number of determinants that affect depositor and borrower behaviour. Results suggest that macroeconomic and regulatory conditions have significant impact on interest rate margins and profitability. Lower market concentration ratios lead to lower margins and profits while the effect of foreign ownership varies between industrialized and developing countries. The foreign banks have higher margins and profits than domestic banks in developing countries while the opposite holds in developed countries.

### 4.2.6 Research on Bangladeshi Banks’ Profitability

To measure and understand the profitability of Bangladeshi banking sector, foreign and national experts undertook number of studies\(^{117}\). Chowdhury (2002) observed that the banking

\(^{117}\) Some of the recent and notable ones are Bhattacharya and Chowdhury(2003);Chowdhury and Islam(2007);Jahangir,Shill and Haque(2007);Chowdhury(2002);Siddique and Islam(2001);Al-Shammari and Salim(1998);Bhatt and Ghosh(1992);Hossain and Bhuiyan(1990);Rahman(2007);Saha,Sujit and Chowdhury(2000)etc.
industry of Bangladesh is a mixed one where regular performance evaluation is needed because of the fierce competition and major transition in the last two-three decades. The author recommended that to remain profitable, banks should comply with regulations to endure the pressure arising from internal and external factors.

After the incorporation of the Bank Company Act, 1991; Bhatt and Ghosh (1992) observed that the profitability of commercial banks’ depends on some endogenous and exogenous factors. The endogenous factors represent control of expenditure, expansion of banking business, timely recovery of loans and productivity. The exogenous factors consist of direct investments such as SLR (Statutory Liquidity Ratio), CRR (Cash Reserve Ratio) and directed credit programs such as region wise, population wise guidelines on lending to priority sectors. The regulated and restricted regime in the operation of banking system in terms of investment, credit allocation, branch expansion, interest rate determination and internal management eroded the productivity and profitability of commercial banks.

Also, Bhattacharya and Chowdhury (2003) pointed out six major policy measures those affects banks’ profitability in Bangladesh which includes: reduction of lending rate, linking classified loans to large loan sanctioning, rationalization and merger of bank branches, measures for loan recovery and demarcation of responsibilities between the management and the board and decision on cash reserve ratio.

Nimalathasan (2008) undertook a comparative study on the financial performance of the banking sector using CAMELS\textsuperscript{118} rating system. The study was done on 6562 branches of 48 banks in Bangladesh from 1999-2006. It revealed that out of 48 banks, 3 banks were rated 01 (Strong), 31 banks were rated 02 (Satisfactory), 7 banks were rated 03 (Fair), 5 banks were rated 04 (Marginal) and 2 banks obtained 05 (Unsatisfactorily). 1 Nationalized Commercial Bank (NCB) had unsatisfactorily rating and other 3 NCBs had marginal rating.

Jahangir, Shill and Haque (2007) found that market size and bank's Return on Equity (ROE) have strong and significant relationship which suggests that capital adequacy is important for banks to be profitable. They also found a negative relationship between bank's risk and ROE;

\textsuperscript{118} Acronym of CAMEL is Capital adequacy, Asset quality, Management Efficiency, Earning quality, Liquidity risk and Sensitivity to Market.
concluded that commercial banks are exposed to high-risk loans in Bangladesh producing lower returns. They are running the risk of lending more than what they are provisioned for making them substantially risk-prone\textsuperscript{119}. According to them the terminology ‘good management’ is very subjective, arbitrary to define and always an internal factor to the banks. Especially in Bangladesh, good management can not be expected in most of the cases because the expertise is yet to be developed.

Haque (2013) measured the financial performance of some selected private commercial banks in Bangladesh for the period 2006-2011 and to identify relationship between a bank’s years of operation and its performance. For this purpose five banks have been selected from different generations and profitability, liquidity, credit risk and efficiency issues have been scrutinized. The study concluded that there is no specific relationship between the generation of banks and its performance. The performances of banks are dependent more on the management’s ability in formulating strategic plans and the efficient implementation of those strategies.

Recently, researchers of Bangladesh Economic Update (2013) stated that comparatively poor administration, lack of transparency, weak regulations and monitoring, interest rate spread and rent seeking behaviour of the politician are noticeable causes for banks’ poor performance and increasing Non Performing Loans (NPLs). Higher NPLs reduce revenue, resulting high loan loss provisioning and high cost of loan which cause lower investment, poorer economic growth and reduced profitability (as banks cannot charge interest on their classified loans). Furthermore, banks with high percentage of NPLs suffer from erosion of capital and also need to set aside a portion of their income as Loan Loss Provision (LLP) to make up the bad debts.

Research by the Unnayan Onneshan in their Bangladesh Economic Update (2013) also indicated that interference in credit disbursement by the Board of Directors (BoDs) and political influence in sanctioning of loans have significant contribution to generate NPLs. Classified loans\textsuperscript{120} 121 122 are usually issued according to the terms and regulations of the bank

\textsuperscript{119} Banks loans suffer from two main sources are the risk of default and the risk of interest rate where default risk can be offset by good management decision but interest rate risk is a macro factor and determined by central bank of the country.

\textsuperscript{120} Loans that are not paid on time and are nominated as troubled assets by banks are known as ‘Classified Loans’.
where the extent of default loans increase in the third quarter due to tightening the loan classification guideline and sluggish business activities during the political pressure and uncertainty. The Financial Stability Report (2012) brought out by the Bangladesh Bank stated that higher classification of loans are mainly due to the nature of their operations, lack of efficiency in fund management, extending obligatory financing towards social and economical priority sectors and politically motivated lending.

### 4.2.7 Criticism of Previous Research

This section criticized the previous research findings on the banking sector of Bangladesh. Samad (2008) tested the validity of two market structure hypotheses (SCP and ESH) by using pooled and annual data for the period from 1999–2002. His study included cross-sectional data from the consolidated balance-sheets and income-statement for all 44 commercial banks operating in Bangladesh and supported ESH as an explanation for market performance. However, his findings are inconclusive and contradictory because the pooled data which contains robust information does not lend support to either of the hypotheses and the results should be interpreted cautiously for policy implications.

A recent study by Mostak (2012) tested the two competing hypotheses (SCP and ESH) for the period from 1999-2011 and suggested that concentration is the important factor for banks’ performance in Bangladesh. According to him the three largest banks accounted for an average of 40% of market shares during the sample period in terms of assets, deposits and loan; however, those banks were not so profitable up until 2007 but improved performance significantly from 2008 onward. As a result, ROA is negatively related to MS and positively related to Concentration Ratio, which implies concentration has lowered the cost of collusion between banks and resulted in higher than normal profits for all market participants. Though major banks enjoy the monopoly power, their powers are short lived because of increasing

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121 At the end of September 2013, the percentage share of classified loan to total outstanding loan was 12.79 percent, whereas it was 11.91 percent at the end of June, 2013 and the percentage share of classified loan to total outstanding increased to 14.21 percent at the end of December 2013.

122 The classified loans increased by Tk.4400 crore or 8 percent to Tk.56700 crore in the July-September, 2013 quarter from Tk.52300 crore of the April-June, 2013 quarter, according to Bangladesh Bank data. The total classified loan was Tk.51000 crore in March, 2013 which was Tk.29000 crore in June, 2012. The classified loans increased due to tightening the guideline.
competition in the market from private and foreign commercial banks. It would be really interesting to investigate whether SCP holds in the banking sector of Bangladesh and banks do enjoy monopolistic power due to that.

Another study by Biswas and Mondol (2012) tested the efficiency of Bangladeshi commercial banks considering a sample of twenty banks selected from three groups: nationalized, private (domestic) and private (foreign) banks. Factor Analysis is adopted to measure the efficiency of those banks based on seven productivity indicators where the analysis revealed that out of 20 banks, only 7 of them are efficient and of those 7 efficient ones, 6 are foreign banks and only one is a domestic PCBs. None of the nationalized commercial banks is found to be efficient and concluded that foreign banks are the most efficient ones. In this regard, it is not logical to compare banks those are operating in a privileged environment and under different regulations. In this case, foreign banks’ presence has been found to shore up performance of financial institutions because they can infuse new technology, promote competition and provide managerial expertise in the host country. Because of their financial clout and reputation, they can mobilize deposits from large multinational corporations, thereby crowding out domestic banks. Similarly, they can lend to large firms without nurturing the small domestic banks, raise overhead costs for domestic banks and dampen their profitability.

Alongside these, Haque (2013) analyzed 5 PCBs in Bangladesh of different generations from 2006-2011 to identify relationships between banks’ years of operation and four performance dimensions - profitability, liquidity, credit risk and efficiency. The study concluded that there is no specific relationship between banking generations and their performances; while performance is dependent on management’s ability in formulating and implementing strategic plans.

In this regard, the study by Haque (2013) considered a very small sample which is not representative of the overall conventional PCBs operating in Bangladesh. Moreover, it is evident from Chapter-3, which measured the efficiency of the conventional PCBs considering the complete set, that there is a relationship between generations and efficiency where exists an efficiency gap between the 1st Gen PCBs with 2nd and 3rd Gen PCBs.
4.3 Methodology

This section explains the method of doing the research, followed by a detailed description of the dataset, dependent and independent variables those have been used to run the model.

4.3.1 The Method

The use of Panel Data is the most suitable tool when the sample comprises cross-sectional and time-series data as it allows overcoming the unobservable, constant and heterogeneous characteristics of each bank included in the sample. However, it has to address the classic problem of endogeneity since the dependent variable (Y) might determine some variables on the right side of the model simultaneously. This technique captures the impact of macroeconomic developments on profitability after controlling for bank-specific characteristics with less collinearity among variables and more degrees of freedom with greater efficiency (Gujarati, 2002). Also, panel data construct better detection and measurement of effects than pure cross-sectional or pure time series data (López, 2005 and Himmelberg et al., 1999).

Gujarati (2002) also pointed out several estimation and inference problems of the panel estimation. As data for panel regression involve both cross-sectional and time dimensions, problems like heteroscedasticity, autocorrelation and cross-correlation in individual units at the same point needs to be addressed. The endogeneity problem of the independent variable can be eliminated by the use of instrumental variables necessary. Moreover, several estimation techniques are used to address one or more of these problems where two most prominent ones are the Fixed Effects (FE) model\textsuperscript{123} and Random Effects (RE) model\textsuperscript{124}.

\textsuperscript{123} Fixed Effects (FE) model allows the partial regression coefficients to be common across cross-sectional units but the intercepts in the regression model are taken to be distinct among individual bank. In Fixed Effect (FE) model, if some variables are unobserved but correlated, then the coefficients of the least squares estimator will be biased and inconsistent because of the omitted variable. In FE model, the intercept in the regression model is allowed to differ among individuals in recognition to the fact that each individual or cross-sectional unit may have some special characteristics of its own.

\textsuperscript{124} Random Effect (RE) model assumes that a common mean value for the intercept (= C) exists and the cross-sectional differences in the intercept values of each bank are reflected in the error term $\varepsilon_i$. In other words, Random Effect (RE) model assumes that the intercept of an individual unit is a random drawing from a much larger population with a constant mean value. If it is assumed that the error component and the regressors are
The consensus from the literature on bank profitability is that the appropriate functional form of analysis is the linear one. To this extent, Short (1979) and Bourke (1989) consider several functional forms and conclude that the linear model produces results as good as any other functional forms. Thus, in this study, a linear model is used to analyze the cross-section time series data to isolate the profitability determinants of Bangladeshi banks. The empirical specification takes the following general form:

$$ Y_{it} = C + \sum a_{it}B_{it} + \sum \beta_{j}I_{t} + \sum \gamma_{k}M_{t} + \mu_{i} + \epsilon_{it} $$

Where,
- $Y_{it}$ is the dependent variable for bank $i$ at time $t$;
- $C$ is the intercept;
- $a$ is the coefficient of bank specific variables
- $B_{it}$ is independent variable or vector of $j$-th bank-specific characteristics of bank $i$ at time $t$;
- $\beta$ is the coefficient of industry-specific variables
- $I_{t}$ is independent variable or vector of industry-specific characteristics at time $t$ that all banks take as given;
- $\gamma$ is the coefficient of macro variable
- $M_{t}$ is independent variable or vector of macro variable that all banks take as given at time $t$;
- $\mu_{i}$ bank-specific unobserved heterogeneity, $\mu_{i} \sim N(0, \sigma_{\mu})$
- $\epsilon_{it}$ random idiosyncratic errors, $\epsilon_{it} \sim N(0, \sigma_{\epsilon})$
- $i$ is the number of banks starting from 1 to 34 banks
- $j$ bank specific variable
- $t$ is the time starting from 2001 to 2012

It is well established that the Ordinary Least Square (OLS) estimate of the constant is inconsistent when $T$ is not large and is correlated with the error terms\(^{125}\). Thus, the Generalized Method of Moments (GMM) estimator by Arellano-Bond (1991) is a generic method for estimating parameters and do not have these limitations\(^{126}\). When the unobserved effect correlates with the independent variables, pooled OLS regression produces estimations uncorrelated then RE model may be more suitable, whereas if the error component and the regressors are correlated then FE model may be appropriate.

\(^{125}\) According to Judge, et al (1988) if the number of time series data ($T$) is large and the number of cross-sectional units ($N$) is small then there is likely to be little difference in the values of the parameters estimated by the two models.

\(^{126}\) In econometrics, the generalized method of moments (GMM) is a generic method for estimating parameters in statistical models. Usually it is applied in the context of semi-parametric models, where the parameter of interest is finite-dimensional whereas the full shape of the distribution function of the data may not be known, and therefore the maximum likelihood estimation is not applicable.
that are biased and inconsistent which can be offset by using the first difference or the Fixed Effect (with-in) estimators (Hansen, 1982).

In some cases when the variances of the observations are unequal (heteroscedasticity) or there is a certain degree of correlation between the observations then the OLS can be statistically inefficient or give misleading inferences; thus, required to use the Generalized Least Square (GLS). The GLS is used in this study rather than the OLS to estimate the panel data. The decision is made following Gujarati’s (2002) suggestion that GLS overcomes the heteroscedasticity resulted by utilizing financial data with differences in sizes. Due to the fact that the sample used in this study consists of small, medium and large commercial banks; differences in sizes of the observations are expected to be observed. The usual practice of econometrics modeling assumes that error is constant over all time periods and locations due to the existence of homoscedascity. Nevertheless, problems could arise to lead to heteroscedasticity issues as variances of the error term produced from the regression tend not to be constant because of the variations of sizes in the observation. Therefore, the estimates of the dependent variable will be less predictable (Gujarati 2002).

Since there are 34 cross-sectional units involved in 12 years’ of time series, the data will be pooled to account for simultaneous consideration of intermproval movements and cross sectional differences. In addition to the pooled time series cross sectional regressions, the model will be estimated as a series of twelve year-by-year cross-sectional regressions. If the results are similar, this suggests that the findings are robust with respect to the pooling approach, the sample composition and the period estimated. The panel regression will also determine whether it is a pooled model of FE or RE from the slope of the intercept (= C).

4.3.2 Variable Selection

There are many determinants those have influence on profitability; however, it is difficult to identify whether all of them are significant factors and important in determining bank’s profitability. This study explores some of the determinants and their relationships at the bank level. The underlying assumption is to capture the influence of different generations, efficiency of management and role of high market share.
a. Selection of Dependent Variable for Profitability

There are divergent views among scholars on the superiority of one indicator over the others as a good measure of profitability. Like, Heffernan and Fu (2008) examined the performance of different types of banks using Economic Value Added (EVA) and Net Interest Margin (NIM) and suggested that they do better than the more conventional ROA and ROE measures of profitability. Besides the conventional measures, some researchers also used Equity Multiplier\(^{127}\) as a dependent variable who considered it is a measure of profitability and financial leverage as it has a multiplier effect on ROA to determine the bank’s ROE (Grier and Smallwood, 2007). Also, Odufulu (1994) used only the gross profit margin in measuring profitability. Profitability measures of Akinola (2008) included Profit before Tax (PBT), Profit after Tax (PAT) and Rate of Return on Capital (ROC).

According to Goudrean and Whitehead (1989) and Uchendu (1995), all profitability indicators are good depending upon their application and independent variables selection. Bank profitability is a result of continuous interdependency of adopting bank’s strategy and its economic surrounding. Therefore, numerous empirical research works combine both of these aspects and focus exclusively on a particular issue while measuring bank’s profitability.

Like most of the previous literature, this chapter attempts to measure banks’ profitability by using the traditional accounting based measure that is Return on Assets (ROA) computed as Net Profit divided by Total Asset. This financial ratio is usually expressed as a function of internal and external determinants. The internal determinants are those influenced by a bank’s management decisions and policy objective while the external determinants refer to the industry and macroeconomic situations. Examples of internal determinants are capitalization, size of bank, management quality and asset quality whereas inflation and GDP represent the example of external determinants.

Also Goddard et al. (2004) suggested that the results obtained by using either ROE or ROA are comparable because the yearly variation in the numerator (net income) is greater than the

\(^{127}\) It measures the amount of assets in pound that an institution supports with one pound of shareholders’ equity.
yearly variation in the denominator (assets or equity). Economic measures of profitability are
not used in this study due to the lack of data availability as the disclosed parameters are
subject to internal policy matters.

b. Selection of Independent Variables for Profitability

This section describes the independent variables used in the profitability models to estimate
the dependent variables. Following prior research on banks’ profitability, the independent
variables are classified into three types- i) bank specific factors128, ii) industry specific factors
and iii) macro-economic factors (Molyneux and Thornton, 1992; Barth et al, 1997; Pasiouras
and Kosmidou, 2007).

i. Bank Specific Factors

The bank specific factors includes bank size, operating expense, credit risk, liquidity risk,
interest payments, capital strength and non-interest revenues which are described below with
potential relationship with the dependent variable.

NPLRAT proxies Credit Risk which is calculated by dividing net NPLs over total loans and a
measure of asset quality (loans are considered the primary asset of banks). Changes in
credit risk reflect changes in the health of a bank’s loan portfolio which also affect the
performance of banks. Duca and McLaughlin (1990) stated that variations in bank
profitability are largely attributable to variations in credit risk since increased exposure to
credit risk is normally associated with decreased banks’ profitability. In this direction, bad
asset quality is expected to have a negative impact on bank’s performance as it reduces
interest income and overall profitability (Miller and Noulas, 1997).

GENINPLRAT is also the proxy of Credit Risk which is limited to 1st Gen bank’s NPLs
only. It is calculated by dividing Generation 1 banks’ net NPLs over total loans to
measure the significance of 1st Gen PCBs NPLs to the industry NPLs.

128 The bank-specific variables are internal factors and controllable for banks’ managers while the industry-
specific and macroeconomic variables are uncontrollable and hence external.
LLPRAT is a proxy of the *Credit Risk* which is calculated by dividing the Loan Loss Provisions (LLP) over the total loans. If banks operate in more risky environments and lack the expertise to control their lending operations, it will probably result in a higher LLP ratio. It is anticipated that LLPRAT will have a negative impact on bank’s profitability (Athanasoglou, Brissimis and Delis, 2005) which is also consistent with the credit rationing theory (Stiglitz and Weiss, 1981) of anticipating an adverse effect on interest rates.

LARAT is the proxy for *Liquidity Risk* which is calculated by dividing the liquid assets over the total assets. Liquidity risk, refres to the possible of bank’s inability to accommodate liabilities, is considered an important determinant of bank profitability. Banks keep liquid funds to avoid insolvency problems but higher liquidity is associated with lower profitability (Eichengreen and Gibson, 2001). The loan market, especially to households and firms, is risky and has greater expected returns than other bank assets such as government securities. Thus, there is positive relationship between liquidity and profitability (Bourke, 1989).

EQTA is the key ratio for *Capital Adequacy* which measures the strength of capital by dividing equity over total assets. Its impact on bank profitability is found to be ambiguous. The higher the ratio is the higher the profitability found as there is lesser need for external funds which decreases cost of capital (Molyneux, 1999). Moreover, an increase in capital raises the expected earnings by reducing the expected costs of financial distress, including bankruptcy (Berger, 1995). Most studies use this as an explanatory variable where Athanasoglou et al. (2005) suggested that capital is better modeled as an endogenous determinant on measuring bank’s profitability as higher profits lead to an increase in capital. On the other hand, lower capital ratio suggests a relatively risky position and negative coefficient (Berger, 1995).

TLTA proxies *Asset Composition* by dividing total loans by total asset and provide a measure of income source. Loans are the largest segment of interest bearing assets and are expected to have a positive relationship with bank profitability. Other things being constant, the more the deposits transformed into loans, the higher the level of profit will
be generated. However, banks that are rapidly increasing their loans have to pay a higher cost to fund those and this could lead to a negative impact on profitability.

**TDTA** shows the *Effect of Funds* on profitability which is captured by the total deposits/total assets ratio. It is generally believed that customer deposits impact banking profitability positively as long as there is a sufficient demand for loans in the market. However, if there is insufficient loan demand, more deposits in fact may depress earnings since this type of funding is costly.

**ln.AST** is calculated as the natural logarithm of the accounting value of the total assets that captures potential economies or diseconomies of scale in the banking sector. The literature gives mixed results on relationship between size and profitability of banks. This variable controls for cost differences and product and risk diversification according to the size of the credit institution. The first factor leads to a positive relationship between size and bank profitability if there are significant economies of scale\(^{129}\) while the second gives negative results if increased diversification leads to lower credit risk and thus lower returns and thus can be concluded that few cost savings can be achieved by increasing the size of a bank especially when market develops. However, Eichengreen and Gibson (2001) suggested that the effect of bank size on profitability may be positive up to a certain limit and beyond that point when banks become extremely large, the effect of size becomes negative due to bureaucratic and other reasons. Hence, the relationship between the size and bank’s profitability may be non linear.

**ln.RAST** is a proxy for *size* which is calculated as the natural logarithm of the accounting value of the real total assets after adjusting by the Consumer Price Index (CPI). This variable finds out the impact of bank’s size on profitability after removing the effect of inflation which allows to observe the true amount and earning potential of the security without external economic forces. It will have the similar implication of the variable **ln.AST** in the regression model with the difference of inflation adjustment.

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\(^{129}\) Studies includes Bourke(1989); Berger et al.(1987); Miller and Noulas(1997); Molyneux and Thornton(1992); Bikker and Hu(2002); Goddard et al.(2004); Athanasoglou et al.(2005)
**ln.OPEXP** is calculated as the natural logarithm of the accounting value of the total overhead which is used to measure the *efficiency* of banks in managing its expenses. Majority of studies suggest a negative impact of operating expenses on profitability as efficient banks are able to operate at a lower cost. However, Molyneux and Thornton (1992) observed a positive relationship, suggesting that higher profits earned by banks may be appropriated in the form of higher payroll expenditure paid to more productive human capital.

**EFF** is the proxy for *Efficiency* which is taken from the previous chapter. In **Chapter-3**, Revenue Efficiency of banks had been calculated and this chapter is using those bootstrapped scores to measure the relationship between profitability and efficiency. Efficiency could have a positive coefficient if banks are profitable both by lowering their operating costs and/or generating extra profit and vice versa.

**OHEFRAT** is the *Overhead Efficiency Ratio* which is calculated by dividing the operating expenses to total assets, provides information on variations in operating costs. The effect of the variable on banking performance is mixed. A positive coefficient may be found if banks transfer a portion of their operating costs to their borrowers and depositors. On the other hand, the cost of operating expenses is expected to have a negative relationship with profitability when efficient banks are able to operate at lower costs (Fries and Taci, 2005). Operating expenses consist of staff expenses, salaries and other employee benefits (including transfers to pension reserves and administrative expenses\(^{130}\)).

**NIREVRAT** means Non-Interest Revenue is another independent variable which is calculated by dividing non-interest income over net income. It measures bank’s *Diversification* into non traditional activities. Although fee-based services add income to banks, those services in general generate lesser profits when compared to loans. When banks shift from interest income services to non-interest income services, profitability may decline. Therefore, the ratio is expected to have a negative effect on profitability.

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\(^{130}\) Administrative expenses include various types of bank expenses associated with bank operations, such as the adoption of new information technology, depreciation, legal fees, marketing expenses, or non-recurring costs related to bank restructuring. Provisions for loans losses are not included in operating expenses.
**GEN1** is the dummy variable which is used to capture the impact of Generation 1 banks on profitability where all the Gen 1 banks are denoted as 1 while others 0. The relationship between profitability and Gen 1 may exist because of the efficiency gap with Gen 2 and 3 banks (obtained in Chapter-3) which may unable them to maximization profits.

**ii. Industry Specific Factors**

Market Concentration, market share and ownership structure are included to cover industry specific factors which are described below.

**HHI** proxies *Market Concentration* which is an often examined industry-specific variable measured by using Herfindahl–Hirschman Index (HHI). The HHI is the most widely treated summary measure of concentration, which often serves as a benchmark for the evaluation of other concentration indices. In the United States, the HHI plays a significant role in the enforcement process of antitrust laws in banking and is extensively used by bank regulatory agencies.

HHI is calculated by squaring the market share of each firm competing in a defined geographic banking market and then summing the squares. In other words, it equals the sum of the squares of each bank’s market share in total industry assets. The HHI can range from zero in a market having an infinite number of firms to 10,000 in a market having just one firm (with a 100% market share). The HHI is a static measure that gauges market concentration at a single point in time (Bikker and Haaf 2000, Al-Muharrami et al. 2006).

\[
HHI = \sum_{i=1}^{n} S_i^2
\]

Where, \( n \) is the total number of banks in the industry. In the calculation of HHI, larger banks get a heavier weight than their smaller counterparts which reflects their relative importance in the market.

An HH-index of 10,000 indicates that there is only one bank in the country while if the number of banks goes to infinite the HH-index will return to almost zero. Two different hypotheses predict a positive relationship between market concentration and banks’
profitability; the Structure- Conduct- Performance (SCP) or market power hypothesis and the Efficient- Structure (EFS) hypothesis.

The first hypothesis states that a higher market power results in non-competitive pricing and yields higher monopoly profits (Goddard et al., 2004). In other words, according to the SCP hypothesis increased market share leads to monopolistic profits. On the other hand, the Efficient- Structure (EFS) hypothesis states that larger banks operate more efficiently; thus, in a more concentrated market there are more efficient and profitable banks (Goddard et al., 2004). The empirical part of this chapter tests whether a positive or negative sign of concentration is present; however the detailed calculation of HHI for Bangladeshi banking sector is provided in Chapter-2.

CR means the Concentration Ratio which also a proxy for Concentration of banking industry. It is calculated by summing up the market shares of the k largest banks in the market which takes the following form:

\[ CR_k = \sum_{i=1}^{k} S_i \]

Where, \( S_i \) is the market share of i-th bank when banks are ranked in descending order of the market share. In this study, the market share is measured on the basis of the asset size; however, the loan size and the deposit size of the banks are also provided in details in Chapter-2. The value of \( k \) could be 3, 4 or 5 i.e. CR3, CR4 or CR5. There is no rule for determining the value of \( k \), so the number of banks included in the concentration index is an arbitrary decision. The index gives equal emphasis to the \( k \) leading banks but neglects the small banks in the market.

CR is considered as one point on the concentration curve and a one-dimensional measure ranging between zero and unity. The index approaches zero for an infinite number of equally sized banks, if the banks included in the calculation of the concentration ratio make up the entire industry (Bikker and Haaf 2000, Al-Muharrami, Matthews and Khabari 2006). Because of simplicity and limited data requirements, the concentration ratio one of the most frequently used measures of concentration in the empirical literature.
**Ln.DEP** proxies the *Market Shares* of individual bank, is the value of deposits in logarithms, which is used instead of deposits in order to reduce the scale effect. Empirical evidences found that this variable has a combined effect on profitability. A positive relationship indicates that the bank enjoys economies of scale while a negative relationship implies that the bank suffers from diseconomies of scale when it expands to a larger size.

**OWNRSP** is the dummy variable which captures the impact of ownership structure on profitability where the government banks are denoted as 1 while others 0. The relationship between profitability and ownership may exist due to the superior performance of private banks as compared to government banks as they do not always aim at profit maximization.

### iii. Macroeconomic Factors

Regarding macroeconomic factors, economic growth and inflation rate are considered.

**RGDP** is the proxy for *Growth Rate* of the economy. Real growth rate of GDP at factor cost is taken to measure it. In general, a high bank asset-to-GDP ratio implies that financial development plays an important role in the economy which may reflect a higher demand for banking services and attracts more potential competitors to enter the market. GDP is expected to have positive impact on profitability according to the existing literature.

**INF** is the proxy for *Inflation*. The annual inflation rate is taken to measure it. High inflation is associated with higher loan rates and therefore higher income. If a bank’s income rises more rapidly than its costs, inflation is expected to exert a positive effect on profitability. On the other hand, a negative coefficient is expected when the cost increases faster than the bank’s income.

**RINT** is the *Real Interest* which is expected to have a positive relationship with profitability. In the essence of lend-long and borrow-short argument, banks in general increase lending rates sooner by more points than their deposit rates. In addition, the rise in real interest rates will increase the real debt burden on borrowers which lower asset quality and thereby induce to charge a higher interest margin in order to compensate the inherent risk.
From the above, it is observed that some relationships between selected independent variables and profitability are straightforward where some are not. Nevertheless, the inclusion of irrelevant variables does not lead to biased coefficients or standard deviations while the omission of relevant variables does. Hence, some variables that look rather predictable at first sight are included to prevent biased results. Considering the discussed variables and based on academic literature, the following Table 9 presents the proposed dependent and independent variables with their definition, notation and expected sign of the coefficients.

Table 9: Definition, Notation and Expected Effect on Profitability

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measures</th>
<th>Definitions</th>
<th>Notations</th>
<th>Hypothesized Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td>Profitability</td>
<td>Net profit (Before Tax) / Total Asset</td>
<td>ROA</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Credit risk</td>
<td>Net NPL / Total Loans</td>
<td>NPLRAT</td>
<td>+ / -</td>
</tr>
<tr>
<td>N</td>
<td>Credit risk</td>
<td>Loan Loss Provisions / Total Loans</td>
<td>LLPRAT</td>
<td>+ / -</td>
</tr>
<tr>
<td>D</td>
<td>Credit risk</td>
<td>Gen 1 banks net NPL / Total Loans</td>
<td>GEN1.NPLRAT</td>
<td>+ / -</td>
</tr>
<tr>
<td>E</td>
<td>Liquidity Risk</td>
<td>Liquid Asset / Total Assets</td>
<td>LARAT</td>
<td>+ / -</td>
</tr>
<tr>
<td>P</td>
<td>Capital Adequacy</td>
<td>Equity / Total Assets</td>
<td>EQTA</td>
<td>+ / -</td>
</tr>
<tr>
<td>N</td>
<td>Asset Composition</td>
<td>Total Loans / Total Asset</td>
<td>TLTA</td>
<td>+ / -</td>
</tr>
<tr>
<td>D</td>
<td>Effect of Fund</td>
<td>Total Deposit / Total Asset</td>
<td>TDTA</td>
<td>+ / -</td>
</tr>
<tr>
<td>E</td>
<td>Size</td>
<td>Natural Logarithm of the accounting value of Total Assets</td>
<td>ln.AST</td>
<td>+ / -</td>
</tr>
<tr>
<td>N</td>
<td>Size</td>
<td>Log of Real Asset (CPI adjusted)</td>
<td>ln.R.AST</td>
<td>+ / -</td>
</tr>
<tr>
<td>T</td>
<td>Efficiency of Expense Management</td>
<td>Natural Logarithm of the accounting value of Total Overhead</td>
<td>ln.OPEXP</td>
<td>+ / -</td>
</tr>
<tr>
<td>V</td>
<td>Technical Efficiency</td>
<td>Revenue Efficiency</td>
<td>EFF</td>
<td>+ / -</td>
</tr>
<tr>
<td>A</td>
<td>Overhead Efficiency Ratio</td>
<td>Operating Expenses / Total Assets</td>
<td>OHEFRAT</td>
<td>+ / -</td>
</tr>
<tr>
<td>V</td>
<td>Diversification</td>
<td>Non-Interest Income / (Interest Income + Non Interest Income)</td>
<td>NIREVRAT</td>
<td>+ / -</td>
</tr>
<tr>
<td>R</td>
<td>Dummy Bank Specific Variable</td>
<td>Gen 1 Banks are denoted as 1 while others 0</td>
<td>GEN1</td>
<td>+ / -</td>
</tr>
<tr>
<td>I</td>
<td>Industry – Related</td>
<td>Herfindahl-Hirschman Index</td>
<td>HHI</td>
<td>+ / -</td>
</tr>
<tr>
<td>A</td>
<td>Concentration</td>
<td>Concentration Ratio of 5 Banks holds the most percentage of market share</td>
<td>CR5</td>
<td>+ / -</td>
</tr>
<tr>
<td>B</td>
<td>Market Share</td>
<td>Natural Logarithm of the accounting value of Total Deposits</td>
<td>ln.DEP</td>
<td>+ / -</td>
</tr>
<tr>
<td>L</td>
<td>Dummy Industry Related Variable</td>
<td>Government Banks denoted as 1 while others 0</td>
<td>OWNRSP</td>
<td>+ / -</td>
</tr>
<tr>
<td>E</td>
<td>Macro</td>
<td>Inflation</td>
<td>INF</td>
<td>+ / -</td>
</tr>
<tr>
<td>S</td>
<td>Economic Growth</td>
<td>Real Gross Domestic Product</td>
<td>RGDP</td>
<td>+</td>
</tr>
<tr>
<td>E</td>
<td>Real Interest Rate</td>
<td>Inflation adjusted Rate of Interest</td>
<td>RINT</td>
<td>+</td>
</tr>
</tbody>
</table>

Source: Prepared by the Author
4.3.3 The Model

The empirical model on the determinants of banks’ profitability is measured based on its return on assets (ROA) on balanced panel data where all the variables are observed for each cross-section and each time period. The ROA, defined as net income divided by total assets, reflects the ability of the bank to generate returns on its portfolio of assets.

In this study, for determining factors of bank profitability, three econometric specifications are estimated namely- bank-specific variables, industry specific variables and macroeconomic indicators. Since the study combines cross-sectional and time-series data, a dummy variable is used with the assumption that all behavioral differences between individual banks and over time are captured by the intercept (Griffiths et. al., 1993).

This assumption is to be validated by the following statistical model:

\[ y_{it} = \beta_0 + (\gamma_1D_1 + \gamma_2D_2 + \ldots + \gamma_jD_j) + (\beta_1X_{1it} + \beta_2X_{2it} + \ldots \beta_kX_{kit}) + \mu_i + \varepsilon_{it} \]

where, \( y_{it} \) is the dependent variable; \( \beta_0 \) is an intercept for the base bank; \( \gamma_1, \gamma_2, \) and \( \gamma_j \) determine the contribution of the dummy variables \( D_1, D_2 \) and \( D_j \) defined as \( D_{1,2,\ldots,j} = 1 \) otherwise 0 for \( j \) number of banks included in the study (i.e. 34 banks). Independent variables are represented by \( X_{1it}, X_{2it} \) and \( X_{kit} \) where \( \beta_1, \beta_2, \) and \( \beta_k \) determine the contribution of independent variables and \( k \) is the total number of independent variables. Also, \( i \) is the number of observations, \( t \) is the number of observations for a particular bank (time series data), \( \mu_i \) is bank-specific error term and \( \varepsilon_{it} \) is a general error term.

The estimations will be performed by the Generalized Least Squares (GLS) technique which is especially suitable for data sets where serial correlation and/or heteroscedasticity might be present (Pindyck and Pubinfield, 1991). The GLS minimises the weighted sum of residual squares whereas the OLS allows all errors to receive equal importance no matter how close or how wide the individual error spread is from the sample regression function.
In GLS estimation, the weight consigned to each error term is relative to its variance of the error term. Error term that comes from a population with large variance of error term will get relatively large weight in minimizing Residual Sum of Squares (RSS). Consequently, if a problem of non constant error arises, GLS is able to produce estimators in Best Linear Unbiased Estimator\textsuperscript{131} (BLUE) version because it assigns appropriate weight to different error terms which in turn produce the ideal constant variable (Gujarati 2002).

4.3.4 The Dataset

This study includes cross-sectional data for 34 conventional, Islamic and state-owned commercial banks operating in Bangladesh from 2001–2012. The source of bank-specific financial data is the BankScope database produced by the Bureau van Dijk which provides banks’ balance sheets and income statements. Bankscope database contains specific data on 25,800 banks world-wide, including commercial banks in Bangladesh which are being updated monthly.

BankScope presents data in original currency of the specific country and provides the option to convert to any other currencies; hence, local currency of Bangladesh, Bangladeshi Taka (BDT), is used in this study as the study involves commercial banks in Bangladesh. Some missing data was also obtained from the balance-sheets and income statements of respective bank’s annual reports and their websites. All the accounting information is consolidated on December of each year.

Although there are 48 banks in Bangladesh, this study includes 34 while excluded the rest because of the lack of data availability for the Specialized Development Banks and regulatory differences of the Foreign Commercial Banks. In order to maintain the homogeneity, only

\textsuperscript{131} “Best” means giving the lowest variance of the estimate, as compared to other unbiased, linear estimates. The errors don't need to be normal, nor do they need to be independent and identically distributed (only uncorrelated and homoscedastic). The hypothesis that the estimator be unbiased cannot be dropped, since otherwise estimators better than OLS exist.
State-owned Commercial Banks (SCBs) and Private Commercial Banks (PCBs) are included in the analyses.

However, the data set covers 34 banks of three generations which account for about 90% of the total asset in the banking sector at the end of 2012 (Bangladesh Bank Website, 2013). Among the sample the complete set of 30 Private Commercial Banks and 4 Nationalized Banks are covered. Furthermore, as the availability of data of one of the Islamic PCBs was limited for the year 2004 and 2005, this study had to work with an unbalanced panel data set for the sample period. The number of PCBs in Bangladesh is increasing year to year and 4th Gen PCBs have already been incorporated. However, this study concentrates on 34 commercial banks of 1st, 2nd and 3rd Generation from 2001 to 2012.

With regard to the macroeconomic variables, the data of economic growth, inflation rate and interest rates are obtained from the website of Bureau of Statistics, Bangladesh. Real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator which is collected from International Monetary Fund, International Financial Statistics and data files using World Bank data on the GDP deflator. The real interest rate is calculated by taking the difference between the nominal interest rate and the inflation rate.

4.5 Results

The study employs panel data analysis technique because it allows the inclusion of data for a number of cross section and time periods. As discussed in the previous section, panel data has the advantage of providing more efficient estimations of parameters by considering broader sources of variations as well as allowing the study of dynamic behaviours of these parameters.

This section provides the descriptive statistics and the regression results using the variables followed by elaborate analysis of the results in the light of different hypothesis in context of the Bangladeshi banking sector.
4.5.1 Descriptive Statistics

Table-10 reports the results of descriptive statistics that includes the mean, standard deviation, maximum and minimum of selected variables for thirty four (34) commercial banks in Bangladesh from Generation 1, 2 and 3 for the financial year 2001 to 2012.

Table–10: Descriptive Statistics of Variables

<table>
<thead>
<tr>
<th>No.</th>
<th>Variables</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Max</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ROA</td>
<td>408</td>
<td>0.9435</td>
<td>2.36</td>
<td>-21.97</td>
<td>6.06</td>
</tr>
<tr>
<td>2</td>
<td>nplrat</td>
<td>408</td>
<td>0.1025</td>
<td>0.2589</td>
<td>0</td>
<td>4.27</td>
</tr>
<tr>
<td>3</td>
<td>larat</td>
<td>408</td>
<td>0.1715</td>
<td>0.0914</td>
<td>0</td>
<td>0.8722</td>
</tr>
<tr>
<td>4</td>
<td>eqta</td>
<td>408</td>
<td>0.0587</td>
<td>0.0869</td>
<td>-0.7721</td>
<td>0.6887</td>
</tr>
<tr>
<td>5</td>
<td>inf</td>
<td>408</td>
<td>6.92</td>
<td>2.37</td>
<td>1.93</td>
<td>10.33</td>
</tr>
<tr>
<td>6</td>
<td>rgdp</td>
<td>408</td>
<td>5.94</td>
<td>0.6401</td>
<td>4.42</td>
<td>6.71</td>
</tr>
<tr>
<td>7</td>
<td>rint</td>
<td>408</td>
<td>8.71</td>
<td>2.79</td>
<td>4.17</td>
<td>14.03</td>
</tr>
<tr>
<td>8</td>
<td>lnrast</td>
<td>408</td>
<td>10.33</td>
<td>1.24</td>
<td>0</td>
<td>12.77</td>
</tr>
<tr>
<td>9</td>
<td>eff</td>
<td>406</td>
<td>0.8415</td>
<td>0.1808</td>
<td>0.1145</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>gen1nplrat</td>
<td>408</td>
<td>0.0461</td>
<td>0.0933</td>
<td>0</td>
<td>0.4459</td>
</tr>
<tr>
<td>11</td>
<td>ciratio</td>
<td>406</td>
<td>52.99</td>
<td>56.8904</td>
<td>20.44</td>
<td>691.67</td>
</tr>
</tbody>
</table>

Sources: Author’s calculation from the web sourced data

The descriptive statistics is measured on 408 observations of 1st, 2nd and 3rd Gen PCBs. The statistics showed the mean, standard deviation, maximum and minimum for the variables – ROA, nplrat, larat, eqta, inf, rgdp, rint, lnrast, eff, gen1nplrat and ciratio.

At the outset of the results, it is observed that there is a significant difference in the profit performance of the Gen 1 banks than the remaining in the sample. It is also interesting to observe that the mean value of Gen 1 banks is lower than the mean values of Generation 2 and Generation 3.

A non-parametric test shown in Table-11 indicates that the profit performance of Gen 1 banks as measured by ROA is significantly different from the Gen 2 and Gen 3 banks.
Table-11: Mean Differences between 1st Gen with 2nd and 3rd Gen Banks

<table>
<thead>
<tr>
<th>Determinants</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gen 1</td>
</tr>
<tr>
<td>Number of Observations</td>
<td>132</td>
</tr>
<tr>
<td>Mean</td>
<td>0.1222</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.0044</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wilcoxon Rank-Sum (Mann-Whitney) Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z</td>
</tr>
<tr>
<td>Prob &gt;</td>
</tr>
</tbody>
</table>

Source: Author’s calculation from the web sourced data

It has seen that there is a gap between the mean values of Gen 1 with Gen 2 and 3 banks for the ROA. The mean of Gen 2 and 3 ROA is higher than Gen 1 ROA which means that Gen 1 banks are underperforming compared with Gen 2 and Gen 3 banks.

Moreover, it is evident from the Wilcoxon rank-sum (Mann-Whitney) test\textsuperscript{132} that gap in mean values are statistically significant as the probability is less than 5%, thus it is worth exploring the reasons of differences through a more rigorous analysis.

**4.5.2 Regression Analysis**

This section regress the dependent variables using all the independent variables to identify the most contributing independent variables and to determine the FE or RE model.

In the general model, the dependent variable is the ROA which is regressed against the full set of independent variables including nplrat, llprat, larat, eqta, tltc, tdta, hhi, lnраст, inf, rgdp, eff, gen1nplrat and rint under RE and FE.

Table-12 presents the results of the regression.

\textsuperscript{132} To interpret the output from the Mann-Whitney test, analysts need to consider the Z score and two-tailed p-value. The tests are run by statistical software named Stata version 11.1 where the Mean and Std Err. of ROA and ROE for 1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen banks are calculated.
Table-12: General Specification Regression Results

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROA – RE</th>
<th></th>
<th>T</th>
<th>P &gt;</th>
<th>ROA – FE</th>
<th></th>
<th>T</th>
<th>P &gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nplrat</td>
<td>3.1593</td>
<td>0.7811</td>
<td>4.04</td>
<td>0.000***</td>
<td>5.1289</td>
<td>0.9177</td>
<td>5.59</td>
<td>0.000***</td>
</tr>
<tr>
<td>ilprat</td>
<td>-23.8979</td>
<td>3.4870</td>
<td>-6.85</td>
<td>0.000***</td>
<td>-28.8430</td>
<td>3.7540</td>
<td>-7.68</td>
<td>0.000***</td>
</tr>
<tr>
<td>larat</td>
<td>-0.6116</td>
<td>1.4043</td>
<td>-0.44</td>
<td>0.663</td>
<td>0.6535</td>
<td>1.7100</td>
<td>0.38</td>
<td>0.703</td>
</tr>
<tr>
<td>eqeta</td>
<td>12.4037</td>
<td>1.8123</td>
<td>6.84</td>
<td>0.000***</td>
<td>7.8424</td>
<td>2.1734</td>
<td>3.61</td>
<td>0.000***</td>
</tr>
<tr>
<td>tita</td>
<td>0.3536</td>
<td>1.1277</td>
<td>0.31</td>
<td>0.754</td>
<td>2.3613</td>
<td>1.4886</td>
<td>1.59</td>
<td>0.114</td>
</tr>
<tr>
<td>tda</td>
<td>1.7651</td>
<td>1.6753</td>
<td>1.05</td>
<td>0.292</td>
<td>0.1803</td>
<td>2.0042</td>
<td>0.09</td>
<td>0.928</td>
</tr>
<tr>
<td>hhi</td>
<td>-0.0017</td>
<td>0.0020</td>
<td>-0.84</td>
<td>0.399</td>
<td>-0.0011</td>
<td>0.0020</td>
<td>-0.54</td>
<td>0.588</td>
</tr>
<tr>
<td>lnrat</td>
<td>0.4611</td>
<td>0.1349</td>
<td>3.42</td>
<td>0.001***</td>
<td>0.3494</td>
<td>0.2461</td>
<td>1.42</td>
<td>0.157</td>
</tr>
<tr>
<td>inf</td>
<td>0.0337</td>
<td>0.1017</td>
<td>0.33</td>
<td>0.740</td>
<td>0.0357</td>
<td>0.0989</td>
<td>0.36</td>
<td>0.718</td>
</tr>
<tr>
<td>rgdp</td>
<td>-0.3716</td>
<td>0.2759</td>
<td>-1.35</td>
<td>0.178</td>
<td>-0.4413</td>
<td>0.2667</td>
<td>-1.65</td>
<td>0.099*</td>
</tr>
<tr>
<td>eff</td>
<td>2.9163</td>
<td>0.5857</td>
<td>4.98</td>
<td>0.000***</td>
<td>1.3730</td>
<td>0.7485</td>
<td>1.83</td>
<td>0.067*</td>
</tr>
<tr>
<td>gen1nplrat</td>
<td>-6.3445</td>
<td>1.3439</td>
<td>-4.72</td>
<td>0.000***</td>
<td>-9.6069</td>
<td>1.8835</td>
<td>-5.10</td>
<td>0.000***</td>
</tr>
<tr>
<td>rint</td>
<td>0.1511</td>
<td>0.1594</td>
<td>0.95</td>
<td>0.343</td>
<td>0.0740</td>
<td>0.1557</td>
<td>0.47</td>
<td>0.635</td>
</tr>
<tr>
<td>cons</td>
<td>-6.4186</td>
<td>2.8534</td>
<td>-2.25</td>
<td>0.024</td>
<td>-3.2149</td>
<td>3.8912</td>
<td>-0.83</td>
<td>0.409</td>
</tr>
</tbody>
</table>

|               |          |          |      |    |          |          |      |    |
| Number of obs | 406       |          |      |    | 406       |          |      |    |
| Number of groups | 34     |          |      |    | 34        |          |      |    |
| sigma_u       | 0         |          |      |    | 0.9975    |          |      |    |
| sigma_e       | 1.6035    |          |      |    | 1.6035    |          |      |    |
| Rho           | 0         | 0         |      |    | 0.2790    |          |      |    |
| Wald chi2(13) | 427.80    |          |      |    | -         |          |      |    |
| Degree of Freedom | 13   |          |      |    | -         |          |      |    |
| Prob > chi2   | 0.0000    |          |      |    | -         |          |      |    |
| F(33, 359)    | -         | 1.92      |      |    | -         |          |      |    |
| Prob > F      | -         | 0.0022*** |      |    | -         |          |      |    |

At first, the study compares the Random Effects regression model with the Fixed Effects model. The general specification rejects the RE model because it fails in the Breusch and Pagan Lagrangian multiplier test\textsuperscript{133} \textsuperscript{134}. The B-P test found the probability is greater than 5%

\textsuperscript{133} To decide between fixed or random effects, Hausman test and Breusch-Pagan Lagrangian multiplier test are conducted where the null hypothesis measures whether the preferred model is random effects or the alternative the fixed effects(Green,2008). It basically tests whether the unique errors($u_i$) are correlated with the regressors.

\textsuperscript{134} The LM test helps to decide between a random effects regression and a simple OLS regression. The null hypothesis in the LM test is that variances across entities are zero which means no significant difference across units(i.e. no panel effect). The command in Stata is xttset0 which needs to be typed right after running the random effects model.
where the results are 0.4384 for ROA which means the unobserved effects are correlated with the explanatory variables, so the Random Effect results will be biased. Therefore, the Fixed Effects model needs to be regressed on the same variables to measure if the general specification provides any different result. It is found from the regression result for ROA is 0.0022 under the F-test which means the result is not rejected.

It shows in the above analysis that RE models is rejected under their diagnostic tests and the FE is not rejected. However, if the variables are narrowed down to a parsimonious specification which is a methodology whereby a general specification is narrowed to a specific one through a sequence of variable deletion tests to get the best output using the least number of variables then it might give a different result. Table-13 shows the regression results of the parsimonious specification under FE and pooled estimations.

Table-13: Parsimonious Specification Regression Results

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROA – FE</th>
<th>ROA - Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef.</td>
<td>Std. Err.</td>
</tr>
<tr>
<td>nprat</td>
<td>-0.7006</td>
<td>0.4597</td>
</tr>
<tr>
<td>lrat</td>
<td>-0.2789</td>
<td>1.3281</td>
</tr>
<tr>
<td>eqta</td>
<td>9.6697</td>
<td>1.7383</td>
</tr>
<tr>
<td>hhi</td>
<td>0.0013</td>
<td>0.0019</td>
</tr>
<tr>
<td>Rint</td>
<td>0.0599</td>
<td>0.1276</td>
</tr>
<tr>
<td>lnrast</td>
<td>0.7717</td>
<td>0.2576</td>
</tr>
<tr>
<td>eff</td>
<td>0.8990</td>
<td>0.7995</td>
</tr>
<tr>
<td>gen1nprat</td>
<td>-7.2116</td>
<td>1.9590</td>
</tr>
<tr>
<td>_cons</td>
<td>-9.4216</td>
<td>3.1789</td>
</tr>
</tbody>
</table>

**Number of obs** 406 406

**Number of groups** 34 34

**Wald chi2(8)** 10.87 229.55

**Degree of Freedom** 8 8

**Prob > chi2** 0.0724 0.000***

***Significance Level at the 1% and **Significance Level at the 5%

If the variables are narrowed down to a parsimonious sample to get the best output using the least number of variables then it gives the probability of 0.0724 which is rejected under F-test and confirmed that the pooled model is appropriate for the sample. The regression results presented in Table-13 reports the unbalanced panel outcomes of the Bangladeshi banks
between 2001 and 2012 for a parsimonious specification which includes the variables of nplrat, larat, eqta, hhi, lnrrast, eff and gen1nplrat. The diagnostic statistics are provided at the bottom of the table where the F-statistics/Wald tests of these regressions are statistically significant at 100% level which suggests that the independent variables have satisfactory overall explanatory power for any change in dependent variable – ROA.

It is worth mentioning that ROE is also a common dependent variable to determine banks’ profitability and previous researchers\textsuperscript{135} have used it commonly. However, ROE is inappropriate in case of measuring the Bangladeshi banks’ profitability because it has got a gross distortion. As ROE is calculated by dividing net profit by the total equity, insolvent banks with negative equity and negative profit provides a positive ROE; where, in reality it should not exist. One of the PCBs in Bangladesh reported an ROE ranging from the minimum of -176 to the maximum of 850 during the sample period from 2001 to 2012. It is also evident from the previous part that despite having negative profits, ROAs remain undistorted and negative profit came out as negative ROA; therefore, provides sensible measures.

4.5.3 Analysis of Results

This chapter reviewed the profit performance of 34 commercial banks of 3 different generations from the period of 2001 to 2012 by using the ROA. The results are obtained from a general to a specific search using the conventional variables that have been used in the literature to examine the current market structure and performance of the Bangladesh banking industry. In doing so, the structural theories of Structure-Conduct Performance (SCP) hypothesis and Efficient Structure (ESH) hypothesis were tested to analyze the level of concentration and competition in the industry among generations. The hypotheses were estimated by using pooled methods in a panel data framework because the parsimonious specification rejects both the FE model and RE model at 5% significance level.

The results of the balanced panel from 2001 to 2012 have shown that profitability in the Bangladeshi banking industry is determined by the efficiency of commercial banks and not by

concentration. The results clearly contradict with the study of Mostak (2012) and support Samad (2008), Suffian and Kamarudin (2012) findings. It found a very strong association with the proxy for concentration (HHI) and the measure for efficiency (ESH). At 1% significance level HHI is negatively and EFH is positively related to the profitability variable (ROA) which implies that market concentration increases the cost of collusion between banks and resulted in lower than normal profits for the participants whereas superior efficiency increases the overall profitability. Commercial banks in Bangladesh do not enjoy monopoly power and face increased competition due to the pressure of local and foreign commercial banks.

Concerning the impact of Efficient Structure Hypothesis, technical efficiency (EFF) result implies an increase (decrease) in efficiency enhances (reduce) the profit of the PCBs. The efficiency can be obtained by reducing cost or advancement in core competence to generate more profit. Sathye (2001) argued that a highly positive relationship with profitability is natural if highly qualified and professional management is there with high remunerations. Efficient staffing and cost management are the prerequisites for the improved profitability in the Bangladeshi banking system. If they improve the managerial practices then banks do have much to gain as the sector has yet not reached to the maturity for earning higher profits.

The results of other independent variables like EQTA, RINT, LARAT, LNRAST, NPLRAT and GEN1NPLRAT are also strongly related to the dependent variable. The Equity to Total Assets (EQTA) ratio is positively related to ROA at 1% significance level with the coefficient of 10.5290 which means that ROA increases by 1052.90% when EQTA increased by 1% keeping other variables fixed. In line with the studies of Berger (1995) and Staikouras and Wood (2003), the positive coefficient indicates an efficient management of banks’ capital structure. Others also argued that well-capitalized banks face lower costs of going bankrupt (Isik and Hassan 2003, Goddard, Molyneux and Wilson 2004, Kosmidou 2008). Therefore, lower cost of equity funds or lower need for external funds result in higher profitability.

Similarly, the coefficient of the Real Interest Rate (RINT) is also positive and statistically significant at 1% with the ROA which means if the inflation can be anticipated then the interest rate will be adjusted accordingly, resulting in revenues to increase faster than costs; thus, creates a positive impact on the PCBs’ performances. This result is consistent with
earlier research that supports the argument that if banks increase their charges to customers, their total income increases.

On the other hand, Liquid Asset to Total Asset (LARAT) ratio is negatively related to ROA at 99% confidence interval where the coefficient is -0.9263. The more liquid assets banks possess, the lower the profit will be because liquid assets earns less than non liquid assets as short term bills have lesser rate of interest than long term loans. Molyneux and Thornton (1992) also found a negative and significant relationship between the level of liquidity and profitability. Melicher and Norton (2003) stated that liquidity, measured by current ratio is considered as a powerful tool in predicting incoming cash crises where it reflects companies’ abilities on surviving and future growing depending on their liquidity power. Liquidity is an important thing for banks to meet their short term obligations but if it is too high means banks are not working efficiently which leads to a decrease in banks’ profitability. The negative relationship between the LARAT coefficient and bank profitability indicates that if liquid assets ratio increased by 1% then commercial banks’ profitability decrease by 92.63%, where a high value of liquidity suggests that funds are not being efficiently employed.

The size variable (LNRAST) is found negatively related to ROA at 99% confidence interval with the coefficient of -0.21110 which means large banks have lower profit performance. This finding indicates that the bigger the size, the more the total income of the bank but this does not mean that the net income to the bank will increase. Though big banks can have more loans due to their size and can get an access to the lowest cost finances; however, in case of Bangladesh, large banks are less profitable and do not enjoy the economies of scale. Samad (2008) also found a negative relationship and the rationale was the higher the amount of assets of a bank is, the greater the advantage exists for diversification of products and loans where the increased diversification implies lower risk and less profit. Besides that, the negative sign on bank size (LNRAST) suggests that larger banks achieve a lower ROA than smaller ones because the interbank market is competitive and efficient that does not allow big banks to enjoy the cost advantage despite of having a large deposit-taking network; growing banks face diminishing marginal returns that decline average profit; information advantage and the enforcement power gain is significant in small banks. Therefore, rather than the size factor, efficiency is more important in the Bangladeshi bank’s profitability.
The Non Performing Loans to Total Loans (NPLRAT) ratio is found to have a significant negative impact on banks’ ROA with the coefficient of -1.5305 at 100% confidence level. The empirical finding implies that Bangladeshi local PCBs have high NPL ratio which reduces its profitability. Banks should focus on credit risk management which has been proven to be problematic in the recent past by recognizing the impaired assets and creating reserves for writing off these assets. Though banks tend to be more profitable when they undertake more lending activities, yet due to the credit quality of lending portfolios, a higher percentage of loans turn into impaired assets. Such high levels of NPLs against the total loans depress banks’ ROA significantly. Higher level of NPLs means higher credit risk and poor asset management in the banks which reduces interest income and increases provisioning costs, thus decreases ROA. The result is also consistent with the extant literatures.

From the restricted model, the result of the interaction term between the Generation 1 PCBs and the NPL Ratio (GEN1NPLRAT) revealed some new finding that other researchers have not yet identified. This research found a negative coefficient of -2.5534 for the variable GEN1NPLRAT at 100% confidence level. This result signifies that, despite of having the independent and cumulative negative effect of NPLRAT on ROA; Gen 1 banks add more negative contribution on the average profitability during the sample period. For all banks if the NPLRAT increases by 1 point then profit (ROA) falls by 1.5305 points but for Gen 1 banks it falls by 4.0839 points. It was found from Chapter-3 that Gen 1 banks are inefficient and now it shows that Gen 1 banks are also less profitable than the average. If the NPLRAT increases, the amount of NPLs of Gen 1 banks made their profits to fall by 3 times more than the Gen 2 and 3 banks while everything else remain the same.

Besides the interaction variable, the dummy variable of generation 1 banks (Gen 1) holds it down further because it shows a negative relationship with profitability in all the regression results (details results are provided in Appendix-16) which is a clear evidence that Gen 1 banks are under performing in terms of profit. The plausible reasons will be explored and discussed fully in the next chapter (Chapter-5).
4.6 Chapter Conclusion

The banking industry of Bangladesh has undergone unprecedented changes over the last two decades and these changes have resulted in fierce competition and greater efficiency. With an aim of measuring the profitability of the local commercial banks in Bangladesh, this chapter has undertaken a series of empirical validations and used a pooled estimation model targeting to assess the enigmatic market structure-performance and efficient market structure hypotheses over the period of 2001-2012. The SCP paradigm establishes a direct link from industry structure to bank conduct and from bank conduct to industry performance assuming that banks in a concentrated market ignore potential competitors, can be technologically incompetent and can provide barriers to entry to generate market power and to earn monopolistic profits by offering lower deposit rates and charging higher loan rates. On the other hand, the ESH interprets profitability in a different way by suggesting maximization of profits by reducing prices and expanding bank size and thus gaining market share at the expense of other relatively inefficient banks of different generations.

The results of the regression model and the diagnostic test confirmed the superiority of the pooled effects over RE and FE model through which several key findings emerge from the GLS estimation. In line with the findings of other researchers on the Bangladeshi banking sector, the results of this study confirm the retention of the Efficient Structure (ESH) hypothesis and the rejection of the Structure Conduct Performance (SCP) hypothesis. These results suggest from 2001-2012 local PCBs adopted sufficient competitive behaviour and they generated profits not through exercising market power rather through efficient activities. It is evident from the HHI scores that produce a negative relationship with profitability meaning collusive behavior, market power and monopolistic profit earnings do not exist in the Bangladeshi banking sector. Rather, it reveals that due to increased competition banks decreased cost and/or charged higher loan rates which positively affect their technical efficiency variable, EFF (obtained from Chapter-3). Where other researchers conducted on the banking sector of Bangladesh have used overhead or management expenses as proxy for efficiency measures, this study uses the direct measure of technical efficiency and the result shows a very strongly positive association between profitability and efficiency, meaning the efficient banks are the most profitable ones.
Other variables like EQTA, RINT, LARAT, LNRAST and NPLRAT showed consistent results. The Equity to Total Assets (EQTA) ratio is positively related to ROA means the more equity banks have, the more they will be able to invest to earn above average profit. Real Interest Rate (RINT) is also positively and statistically significantly related to profitability resulting interest income to increase faster than costs to create a positive ROA. On the other hand, Liquid Asset to Total Asset (LARAT) ratio is negatively related to ROA meaning the more liquid assets banks possess, the lower the profit will be because liquid assets earns less interest income. The regression results found that size of banks (LNRAST) is negatively related to ROA which indicates bigger banks might have more loans, more total income, lowest cost finances, more opportunity of diversification but they may not necessary increase their net income due to diseconomies of scale and competitive pressure. The Non Performing Loan to Total Loans (NPLRAT) ratio has a negative impact on ROA which implies that Bangladeshi PCBs have high NPL ratio to reduce profitability by lowering interest earning while they require credit risk management by recognizing the impaired assets and creating reserves for writing off those assets.

The most significant result came from the interaction term between Generation 1 PCBs and the NPL Ratio (GEN1NPLRAT) of the restricted model which revealed a completely new finding that other researchers have not yet hypothesized and diagnosed. In Chapter-3, Gen 1 banks found to be inefficient in generating revenues while the results of this chapter shows that Gen 1 banks are not only inefficient but also less profitable than the average due to their higher NPL ratio *ceteris paribus*. Results showed that allowing everything else being the same, the profit falls by 3 times more for Gen 1 banks compared with 2nd and 3rd Gen banks if the NPL ratio increases which drags down further the average profitability of the banking sector of Bangladesh during 2001 to 2012. The plausible causes of the deterioration of Gen 1 banks’ profit performance is a matter of concern which will be empirically explored and critically discussed in the next chapter (Chapter-5).

This chapter of the thesis is one of the first attempts to empirically examine the interaction of Gen1 banks and their NPL ratio compared to the rest local commercial banks. This research has used the total amount of NPL to calculate the NPL ratio; however, the risk-weighted assets, funding ratio, liquidity coverage ratio etc could be used in future research to investigate the cause of below-average profit performance of Gen 1 banks.
Chapter 5
Corporate Governance
5.1 Introduction

Corporate Governance (CG) plays a vital role in banks’ efficiency and profitability by ensuring transparency, accountability and fairness in reporting and operations. CG relates the overall system to its stakeholders by ensuring that managers and other insiders adopt mechanisms to safeguard the interest of shareholders. As CG is based on the level of corporate responsibility a company exhibits regarding accountability, transparency and ethical values; a review of CG of banks is crucial.

5.1.1 Importance of the Study

This research is important for all stakeholders; particularly to owners, regulators and investors who are concerned about the profitability and efficiency of the Private Commercial Banks (PCBs) in Bangladesh. This study provides comprehensive analysis of the situation of PCBs situation in relation to codes, guidelines and principles on CG (explained in Chapter-2) introduced by the Bangladesh Bank\(^{136}\) (BB) as well as the Bangladesh Securities Exchange Commission (BSEC)\(^{137}\). Further, it provides an insight in understanding the degree of PCBs’ CG compliance. Comprehensive analysis of CG of PCBs in Bangladesh is important for the following reasons:

Firstly, it is crucial to measure the performance of different generations as it might vary from generation to generation. So far, no studies have been conducted that measured if there is any efficiency and profitability gap exists under the existing CG structure and explores the causal relationship. Thus, it is important to see how the CG is responsible and responding to ensure PCBs’ efficiency and profitability.

Secondly, this chapter aims to find out the plausible reasons for 1\(^{st}\) Gen PCBs’ poor efficiency and profit performance. It has been observed in Chapter-3 that 1\(^{st}\) Gen banks are

\(^{136}\)Bangladesh Bank is the Central Bank of Bangladesh. In this chapter, the term ‘Bangladesh Bank’ and the ‘Central Bank’ is used interchangeably.

\(^{137}\)Hereafter, ‘Corporate Governance’ will be termed as ‘CG’, ‘Private Commercial Banks’ as ‘PCBs’, ‘Bangladesh Bank’ as ‘BB’ and ‘Securities Exchange Commission’ as ‘SEC’.
revenue inefficient and Chapter-4 found, Non Performing Loans (NPLs) is one of causes that made 1st Gen banks’ less profitable. It is important to find the causes/factors contributed to increase revenue inefficiency and less profitability.

**Thirdly**, the study covers the complete sample set of 23 conventional PCBs’ operating in Bangladesh till 2012. The choice period allows a significant lag time for banks to have reviewed and implemented the rules and regulations on CG as issued by the Bangladesh Bank (BB). The CG issues are of crucial public concern due to alleged corruption\(^\text{138}\) in the banks that causes damage to the depositors and other value chain of the banks widely. This study therefore addresses few key governance variables which are board size, board composition, directors’ equity interest and governance disclosure level.

**Fourthly**, banks in Bangladesh are the main depository, generally accepted means of payment and extremely important engine of economic savings and growth. As Bangladesh liberalised its banking system through privatisation and reduced the role of economic regulation; consequently, the board and management obtained greater freedom in running PCBs that demand a thorough periodic analysis of different CG aspects. This chapter explores the current CG among PCBs and highlights board practices. Incorporating the combined evidence from Chapter 3 and 4, this study aimed to be useful not only for the policymakers of the Central Bank but also for the existing bankers and other stakeholders of the industry towards upgrading quality and enhancing stability of PCBs.

### 5.1.2 Objective of the Study

The chapter aims to address CG in following perspectives:

a. Analyse the effectiveness of the Code of Corporate Governance (CCG) for Bangladesh, particularly for the financial institutions. According to BEI (2004, pg 6), “….if it is fully implemented, the reputation for Bangladesh as a destination for investment and aid will be greatly enhanced and thus the economy will be rewarded with more investment and higher

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\(^{138}\) By the social media and daily newspapers like the Financial Express, the New Age, the Daily Star, bdnews24.
quality investors”. After a decade of incorporation, it is worth exploring the extent to which the PCBs are complying with the Codes.

b. Explore the relationship between CG structures and 1st, 2nd and 3rd Gen PCBs’ performance in terms of Revenue Efficiency and Profitability. Particular focus is given on PCBs’ board composition and financial performance.

c. Investigate under the CG framework the existing gap between 1st Gen PCBs with 2nd and 3rd Gen PCBs on the Revenue Efficiency and Profitability.

d. Look for areas of improvement and recommendations to prepare policy that will improve the efficiency and profitability of conventional commercial banks.

e. Draw conclusion about the understanding of CG, particularly for banks in developing countries.

To meet these objectives, this chapter aims to explore two research issues which are:

**Research Issue 1**: What is the present situation of Corporate Governance (CG) in the banking sector of Bangladesh; in particular, what hinders proper implementation of CG codes and what is the consequence of CG non-compliance?

**Research Issue 2**: Seeking to explain in the light of Chapter 3 and 4, what made Gen 1 PCBs different from Gen 2 and 3 PCBs in terms of Revenue Efficiency and Profitability?

### 5.1.3 Research Contribution

CG is one of the topics of great interest to many researchers in many branches of knowledge. Thus, this study is important for several reasons.

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139 Names of researchers and their contribution in the field of Corporate Governance of Banks are provided in the following section of this chapter.
Firstly, this chapter contributes to the existing CG literature by providing evidence from a hitherto unexplored country, Bangladesh; where majority of CG research focused on non-financial companies with some exception that left a gap for CG research on the Financial Institutions (FIs) and particularly on the complete set of conventional PCBs.

Secondly, many studies of CG have explored governance practices in developing countries; however, there is a lack of research that investigates the challenges banking companies are facing in ensuring full compliance or investigating the solutions for ensuring full compliance. This research reviews the CCG that has not been reviewed since its development for the FIs and provides detailed descriptions with examples for CG failure.

Thirdly, this chapter identifies several vital issues from the present CG environment in the PCBs in Bangladesh which, the respondents think, are hindering the proper implementation of CCG. The findings from the assessment of the compliance with the CCG would help the Bangladesh Bank (BB) to take suitable policy measures to further strengthen the CG of Banks. These findings are also expected to help the banking industry in Bangladesh to further strengthen the CG practices to achieve the best practice.

Fourthly, the study identifies few major issues analyzing the responses of the respondents which are the causes of performance gap in terms of Revenue Efficiency (Chapter-3) and Profitability (Chapter-4) between 1st Gen with 2nd and 3rd Gen PCBs in Bangladesh from 2001 to 2012. For the first time, research on the complete set of conventional PCBs of 1st, 2nd and 3rd Gen have been done which provided some key reasoning of performance gap to the BoDs and the management. It is vital to understand the shortcomings of the 1st Gen PCBs whereas the 2nd and 3rd Gen banks can consider taking necessary preventive actions to compete successfully.

5.1.4 Organization of the Study

To conduct the analysis, this chapter is divided in several sections.

Part 2 ‘Literature Review’ briefly explores the theoretical background of CG. It also explains the historical development of CCG and trends of compliance in both developed and
developing economies. The Code contents are also compared with the OECD Principles (2004) and Codes of other regulatory bodies to understand the extent to which they meet international recommendations and to identify divergence (if any) to validate contents according to domestic needs. It highlights the controversies about code appropriateness in developing countries.

Part 3 is ‘Methodology and Research Strategy’ which comprises the research design and justification, the model, the dataset and research plan. A semi-structured interview method was adopted to answer the issues related to codes, compliance, CG challenges in Bangladesh and the appropriate solutions. The justifications for using these research tools are provided in the relevant section together with detailed descriptions of the research procedures used in collecting the data.

Part 4 contains the ‘Analysis of Results’ where the results of the qualitative analysis are presented through templates. The results of the interviews with the Board of Directors (BoDs), Managing Directors (MDs), Credit Department Heads and Regulators are closely associated with such disclosure and the actual compliance issues. Opinions and examples relating to the problems of governance practices, the causes of non-compliance and solutions for better governance are presented.

Part 5 provides the ‘Conclusion’ of the research findings in the light of banking CG in Bangladesh and issues emerges from this chapter.

5.2 Corporate Governance – A Review of the Literature

This part is organized in three sections where first part describes different theoretical approaches, mainly agency theory, that has significant influence over the interpretation of research findings. Secondly, it describes CG in general and later focused CG particularly for banks. Finally, it discussed about the adoption, importance and implication of CG in both developed and developing economies including Bangladesh.
5.2.1 Theoretical Framework for CG

CG has been viewed from different perspectives using different theoretical lens. Agency theory, stewardship theory, stakeholder theory and institutional theory are the main theories underlying the concept of CG. Agency theory is considered as the basis of this research as the corporate framework of Bangladesh reflects the principle-agent relationship of governance which is based on agency theory. However, to address the debate over the appropriate model of governance for Bangladesh, stewardship theory, stakeholder theory and institutional theory has also been used to construct the theoretical framework.

Table-14 shows the discipline and the year of origin of these theories while the arguments are given which are greatly influenced by some scholarly papers described below and have critically reviewed CG theories.

<table>
<thead>
<tr>
<th>No</th>
<th>Theoretical Framework</th>
<th>Basic Discipline</th>
<th>Year of Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agency Theory</td>
<td>Economics</td>
<td>1930’s onward</td>
</tr>
<tr>
<td>2</td>
<td>Stewardship Theory</td>
<td>Psychology and Sociology</td>
<td>1990’s onward</td>
</tr>
<tr>
<td>3</td>
<td>Stakeholder Theory</td>
<td>Management</td>
<td>1970’s onward</td>
</tr>
<tr>
<td>4</td>
<td>Institutional Theory</td>
<td>Sociology and Organization Behavior</td>
<td>2004’s onward</td>
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Source: Compiled from different sources by the Author

a. Agency Theory

Jensen and Meckling (1976) introduced the ‘principal-agent’ framework and stated that “agency theory\textsuperscript{140} \textsuperscript{141} identifies the agency relationship where one party, the principal,

\textsuperscript{140} Agency theory is the most dominant theory of CG which argues in modern corporation where share ownership is widely held and management roles are separated from ownership functions; managerial actions depart from those required to maximize shareholder returns (Ermongkonchai,2010; Hendry,2005; Krambia-Kapardis and Psaros,2006; Roberts,2004).

\textsuperscript{141} The effectiveness of agency theory is dependent on several assumptions. It assumes that there is a low degree of concentration of ownership and limited bank shareholdings; discipline of the market (product, financial, managerial talent), maintaining a competitive international market; accurate, reliable and timely information flows to the capital market; the securities market is highly liquid and sophisticated; and there is a well-developed legal infrastructure to protect against wealth transfer and insider trading (Reed,2002; Krambia-Kapardis and Psaros,2006).
delegates work to another party, the agent” (Mallin, 2004, p.12). The owners are principals and the managers are agents. There is an agency loss which returns to the residual claimants if the principals/owners exercised direct control of the corporation\textsuperscript{142}. Thus, the agency relationship is a contractual link between principals and agents where agents are appointed by principals and are delegated some decision making authorities (Shankman, 1999).

According to Eisenhardt (1989), agency theory is concerned with analyzing and resolving problems that occur in the relationship between principals (owners or shareholders) and their agents or top management. It has been pointed out that separation of control from ownership implies that professional managers manage a firm on behalf of the firm’s owners (Kiel and Nicholson, 2003). The theory rests on the assumption that the role of organizations is to maximize the wealth of their owners or shareholders (Blair, 1995). Agency theory thus suggests that managers/agents must be monitored and institutional arrangements must provide some check and balances to make sure they do not abuse the power (Blair, 1995; Mallin, 2010). It is very unlikely that agents will always act in the best interests of the principal. Conflicts arise when a firm’s owners perceive the professional managers not to be managing the firm in the best interests of the owners.

Agency cost arises from managers’ misuse of their position, and also from the costs of monitoring those to prevent abuse (Mallin, 2004). Superior information available to professional managers allows them to gain advantage over owners of firms which allured them to be more interested in their personal welfare than in the welfare of the firm’s shareholders. Thus, the agency theory holds that most businesses operate under conditions of incomplete information and uncertainty. Such conditions expose businesses to two agency problems namely adverse selection\textsuperscript{143} and moral hazard\textsuperscript{144}.

Donaldson and Davis (1991) argue that managers will not act to maximize returns to shareholders unless appropriate governance structures are implemented to safeguard the

\textsuperscript{142} In the context of a bank, in the agency relationship, the board of directors is indicated by the term ‘principal’ and the managers by ‘agent’

\textsuperscript{143} Adverse selection occurs when a principal cannot ascertain whether an agent accurately represents his or her ability to do the work for which he or she is paid to do.

\textsuperscript{144} Moral hazard is a condition under which a principal cannot be sure if agent has put forth maximal effort.
interests of shareholders. As shareholders are the primary stakeholders of a company, any act for social purposes beyond the shareholders’ interests will create scope for managers to abuse their power and for government to intervene in corporate decisions and thus there is a possibility that corporate resources will be allocated in an inefficient way (Letza et al., 2004). Therefore, agency theory advocates that the purpose of CG is to minimize the potential for managers to act in a manner contrary to the interests of shareholders.

Proponents of the agency theory hold that top management becomes more powerful when the firm’s stock is widely held. They also claim that CEO duality is more likely to create conflict of interest and have a negative impact on shareholders’ interest, however, scholars like Donaldson and Davis (1994) refute such claims by arguing that vigilant boards favour CEO duality because it contributes to a unity of command at the top of a corporation that helps ensure the existence, or the illusion, of strong leadership; and CEO duality allows companies to serve the shareholders even better. Wheelen and Hunger (2002) argue that problems arise because agents (top management) are not willing to bear responsibility for their decisions unless they own a substantial amount of stock in the corporation. Thus, top management should have a significant ownership to secure a positive relationship between CG and the amount of stock owned by the top management (Mallin, 2004; Mullineux, Mallin and Wihlborg, 2005).

Considering these arguments, some recent studies suggested that CG practices which are based on agency theory must be modified according to the context of the economy (Chancharat et al., 2012; Lin and Chuang, 2011; Tangpong et al., 2010). Besides, an increasing literature casts doubt on the ability of agency theory to understand the CG issues where Jones (1995) disagreed with the proposition of the self-interest nature of the agents. He argued that managers are trustworthy and should be fully empowered.

While these criticisms have their own theoretical grounds, it cannot be ignored that the theory itself is sound and has have a certain weight in dealing with real life issues of good CG. Carpenter and Westpal (2001) stated that agency theory is mainly applied by boards of profit making organizations to align the interests of management with shareholders. Until now, Agency theory has been a great interest to CG researchers who have been using its
assumptions, models and arguments to understand ownership structure, board practices, agency conflicts, CG reform, capital structure and debt (Manosa et al., 2007).

In the case of banks, agency theory posits that the control function is primarily exercised by the BoDs. With regard to the board as a governance mechanism, the issues that appear most prominent in the literature are board composition (in particular board size, inside versus outside directors and the separation of CEO and chair positions) and the role and responsibilities of the board (Biserka, 2007). In relation to the research objectives, this study will adopt agency theory because it focuses on the BoDs as a mechanism which dominates the CG literature and can explain the association between providers of corporate finances and those entrusted to manage the affairs of banks.

b. Other Theories

There are other theories relating to CG. Among those Stewardship Theory, Stakeholders Theory and Intuitional Theory are the most prominent. Where agency theorists view executives and directors as self-serving and opportunistic, stewardship theorists reject agency assumptions, suggesting that directors frequently have interests that are consistent with those of shareholders. The theoretical consideration of stewardship theory adopts an alternate approach from the agency theory in terms of managerial motivation (Donaldson, 1990) which is embedded on psychology and sociology.

Unlike agency theory, stewardship theory assumes that managers are stewards and are not motivated by individual goals; rather their behaviors are aligned with organizations’ principals. Donaldson and Davis (1991) observed that where managers have served a corporation for a number of years, there is a “merging of individual ego and the corporation” (p.51).

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145 E.g. Berle and Means(1932);Jenson and Meckling(1976);Fama and Jensen(1983);Arnold and de-Lange(2004);Bezemer,et al.(2012);Elston and Goldberg(2003);Fama(1980);Hendry(2005);Phan and Yoshikawa(2000);Renders and Gaeremynck(2012);Warda and Filatotchev(2010); Mullineux(2006)

146 In developing countries several other authors including, Manosa,et al.(2007);Imam and Malik(2007);Mukherjee-Reed(2002);Farooque,et al.(2007) have used agency theory to examine CG structures and issues and to predict possible solutions for ensuring better governance.
According to Davis, Schoorman and Donaldson (1997), a steward protects and maximizes shareholders’ wealth through firm performance because by so doing the steward’s utility function maximized. Given a choice between self-serving behaviour and pro-organizational behaviour, a steward’s behaviour will not change because the steward perceives greater utility in cooperative behaviour.

Stewardship theory looks at a different form of motivation for managers drawn from organizational theory that organizations require a structure to allow harmonization for achieving efficiency between managers and owners. Managers are viewed as loyal to the company and interested in achieving excellence and high performance. Specifically, managers are conceived as being motivated by a need to achieve, to gain intrinsic satisfaction through successfully performing inherently challenging work, to exercise responsibility and authority and thereby to gain recognition from peers and bosses which directs to non-financial motivators for managers

In summary, the stewardship theory suggests that a firm’s BoDs and its CEO, acting as stewards, are more motivated to act in the best interests of the firm rather than for their own selfish interests. Stewardship theory holds that there is no inherent, general problem of executive motivation because, over time, senior executives tend to view a firm as an extension of themselves (Clarke et al, 2004; Wheelen and Hunger, 2002). Rather being opportunistic shirkers, managers essentially want to do a good job, to be a good steward of the corporate assets. Therefore, stewardship theory argues that, compared to agency theory, top management cares more about the firm’s long term success (Mallin, 2004).

“Stakeholder Theory views the corporation as a locus in relation to wider external stakeholders’ interests rather than merely shareholders’ wealth” (Letza et al., 2004, p.243).

147 A number of dimensions like Psychological Factors (includes Motivation, Social Comparison, Identification and Use of Power) and Situational Factors (includes Management Philosophy, Risk Orientation, Time Frame, Objectives and Cultural Differences) on which the agency theory assumptions differ from stewardship theory.

148 Freeman(1984:46) defines stakeholders as “any group or individual who can affect or is affected by the achievement of the organization’s objectives”. Freeman suggests, if organizations want to be effective, they will pay attention to all and only those relationships that can affect or be affected by the achievement of the organization’s purpose. That is, stakeholder management is fundamentally a pragmatic concept. Regardless of the content of the purpose of the firm, the effective firm will manage the relationships that are important.
The stakeholder theory holds that corporations are social entities that affect the welfare of many stakeholders where stakeholders are groups or individuals that interact with a firm and that affect or are affected by the achievement of the firm’s objectives (Donaldson and Preston, 1995; Freeman, 1984). Successful organizations are judged by their ability to add value for all their stakeholders; thus, it includes different interest groups such as employees, customers, suppliers, government and society at large.

Stakeholders are instrumental to corporate success and have legal rights when they get what they want from a firm, they return to the firm for more (Donaldson and Preston, 1995; Ulrich, 2008). Therefore, corporate leaders have to consider the claims of stakeholders when making decisions (Blair, 1995) and conduct business responsibly towards; however, participation of stakeholders in corporate decision-making can enhance efficiency and reduce conflicts. According to Donaldson and Preston (1995) the instrumental approach of stakeholder theory legitimizes “as an effective means to improve efficiency profitability, competition and economic success” (Letza et al., 2004, p.251).

However, critics of stakeholder theory state that unlike agency theory and stewardship theory, stakeholder theory is incomplete in terms of under-specification of the corporate purpose or setting specific mechanisms for sound governance (Jansson, 2005, Plaza-Ubeda et al., 2010 and Tse, 2011). According to Sternberg (1997, p.5) “an organization accountable to everyone is actually accountable to no one”.

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149 According to Kaptein and Van Tulder(2003), corporations adopt reactive or proactive approaches when integrating stakeholders’ concerns in decision making. A corporation adopts a reactive approach when it does not integrate stakeholders into its corporate decision making processes. This results into a misalignment of organizational goals and stakeholder demands (Mackenzie,2007). A proactive approach is used by corporations that integrate stakeholders’ concerns into their decision-making processes and that establish necessary governance structures (de-Wit,et al.,2006).

150 Some authors attribute scandals such as those of Enron and WorldCom to the failure to consider stakeholder concerns in decision making (Watkins,2003;Zandstra,2002). Following these scandals, some governments set up new regulations to align the interests of stakeholders with corporate conduct. For example, the Sarbanes-Oxley Act (SOX) was passed as a result of the collapse of Enron and WorldCom.

151 Donaldson and Preston(1997) identify that the stakeholder approach can be categorized into two groups: normative and instrumental. Whilst “the Normative Approach emphasizes ‘intrinsic value’ in stakeholder and views stakeholders as ‘ends’, the Instrumental Approach is only interested in how stakeholders’ value can be used for improving corporate performance and efficiency and regards stakeholders as ‘means’.”(Letza,et al.,2004,p.250).
Other researchers\textsuperscript{152} argued that stakeholders’ interest varies from group to group and even within members of a single group; which often create conflict of interest. The theory does not guide managers in handling these issues; neither has it provided any idea of how to make the trade-offs among stakeholders (Orts and Strudler, 2009) which gets further complicated when managers are left without clear, adequate, consistent and reliable measure for identifying, addressing and prioritizing stakeholders’ claims (Tse, 2011). Griffin (2000) argued that the overall findings on this remained inconclusive to implement a stakeholder model of governance\textsuperscript{153}.

Overall, stakeholder theory of governance argues that CG issues can be better resolved through encouraging stakeholders’ participation and by establishing an environment where business ethics, employees’ participation, inter-firm co-operation, trust and long term relationships are encouraged (Blair, 1995; Keasey et al., 1997). If implemented properly, the advocates of the stakeholder model believe this wide approach of governance is able to offer a certain competitive edge to companies.

To overcome all these problems, Institutional Theory explains the origin and the stability of strategies by a number of cognitive, bureaucratic and political processes which hinder the free adjustment of the organization to the conditions of the surroundings. Institutional theory emerges from an open systems theory that adopts a sociological perspective to explain organizational structures and behaviour by drawing attention to the social and cultural factors that influence organizational decision-making (Scott, 2001). It develops and changes according to the path-dependence model which forces to follow the initial development path, grows stronger and becomes institutionalized over time while at the same time the values, viewpoints, behaviour and practice which are inconsistent are rejected leading to a mutual adjustment of the institutional framework.

\textsuperscript{152} Like Orts and Strudler(2009); Griffin(2000).

\textsuperscript{153} The theory does not specify what to do if the status of a stakeholder changes where the supplier becomes competitors (as an example) and their participation become a threat for company’s competitiveness. As there is no unified method for identifying who is a stakeholder, it would be challenging for managers to decide an optimal method for deciding whose interest to prioritize and to what extent (Jansson,2005;Lepineux,2005 and Plaza-Ubeda,et al.,2010).
However, a critical assumption within institutional theory is that all social actors are seeking legitimacy and/or reinventing legitimacy norms which constraint and force all to converge to create isomorphism or similarity of structure, thought and action within institutional environments (North, 1990). While the concept of “institution” has been conceptualized in diverse ways (Scott, 2001), it generally refers to relatively enduring systems of social beliefs and socially organized practices associated with varying functional areas of societal systems (e.g. work, politics, laws, and regulations). According to Chua and Rahman (2011) compliance is an integral part for organizational success and highlighted “the choices organizations have to make in response to, or in compliance with, their institutional environment, which comprises: (1) powerful institutional constituents such as influential stakeholder groups, and (2) the rules and requirements with which they must comply to gain the desired rewards of support and legitimacy” (p.320).

Institutional theory is of particular help to explain why organizations incur costs or allocate resources to increase their legitimacy to obtain favourable institutional resources. In one view, resources will be irrationally used on the part of the entrepreneurs and the other is that the political magnates will confiscate the gained profit. Institutional theory emphasizes the fact that many dynamics in the corporate environment stem from cultural norms, values and rituals; thus, the social and cultural environment should also be taken into account in understanding CG practices (Chua and Rahman, 2011; Scott, 1995).

5.2.2 Concept of Corporate Governance

Corporate Governance (CG) has become one of the most common buzzwords in business world and is frequently used by academics, practitioners and policy makers which have been viewed from different perspectives using different theoretical lens. For instance, Sir Adrian Cadbury viewed CG from a control perspective and defines it “as a system by which companies are directed and controlled” (Cadbury, 1992, p.15).

Shleifer and Vishny (1997, p.737) emphasized more on the relationship perspectives and considered it as a means to “deal with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment”. Tricker (1994) defined CG as an
umbrella term that includes specific issues arising from the interactions among senior management, shareholders, BoD and other corporate stakeholders. Some other scholars\textsuperscript{154} rather preferred to view CG from a wider perspective to incorporate various stakeholder groups into the company’s objectives. They argued that it is not only for shareholders, rather as a social entity, a company should be accountable to its various stakeholder groups who have a long term relationship with the company and who have the potential to impact firm performance.

However, the Organisation for Economic Co-operation and Development (OECD) defined concept of corporate governance in a broader and elaborated way in 2004 that is generally accepted by all where CG defined as:

\begin{quote}
“Corporate governance is a set of relationships between a company’s management, its board, its shareholders, and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Good corporate governance should provide proper incentives for the board and management to pursue objectives that are in the interests of the company and its shareholders and should facilitate effective monitoring. The presence of an effective corporate governance system, within an individual company or group and across an economy as a whole, helps to provide a degree of confidence that is necessary for the proper functioning of a market economy.” (OECD, 2004, p.11).
\end{quote}

Kocourek, Burger and Birchard (2003) said that governance begins at home, inside the boardroom and among the directors. The term CG\textsuperscript{155} describes the formal system of accountability of senior management to the shareholders; which can be stretched by including the entire network of formal and informal relations involving in the corporate sector and their consequences to the society in general. Literature also indicates that despite wide diversity, CG can be categorized into two contrasting paradigms: shareholder and stakeholder

\textsuperscript{154} Like Chizema and Kim(2010); Mallin(2010); Furfine(2001); Morgan(2002).

\textsuperscript{155} CG includes stakeholders, not just shareholders, but also debt-holders and even non-financial stakeholders such as employees, suppliers, customers and other interested parties.
(Friedman and Miles, 2006; Kakabadse and Kakabadse, 2001). Shareholder CG is seen as a mechanism to deal with issues by narrowing the vision to satisfy the needs of only shareholders whereas the opposite camp advocates having much wider vision to satisfy the needs of stakeholders.

Although most of these definitions emphasize on the structure of rights and responsibilities of different interest groups of the company; however, they differ due to the diversity of corporate practices (Chizema and Kim, 2010). Mallin (2010) suggested that many disciplines like law, economics, finance etc. have influenced the development of CG and theories that have fed into it are quite varied. Thus, CG has been defined in different ways and stylized in different formats for identifying the purpose of the corporation, deciding who should have the control, identifying the problems or finding an optimal solution. The following sections briefly discuss these issues in respect of financial institutions and particularly for banks.

**a. Corporate Governance for Banks**

Corporate Governance of any financial institution, particularly banks, is different from the CG of an ordinary institution because banks differ substantially from a generic firm in several important respects. Also, CG is crucial and essential element for the banking system because bank and financial institutions depends on Other Peoples Money (OPM). Furthermore, banks are more opaque than non-financial companies and information asymmetries are larger which may inhibit standard CG arrangements. Nevertheless, in the area of CG of banks, literatures are found with the focus on how the CG practices in banks differ from those in non-banking firms (Prowse, 1997; Furfine, 2001; Morgan, 2002; Macey and O’Hara, 2003; Mullineux, 2006).

The characteristics that separate the analysis of CG of banks from non-bank financial institutions are –

- **Firstly**, the liquidity producing function of banks are based on a maturity mismatch between the two sides of a bank’s balance sheet in the term structure of assets and liabilities. Thus, the existence of banks depends on continuous access to liquidity
where regulators need to provide prudential regulations to pertain liquidity for managing risk of failure and market anarchy.

- **Secondly**, banks are highly leveraged institutions where bank’s profit increases directly with the volume of lending to creditors which eventually increase the probability of default. Depositors and debt-holders will demand a higher risk premium as compensation for the higher risk of insolvency and from minimum capital requirements provided for by prudential regulation.

- **Thirdly**, banks’ balance sheets are more opaque than those of generic firms because the quality of bank loans is not readily observable where the quality of physical assets of industrial firms is discernable by third parties. Thus, to assess the riskiness of banks, the Basel Committee on Banking Supervision sets out disclosure requirements covering quantitative and qualitative aspects of overall capital adequacy and capital allocation as well as risk exposure and assessment with a view to promoting market discipline.

- **Fourthly**, banks are highly interconnected among themselves where competitors are the important business partners through the interbank market, the OTC derivatives market and the foreign exchange market. Thus, it poses a counterparty risk which prone contagion by spreading one bank’s problem to others and the system-wide at a very fast rate.

- **Fifthly**, because of the mismatch in the term structure of assets and liabilities banks are subject to creditor run or liquidity crisis when sometimes solvent banks become the victim of the collective action of dispersed creditors (depositors, bondholders, other banks). Due to the prisoner’s dilemma, readily available liquidity reserves exhaust and creates financial distress where deposit protection schemes, guarantee schemes state-back debt etc tends to mitigate the danger of bank runs and save creditors.

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156 Physical assets such as machinery, plants etc. whereas bank’s assets or securities are Asset-Backed Securities(ABSs), Collateralized Debt Obligations(CDOs), and Credit-Default Swaps(CDSs) etc.

157 Also, CG in the banking and financial sector differs from that in the non-financial sectors because of the broader risk that banks and financial firms pose to the economy (Alejandro et al., 2004)
Finally, if banks are not in a position to assess the viability of debtor companies, they risk accumulating non-performing loans and be forced into direct or indirect renationalisation to avoid systemic risk. Because of their systemic importance on one hand and their vulnerability to runs on the other hand, banks are heavily regulated and supervised entities. It limits the amount of risk a bank may take under by stipulating risk-adjusted minimum capital requirements, limits a bank’s exposure to a single creditor or group of creditors and addresses the risk from disruptions in the access to sufficient liquidity by setting standards for liquidity management.

In short, CG is the system of internal controls and procedures to define and protect the rights and responsibilities of various stakeholders. Recent failures of large corporations due to poor CG raises the issue and many organizations pronounce the guidelines those are intended to protect the rights of various stakeholders and reduce the conflict of interests among them. In this regard, Banks and Financial Institutions (FIs) are "special" as they do not only accept and deploy large amount of uncollateralized public funds in fiduciary capacity but also leverage such funds through credit creation (Onakoya et al, 2015). The depositors, particularly retail depositors, neither effectively protect themselves as they do not have adequate information, nor in a position to coordinate with each other.

Moreover, there is a contagion effect resulting from the instability of one bank which affects a class of banks or even the entire financial system and the economy resulting in a run on the deposits and putting the entire financial system in jeopardy. Thus the crisis of an individual bank creates problem for entire financial system as well as the monetary management of the country. So, there should have clear and defined duties and responsibilities for the banks’ management and the board that act as the fiduciary for shareholders and the depositors which are different from non-banking organizations (Mullineux, Mallin and Wihlborg, 2005).

As bank operations are less transparent, the range of stakeholders affected by the operations is wider and the different characteristics of traditional and non-traditional banking operations impose challenges on bank CG. Information asymmetries plague in all sectors; however, these informational asymmetries are larger with banks and thus banks are generally more opaque than others (Mullineux, 2007). Besides, the comparatively among loans and bonds create difficulties in acquiring information about bank behavior and monitoring ongoing bank
activities because from the perspective of banking, loan quality is not readily observable and can be hidden for long periods. Hence, Morgan (2002) found that bond analysts disagree more over the bonds issued by banks than by non-financial firms which hinder traditional CG mechanisms.

The government regulated deposit insurance and the implicit guarantee that large banks will be bailed-out by the government to ensure financial system stability, reduce the efficiency of CG mechanisms (Berlin et al., 1991). In addition to reducing the incentives for depositors to monitor the bank, deposit insurance also encourage banks to take on more risk (Merton, 1977).

The implicit guarantee that the government will not let large banks fail as it would disturb the stability of the whole financial system reduces the incentives to monitor in particularly large banks (O'Hara and Shaw, 1990; Mullineux, 2011). It is difficult for outsiders to assess the true risk of bank assets as privileged information on loans cannot be communicated to outsiders and as banks can transform the composition of its asset base rapidly (Flannery, 1994, Bhattacharya et al., 1998).

Hence, banks are seen by many as less transparent than other companies, thus making the monitoring of operations difficult. Thus, CG of banks is a crucial issue for the management of banks which can be viewed from two dimensions - the transparency in the corporate function protecting the investors’ interest and a sound risk management system in place (Jensen and Meckling, 1976).

b. Principles of Corporate Governance for Banks

Different authors and banking specialists argued that bank’s CG requires procedures, processes, systems and codes of regulation and ethics to ensure its implementation (Altunbas, Evans and Molyneux, 2001). Perceptions of the elements that constitute good CG vary from country to country since the business environment is not uniform in all countries. Some insights of key elements of good CG are provided by the Cadbury Report (1992), the Organization for Economic Co-operation and Development (OECD, 1999), Sarbanes-Oxley Act (2002), the Business Roundtable (2002) and the Australian Stock Exchange Corporate
Go
erWas Council (ASX-CG Council, 2003). Table–15 is a synthesis of the different perspectives of good CG in general terms.

### Table-15: Synthesis of Different Perspectives of Good Corporate Governance

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<tbody>
<tr>
<td>i. Establishing BoDs that have clear responsibilities and whose role of directing or governing is different from that of the firm's managers.</td>
<td>i. Protection of shareholders' rights; ii. Equitable treatment of all shareholders; iii. Recognition of the rights of stakeholders; iv. Timely and accurate disclosure of matters regarded by a firm as being material includes financial, performance, ownership and governance matters; v. Effective monitoring of management and accountability of a board.</td>
<td>i. A board has a paramount duty of selecting and overseeing a competent CEO and other senior managers. ii. A firm's management has a responsibility to act in an effective and ethical manner in the process of increasing shareholder value. iii. There is need for accurate and timely financial reporting. iv. Firm must deal with employees in a fair and equitable manner. v. Firm should have a CG committee which comprises independent directors and which addresses issues such as nomination of directors, provision of information and evaluation of a board's effectiveness. vi. Independent directors should have an opportunity to meet outside the presence of a CEO and other management directors. vii. A firm has a responsibility to communicate effectively with its shareholders and other stakeholders.</td>
<td>i. The need for an independent audit committee (Section 301). ii. A firm's principal executive and financial officers signing a statement that they have sufficient internal controls in place to ensure that financial statements do not contain any material misstatements (Section 302). iii. Independence of external auditors (Sections 201-209).</td>
<td>i. Lay solid foundations for management oversight ii. Structure a board to add value iii. Promote ethical and responsible decision-making iv. Safeguard integrity in financial reporting v. Make timely and balanced disclosure vi. Respect the rights of shareholders vii. Recognize and manage risks viii. Encourage enhanced performance ix. Remunerate fairly and responsibly x. Recognise the legitimate interests of stakeholders</td>
</tr>
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Source: Prepared by the Author

In this regard, the Basel Committee on Banking Supervision (1999) prepared a guideline particularly for the banking companies which contended that transparency of information related to existing conditions, decisions and actions is integrally related to accountability which gives market participants sufficient information to judge the management of a bank. The Committee advanced further that various CG structures exist in different countries hence, there is no universally correct answer to structural issues and that laws do not need to be consistent from one country to another.
The Basel Committee on Banking Supervision (BCBS) regularly provides guidelines for bank’s CG to run business and affairs by their BoDs and senior management. Sound CG therefore, can be practiced regardless of the form used by banks whereas the Committee suggested four important forms to oversight that is included in the organizational structure of any bank to ensure the appropriate checks and balances which are: - oversight by the BoDs or supervisory board; oversight by individuals not involved in the day-to-day running of the various business areas; direct line supervision of different business areas, and; independent risk management and audit functions.

In summary, BCBS has provided guideline on how banks need to set corporate objectives to generate economic returns to owners, run the day-to-day operations, consider the interest of recognized stakeholders and align corporate activities/behaviours with the expectation that banks will operate in safely and sound manner and in compliance with applicable laws and regulations to protect the interests of depositors. The senior management and BoDs of have the primary responsibility for good CG (BCBS, 2006). The main responsibility for the external monitoring lies with the ones who benefit the most from good performance, i.e. the shareholders and directors with significant ownership (Sullivan and Spong, 2007). Depositors and other customers can choose not to conduct business with banks that are operated in an unsound manner whereas government authorities can act through laws, regulations, enforcement and an effective judicial framework.

The BCBS has had a longstanding commitment to promoting sound CG practices for banking organisations. The OECD Corporate Governance Committee released the initial guideline in 1999 and subsequently revised in 2004 and 2015. The review embraces the shared understanding that a high level of transparency, accountability, board oversight and respect for the rights of shareholders and role of key stakeholders is part of the foundation of a well-functioning CG system.

As a consequence, input to the review is solicited from a large number of jurisdictions that are not members of the OECD and includes consultations with the business sector, investors, professional groups at national and international levels, trade unions, civil society organisations, other stakeholders and international standard setting bodies (OECD, 2015). The BCBS Committee and OECD Committee guidance assist banking supervisors and provides a
reference point for promoting the adoption of sound CG practices. The principles also serve as a reference point for the banks’ own CG efforts. The widely accepted and long-established principles aim to assist governments in their efforts to evaluate and improve their frameworks for CG and to provide guidance for participants and regulators of financial markets.

The Committee’s revised guideline and elaborated targeting the key principles of CG which are provided in Table–16.

Table-16: Corporate Governance Principle

<table>
<thead>
<tr>
<th>OECD Principles of Corporate Governance</th>
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<tr>
<td><strong>1. Ensuring the Basis for an Effective CG Framework</strong></td>
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<tr>
<td>A The CG framework should be developed with a view to its impact on overall economic performance, market integrity &amp; the incentives it creates for market participants &amp; the promotion of transparent &amp; efficient markets.</td>
</tr>
<tr>
<td>B Legal &amp; regulatory requirements that affect CG practices should be consistent with the rule of law, transparent &amp; enforceable.</td>
</tr>
<tr>
<td>C Division of responsibilities among different authorities should be clearly articulated &amp; ensure that the public interest is served.</td>
</tr>
<tr>
<td>D Stock markets should be regulated in a way that supports effective CG.</td>
</tr>
<tr>
<td>E Supervisory, regulatory &amp; enforcement authorities should have the authority, integrity &amp; resources to fulfil their duties in a professional &amp; objective manner. Moreover, their rulings should be timely, transparent &amp; fully explained.</td>
</tr>
<tr>
<td>F Cross-border cooperation should be enhanced through bilateral &amp; multilateral arrangements for exchange of information</td>
</tr>
<tr>
<td><strong>2. Rights and Equitable Treatment of Shareholders and Key Ownership Functions</strong></td>
</tr>
<tr>
<td>A Basic shareholder rights should include the right to: 1) secure methods of ownership registration; 2) transfer shares; 3) obtain material information on a timely &amp; regular basis; 4) participate &amp; vote; 5) elect &amp; remove members; &amp; 6) share in the profits</td>
</tr>
<tr>
<td>B Shareholders should be sufficiently informed about &amp; have the right to participate in: 1) amendments to the statutes, or articles of incorporation or similar governing documents; 2) authorisation of additional shares; &amp; 3) extraordinary transactions</td>
</tr>
<tr>
<td>C C. Shareholders should have the opportunity to participate &amp; vote in general shareholder meetings: 1) Furnished with sufficient &amp; timely information concerning the date, location &amp; agenda &amp; issues to be decided; 2) Processes &amp; procedures for general shareholder meetings; 3) opportunity to ask questions; 4) Participation in key corporate governance decisions; 5) Vote in person or in absentia; 6) Impediments to cross border voting should be eliminated.</td>
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<tr>
<td>D Shareholders, including institutional shareholders, should be allowed to consult with each other on issues concerning their basic shareholder rights as defined in the Principles, subject to exceptions to prevent abuse</td>
</tr>
<tr>
<td>E All shareholders of the same series of a class should be treated equally. Capital structures &amp; arrangements that enable certain shareholders to obtain a degree of control disproportionate to their equity ownership should be disclosed.</td>
</tr>
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<td>F Related-party transactions should be approved &amp; conducted in a manner that ensures proper management of conflict of interest &amp; protects the interest of the company &amp; its shareholders.</td>
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<tr>
<td>G Minority shareholders should be protected from abusive actions by, or in the interest of, controlling shareholders acting either directly or indirectly, &amp; should have effective means of redress. Abusive self-dealing should be prohibited.</td>
</tr>
<tr>
<td>H Markets for corporate control should be allowed to function in an efficient &amp; transparent manner. Anti-take-over devices should not be used to shield management &amp; the board from accountability</td>
</tr>
<tr>
<td><strong>3. Institutional Investors, Stock Markets and Other Intermediaries</strong></td>
</tr>
<tr>
<td>A Institutional investors acting in a fiduciary capacity should disclose overall CG &amp; voting policies with respect to their investments.</td>
</tr>
<tr>
<td>B Votes should be cast by custodians or nominees in with the directions of the beneficial owner of the shares.</td>
</tr>
<tr>
<td>C Institutional investors acting in a fiduciary capacity should disclose how they manage material conflicts of interest that may affect the exercise of key ownership rights regarding their investments.</td>
</tr>
<tr>
<td>D The CG framework should proxy advisors, analysts, brokers, rating agencies &amp; others, that provide analysis or advice relevant to decisions by investors, disclose &amp; minimise conflicts of interest that might compromise the integrity of their analysis or advice</td>
</tr>
<tr>
<td>E Insider trading &amp; market manipulation should be prohibited &amp; the applicable rules enforced.</td>
</tr>
<tr>
<td>F Listed companies in a jurisdiction than other incorporations, the applicable CG laws &amp; regulations should be clearly disclosed.</td>
</tr>
<tr>
<td>G Structure &amp; functioning of stock exchanges &amp; trading venues should ensure efficient &amp; fair price formation for effective CG</td>
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4. **The Role of Stakeholders in Corporate Governance**

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<tr>
<td>A</td>
<td>The rights of stakeholders that are established by law or through mutual agreements are to be respected.</td>
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<tr>
<td>B</td>
<td>Where stakeholder interests are protected by law, they should have the opportunity to obtain effective redress for violation of rights.</td>
</tr>
<tr>
<td>C</td>
<td>Mechanisms for employee participation should be permitted to develop.</td>
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<td>D</td>
<td>Where stakeholders participate in the CG process, they should have access to relevant, sufficient &amp; reliable information.</td>
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<td>E</td>
<td>Stakeholders should be able to freely communicate their concerns about illegal or unethical practices to the board &amp; to the competent public authorities &amp; their rights should not be compromised for doing this.</td>
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<tr>
<td>F</td>
<td>CG framework should be complemented by effective, efficient insolvency framework &amp; by effective enforcement of creditor rights.</td>
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5. **Disclosure and Transparency**

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<tr>
<td>A</td>
<td>Disclosure should include material information on: 1) financial &amp; operating results; 2) objectives &amp; non-financial information; 3) Major share ownership &amp; voting rights; 4) Remuneration of members &amp; key executive; 5) Information about board members, including qualifications, selection process etc.; 6) Related party transactions; 7) Foreseeable risk factors; 8) Issues regarding employees &amp; other stakeholders 9) CG structures &amp; policies, including the content of CG code &amp; process of implementation.</td>
</tr>
<tr>
<td>B</td>
<td>Information should be prepared &amp; disclosed with high quality standards of accounting &amp; financial &amp; non-financial reporting.</td>
</tr>
<tr>
<td>C</td>
<td>Annual audit should be conducted by an independent, competent &amp; qualified, auditor to provide an external &amp; objective assurance to the board &amp; shareholders that the financial statements fairly represent the financial position &amp; performance in all material respects.</td>
</tr>
<tr>
<td>D</td>
<td>External auditors should be accountable to the shareholders &amp; owe a duty to exercise due professional care in the conduct of audit.</td>
</tr>
<tr>
<td>E</td>
<td>Channels for disseminating information should provide for equal, timely &amp; cost-efficient access to relevant information by users.</td>
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6. **The Responsibilities of the Board**

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<tr>
<td>A</td>
<td>Board members should act on fully informed basis in good faith with due-diligence, care &amp; best interest of company &amp; shareholders.</td>
</tr>
<tr>
<td>B</td>
<td>Where board decisions may affect different shareholder groups differently, the board should treat all shareholders fairly.</td>
</tr>
<tr>
<td>C</td>
<td>The board should apply high ethical standards. It should take into account the interests of stakeholders.</td>
</tr>
<tr>
<td>D</td>
<td>Board should fulfil key functions: 1) Reviewing &amp; guiding strategy, major plans, risk management, annual budgets; setting performance objectives; monitoring implementation; overseeing major capital expenditures; 2) Monitoring effectiveness of CG practices &amp; making changes; 3) Selecting, compensating, monitoring, replacing &amp; overseeing succession planning; 4) Aligning key executive &amp; board remuneration; 5) Ensuring formal &amp; transparent nomination &amp; election process; 6) Monitoring &amp; managing conflicts of interest; 7) Ensuring the integrity of accounting &amp; financial reporting systems, including independent audit, systems for risk management, financial &amp; operational control, compliance with the law &amp; relevant standards; 8) Overseeing the process of disclosure &amp; communications.</td>
</tr>
<tr>
<td>E</td>
<td>The board should be able to exercise objective independent judgement on corporate affairs.</td>
</tr>
<tr>
<td>F</td>
<td>In order to fulfil their responsibilities, board members should have access to accurate, relevant &amp; timely information.</td>
</tr>
<tr>
<td>G</td>
<td>When employee representation on the board is mandated, mechanisms should be developed to guarantee that this representation is exercised effectively &amp; contributes to the enhancement of board skills, information &amp; independence.</td>
</tr>
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</table>

Source: The Corporate Governance Committee by the OECD Council (2015)

BCBS also demonstrated the importance of key personnel being fit and proper for the jobs and the potentiality of government ownership of a bank to alter the strategies and objectives of the bank as well as the internal structure of governance; hence, the general principles of sound CG are also beneficial to government-owned banks. The concept of good governance in banking industry empirically implies total quality management and the degree of adherence to these parameters determines the quality rating of a bank. These six performance areas are known as CAMELS that includes - Capital adequacy, Assets quality, Management, Earnings, Liquidity and Sensitivity risk (Klapper and Love, 2002). Besides BCBS, Asia-Pacific Economic Cooperation\(^{158}\) (APEC) in the Asian Roundtable on Corporate Governance

\(^{158}\) Asia-Pacific Economic Cooperation(APEC) is a forum for 21 Pacific Rim member economies that seeks to promote free trade and economic cooperation throughout the Asia-Pacific region.
Task force developed the Policy Brief on Corporate Governance of Banks in Asia (June 2006). The main issues and priorities for reforms in CG of banks in Asia that were identified are presented in Table–17.

Table-17: Asia-Pacific Economic Cooperation (APEC) Principles

<table>
<thead>
<tr>
<th>No</th>
<th>Principles</th>
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<tbody>
<tr>
<td>1.</td>
<td>The responsibility of individual board members – fiduciary duties of bank’s board members, need of skills, personal abilities, training programs on integrity and professionalism.</td>
</tr>
<tr>
<td>2.</td>
<td>The roles or functions of the board – guiding, approving and overseeing strategies or policies rather than being immersed in day-to-day operations; creating clear accountability lines and internal control systems; and sufficient flows of information and managerial support.</td>
</tr>
<tr>
<td>3.</td>
<td>The composition of the board – banks is more encouraged to have independent directors than other firms; separation between Chairman and CEO.</td>
</tr>
<tr>
<td>4.</td>
<td>The committees of the board – Audit Committee, the Risk Management Committee, The Governance Committee with combined responsibilities of nomination, remuneration, Succession planning, training, performance evaluation, etc.</td>
</tr>
<tr>
<td>5.</td>
<td>Preventing abusive related party transactions – inspection of the existing firewall. Creation of specialized committee to monitor and approve related part transaction. Publicly disclose such transaction.</td>
</tr>
<tr>
<td>6.</td>
<td>Bank holding companies and groups of companies holding banks—a bank’s parent company should not impede the full exercise of the CG of the bank within the banking group.</td>
</tr>
<tr>
<td>7.</td>
<td>Disclosure – effort on convergence into international standards on accounting, etc. should be encouraged.</td>
</tr>
<tr>
<td>8.</td>
<td>Bank’s autonomy in relation to the state – state as owner should respect the legal corporate structures of State Owned Commercial Banks</td>
</tr>
<tr>
<td>9.</td>
<td>Bank’s monitoring of the CG structure of its corporate borrowers – Extent to which banks should assess or monitor CG of their corporate borrowers or seek to improve it.</td>
</tr>
</tbody>
</table>

Source: Asian Roundtable on Corporate Governance (2006)

In the banking literature, it has been argued that given the special nature of banks and financial institutions, some forms of economic regulations are necessary. However, there is a notable shift from such regulations which have always been offered by governments over time in different economies all over the world. In this regard, Barth, Caprio and Levin (2001) emphasized on the developing and transitional economies to strengthen their prudential regulations and supervision because banks in developing economies – (i) have higher capital requirements which is very costly to raise due to the fear of fund mismanagement by shareholders; (ii) do not enough well trained supervisors to examine; (iii) lack political independence supervisory bodies; and (iv) lag behind accurate and timely accounting information. However, in many developing economies, accounting rules are flexible and there is a paucity of information disclosure requirements. The next section discusses about the CG practice in transitional and developing economies.
c. Banking CG in Transitional Economies

In emerging economies, the term “Corporate Governance” is new, yet it has caught on rapidly and mostly all banks have shareholders, boards and “professional” managers, which are the components of modern CG. King and Levine (1993) and Levine (1997) emphasized the importance of CG of banks in transitional and developing economies and observed that: First, banks have an overwhelmingly dominant position in the financial system of a developing economy and are extremely important engines of economic growth. Second, as financial markets are usually underdeveloped, banks in developing economies are typically the most important source of finance for majority of firms. Third, as well as providing a generally accepted means of payment, banks in developing countries are usually the main depository for the economy’s savings.

Previous studies carried on different underdeveloped and developing countries showed that countries with efficient and strong financial markets experience higher rates of economic growth because banks usually account for the lion share of a financial system. There are strong evidence of relationship between the size and operation of financial markets and/or the development and structure of banking sector and economic growth (King and Levine, 1993; Levine and Zervos, 1998; Rajan and Zingales, 1999; Cetorelli and Gambera, 2001; Binh and Tam, 2014).

The world has gone through a number of financial and banking crises over past two decades and recently the financial markets of developing economies have experienced rapid changes due to the growth of wider range of financial products. Any turbulence or failures of the banking and financial sector would push these transitional countries' economies to serious problems when the quality of CG of the financial/banking institutions of the affected countries has been blamed as one of the primary reasons (Onakoya et al, 2015). Banks have been involved with high risk activities such as trading in financial markets and different off-balance-sheet activities more than ever before (Greuning and Bratanovic, 2003; Aebia et. al., 2014) which necessitate an added emphasis on quality of CG of banks in developing economies. There is an argument that active role by regulators sometimes cause problems because they may not have a convincing or sufficient motivation to monitor the banks as they do not have much at stake in case of bank failures. The undesirable banking practices such as
poor risk diversification, inadequate loan evaluation, fraudulent activities were as much responsible as other macroeconomic factors in causing banking crises which shook the financial systems of countries such as Argentina, Chile, Malaysia, Philippines, Thailand etc (Sundararajan and Balino, 1991; Binh and Tam, 2014).

Arun and Turner (2002) argued that in developing economies, the introduction of sound banking CG principles has been partially hampered by poor legal protection, weak information disclosure requirements and dominant owners. They observed in many developing countries that the PCBs are not enthusiastic to introduce CG principles due to the ownership control. In this regard, Rwegasira (2000) identified the factors like - low degree of capital market sophistication, high ownership concentration, domination of bank financing with high degrees of debt–equity ratios and lack of economic and political stability hold back the full execution of banking CG in Africa. He stated that -

“The market-based system presupposes a low degree of concentration of ownership, limited bank holdings...as well as free flowing reliable and timely information about the business and financial affairs of the company. A number of these characteristics are not readily realisable in Africa, at least for the time being.” (Rwegasira, 2000, p. 265)

Banks in developing countries are faced with high risk of harking as a result of heavy government ownership, lack of prudential regulation, weak legal protection and presence of special interest groups (Arun and Turner, 2003). Besides, government controls and sometimes restricts the entry of foreign banks which may bring improved standards of CG to those markets. Another feature of developing country banking sector is that even after being deregulated many important aspects of competition lacks in their banking sectors. Optimal level of market competition is expected to strengthen CG of firms (Grosfeld and Tressel, 2001) because it acts as a market disciplinary force.

The independent regulatory agencies are important in developing countries to act against the frequent collusion among government, businesses and bankers to serve special interest groups (Shleifer and Vishny, 1997; Arun and Turner, 2002; Felício et. al, 2016). Regulatory policies and agencies can improve the quality of bank governance by reducing negative impact of transaction and information costs (Arun and Turner, 2002). Ahunwan (2002) and Onakoya et
al (2015) reported that the presence of concentrated ownership, inefficient capital market, unsophisticated legal system and lack of shareholder activism hinder the execution of CG in Nigeria.

Klapper and Love (2004) studied a group of emerging countries to understand their governance practices and the impact on firm performance. Following the same methodology of Gompers et al. (2003), the study found that the level of compliance is a major issue for emerging markets. It also indicates that there is wide variation in firm-level governance among sample banks with weaker legal systems. It was interesting to observe that the compliance status in developing economies is in sharp contrast with that of the developed countries while developed countries showed high degree of compliance, developing countries are far behind and remained non-compliant mostly.

One of the most comprehensive research works on India by Hossain (2008) investigated the financial reporting and disclosure system of the banks in India where the author studied 38 banks comprising of both public and private sector listed banks. Using content analysis he observed variation in the disclosure patterns between public sector and private sector banks in relation to total CG disclosures. The author concluded that the overall levels of disclosure were relatively low with only the best disclosers reaching at least 50% of the index and suggested that the variation might be due to the weak regulatory supervision or poor internal compliance or control of compliance and public sector banks' compliance might be weaker due to bureaucratic inefficiencies in monitoring. The findings are similar with other studies on India (Ahmed, 2006; Kaur and Mishra, 2010; Shukla, 2009).

Studying the banking CG of Poland, Mallin and Jelic (2000) reported that Poland had fundamental legislative changes and privatization policies which contributed to a strong and healthy economic growth. They also stated that the fixed income market in Poland is very dynamic with rapid growth to meet the demand of both domestic and foreign investors; whereas most of the developing countries are in a battle to gain the trust of investors due to their weak legal regulation, pervasive corruption and ineffective regulatory systems. Even with these progressive infrastructural features, none of the emerging and developing countries could achieve high level of compliance in accordance to the OECD Principles.
However, the overall failure of developing countries in ensuring a high level of compliance has triggered a number of studies to explore the underlying reasons. Findings indicate that inadequate legal system and enforcement mechanism (e.g. Jun-Lin and Liu, 2009; Okike, 2007; Rathinam and Raja, 2010; Vaithilingam and Nair, 2007), deterioration of moral values and lack of culture of compliance (Ermongkonchai, 2010; Halter et al., 2009; Kaur and Mishra, 2010; Lucey and Zhang, 2010); domination of family ownership (Al-Najjar, 2010; Anyansi- Archibong et al., 2010; Kempf and Ruenzi, 2008) are some of the prime factors for which developing countries are finding challenging to ensure higher levels of compliance like developed countries. La Porta et al. (1999) suggest another important factor about the non-compliance of CG that the agency problem in developing countries is different than that of the developed countries where in developing countries the agency problem exists between majority and minority shareholders instead of arising in between agents and shareholders. Keeping all the arguments in view the following section discusses the CG practice of banks of a developing county, Bangladesh.

**d. Corporate Governance in the Banking Sector of Bangladesh**

The concept of good CG is relatively new in Bangladesh; thus the area of good governance in Bangladesh has not been studied as intensively as in other developing countries. In fact, Bangladesh has lagged behind from its neighboring developing countries because CG practices in Bangladesh are quite absent in most companies and organizations. One reason for this absence of CG is that most companies are family oriented but the case is different for financial institutions. Reaz and Arun (2006) focused on the governance practices in banks of Bangladesh and found that owners of banks hold large shares and were misusing the bank’s fund. They also report that the owners are also dominating in the audit and disclosure practices of the banks and concluded by stating that the major problem of bad governance relating to loan recovery in Bangladesh is rooted in political and family interferences. In this regard, for the financial institutions Chowdhury (2002) stated that:

“Even formal institutions do not matter as such unless they can induce changes in the way social agents behave...if financial sectors are liberalized without adequate prudential regulation, financial institutions are likely to be captured by powerful political and/or
business interest that operate the institutions to serve their own interest rather than those of the creditors/depositors” (Chowdhury, 2002, p.25-26)

Furthermore, Chowdhury (2002) stated that the situation is complicated in Bangladesh because the legal system itself protects the criminals from being punished and halts the process of institutionalizing good Governance. Because the current system in Bangladesh does not provide sufficient legal, institutional and economic motivation for stakeholders to encourage and enforce CG practices; hence, failure in most of the constituents of CG is witnessed in Bangladesh. In recent years, several scholarly papers¹⁵⁹ have emerged understanding different dimension of CG in the country which mostly emerged in the area of accounting and auditing practices which sometimes covers the banks as well.

Reaz (2006) comprehensively examined CG of financial institutions (particularly banks) of Bangladesh using a mixed methodology comprising of a questionnaire survey among 35 banks and 21 interviews with top bank management officials to measure the state of governance against the OECD (1999) governance framework. The research findings indicate a poor compliance status exists in Bangladesh. Moreover, motivation to disclose information and improve governance practices by companies is felt negatively. There is neither any value judgment nor any consequences for CG practices.

In the sector of private commercial banks (PCBs) in Bangladesh, poor bankruptcy laws, no push from the international investor community, limited or no disclosure regarding related party transactions, weak regulatory system, general meeting scenarios and lack of shareholder active participations are some of the individual constituents that have been identified as reasons for the absence of CG (Ahmad and Yusuf, 2005). In this regard, Rashid et al (2010) made an overview on banking CG in Bangladesh and identified six specific CG characteristics in relation to current CG practices in Bangladesh namely legal and regulatory frame work, weak institutional control, pre-dominant of individual investors, limited transparency and weak disclosure practices.

Another study by Rashid et al (2010) examined board composition and firm performance from Bangladesh perspective by examining the influence of corporate board composition in the form of representation of outside independent directors on firms’ economic performance. The finding of the study has provided an insight to the regulators in this quest for harmonization of internal CG practices. Kutubi (2011) also examined BoDs size, independence and performance analysis of private commercial banks in Bangladesh which examined the impact of board size and the independent directors on banks’ performance. His study identified that statistically significance positive relationship existed between the proportions of the independent directors and the performance of the banks.

Siddiqui and Podder (2002) studied 14 banks of Bangladesh to examine the effectiveness of audit and found that the banking companies were misstating their profits in their financial statements and their audit firms are certifying these financial statements as ‘true and fair’. Finding that only 3 out of 7 default companies’ auditors have placed a modified statement where the authors raised concerns about their competence and independence of work under the concurrent situation in Bangladesh. Habib and Islam (2007) viewed the auditing practices of Bangladesh from a different angle. They studied the association between non-audit fees (NAF) and financial reporting quality to understand the independence of auditors. The authors claim that unlike developed countries the threat of litigation is completely non-existent in Bangladesh and NAF is causing auditors to sacrifice their independence of work.

In fact, the World Bank report (2003) found that the audit profession lacks proper institutional settings to attract quality graduates and thus it is difficult to produce quality auditors. Moreover, the report also stated that the out-of-date legal requirements, ineffective enforcement mechanism, poor quality accounting education and training and inadequate adherence to professional ethics are also considered to have contributed to the weakness of the financial reporting regime in Bangladesh (World Bank Report, 2003). According to Hossain et al (2011) good CG has implication for company behavior towards employees, shareholders, customers and banks. He suggested that improving CG can provide significant rewards to both individual companies and the country.

A recent paper by Hoque, Islam and Ahmed (2013) on 25 selected banks in Bangladesh indicated that a good number of banks does not comply the mandatory requirements for board
size, appointment of independent directors in the board and holding audit committee meetings set forth by the Central Bank and the Security and Exchange Commission (SEC) implying remarkable shortfall in corporate governance practice in the banking sector. The board is seen to have been prevalently dominated by the outside non-independent directors having multiple directorships and the companies are actually run by the independent managers having no ownership interest.

Many of the problems have been attributed to the lack of sound CG among the banks. Internal control systems, along with accounting and audit qualities, are believed to have been substandard (Raquib, 1999; CPD, 2001). Besides, private commercial banking sector in Bangladesh experienced increasing numbers of non-performing assets, provision and capital shortfalls, eroded credit discipline, rampant corruption patronized by political interests, low recovery rate, inferior asset quality, managerial weaknesses, excessive interference from government and owners, weak regulatory and supervisory roles (USAID, 1995). The reports by the Banking Reform Commission (1999) and BEI (2003) raise serious concerns about the banking sector and criticize the quality of governance that prevails there in Bangladesh. Having regards to these context, the following section explores the determinants of the CG in PCBs in Bangladesh.

**e. Determinants of Corporate Governance in Bangladeshi PCBs**

According to Hettes (2002), banking supervision cannot function if there does not exist a “correct corporate governance” structure since experience emphasizes the need for an appropriate level of responsibility, control and balance of competences in each bank. The correct CG simplifies the work of banking supervision and contributes towards corporation between the management of a bank and the banking supervision authority. Keeping that in view, the Bangladesh Bank continuous its effort to insert appropriate provisions in the Bank Companies Act (1991) and the Financial Institutions Act (1993) supplemented by prudential regulations/guidelines in line with international best practices.

Prehistorically, Bangladesh was a colony of British Empire till 1947 and till now the company law is based on British Company Law and the CG structure is traditionally embedded in the
Anglo-American model. Reed (2002) stated that the basic areas of reform in the Anglo-American model of governance include “changes to company law (to strengthen shareholder rights), reforms of the judicial system (to allow for more effective enforcement of contracts) and changes to financial markets (to help induce investment and discipline management and majority owners) as well as related macro-level reforms” (2002, p.240). Although theoretically, Anglo-American model of governance is supposed to offer countries some advantages like increased corporate growth and profits; facilitation of overall opportunities; faith, trust and reliability via proper discloser in reporting instruments; benefit for society and ensure greater investor protection through its required mechanisms; however, critics have argued that it would be hard to realize these benefits in the vulnerable corporate infrastructure of developing countries.

Thus, the full adoption of the Western countries model may not offer a better future for a country like Bangladesh where the social norms and culture is different. It is important to look at the determinants of CG in Bangladesh, which reflects the Anglo-American model but claims to have customized provisions according to Bangladeshi needs. Prior commencing to identify the determents of CG in Bangladesh, the following section describes briefly about the regulatory bodies and key institution who contributed significantly for setting up the Codes of Corporate Governance (CCG).

i. Key Institutional Involvement Setting the CCG

There are several government and private institutions which are actively involved in developing and regulating the CG in Bangladesh which are –

- Registrar of Joint Stock Companies and Firms (RJSC) is administered by the Ministry of Commerce which is responsible for registering companies under the Companies Act, 1994 that empowers the company’s registrar for formation, filing of statutory returns and authority to call for information and explanation\(^{160}\).

\(^{160}\) Company records are kept manually due to the lack of computerization which has been identified as one of the major drawbacks of the RJSC in Bangladesh. It hinders the timely presentation of information which should be available for inspection by members and other authoritative bodies.
- **Bangladesh Bank (BB)** regulates the banks and non-banking financial institutions (NBFI), entrusted with all the traditional central banking functions including the sole responsibility of issuing currency, keeping the reserves, formulating and managing the monetary policy and regulating the credit system of Bangladesh. Recently, BB\(^{161}\) policies are reformed for improving CG standards that includes – 1. Provisions regarding independent director in the Bank Company Act 1991; 2. Provision regarding the audit committee; 3. Rules regarding disclosure by the banks etc.

- **Securities Exchange Commission (SEC)** of Bangladesh\(^{162} 163\) is another regulatory body of the country’s capital market that was established in 1993 as the primary government regulator in the Bangladesh CG arena\(^{164}\). In 2006, the SEC has issued an order relating CG on a “comply or explain” basis. Publicly listed companies are supposed to comply with the provisions or explain the cause in case of failure.

- **The Institute of Chartered Accountants of Bangladesh (ICAB)** is the only professional accountancy body in Bangladesh, created under the Bangladesh Chartered Accountants Order in 1973 that certifies Chartered Accountants (CA) and regulates the accountancy profession and oversees professional ethics and codes of conduct of its members, provides specialized training and professional expertise, holds the right to take disciplinary action against its members for violation of regulation\(^{165}\).

\(^{161}\) The board members of the Bangladesh Bank are appointed by the government of Bangladesh.

\(^{162}\) Through an amendment of the Securities and Exchange Commission(SEC) Act,1993, on December 10, 2012, its name has been changed as Bangladesh Securities and Exchange Commission(BSEC) from previous Securities and Exchange Commission (SEC).

\(^{163}\) The SEC is attached to the Ministry of Finance where the Chairman and the members of the SEC are also appointed by the Government. Soon after its establishment, the SEC went through some turmoil due to unprecedented boom of the local stock markets when huge amount of domestic and foreign investments enter in the capital market and then the bubble burst. Following the scam, the SEC received huge criticism for its passive reaction to such market scandals and for not using their regulatory power to take strict actions against such market misbehaviour/malpractices. Analysts indicated that the crash was primarily caused by weak regulations, failure of a number of regulatory institutions along with the SEC and poor governance among companies which allowed some market manipulators to be involved in fraudulent activities.

\(^{164}\) In 1999 the Government undertook different initiatives to revive investors’ confidence with the funding and technical assistance of ADB by restructuring the SEC’s operating activities. The SEC went through a number of major changes: it was entrusted as the final rulemaking authority for capital markets; its organogram was revised to incorporate two new members; considerable staff was recruited; and a new investors’ education programme was introduced.

\(^{165}\) The Companies Act, 1994; the Income Tax Act, 1922; the Insurance Act, 1938 and the Securities and Exchange Rules, 1987 require companies of Bangladesh to be audited by chartered accountants. However, research indicated that the ICAB has failed to discipline its members even when SEC fined some audit firms on charges of
- **Institute of Cost and Management Accountants of Bangladesh (ICMAB)** is an autonomous professional body under the Ministry of Commerce of Bangladesh and offers professional qualification in Cost and Management Accountancy, with a focus on accounting for business.

- **Bangladesh Enterprise Institute (BEI)** is a donor-funded, private, non-profit, non-political research centre that emerged in 2000 which is actively involved in shaping the CG regulations in Bangladesh besides others. Its Board of Governors includes business personalities, political members and bureaucrats. BEI provides training to BoDs, conducts dialogue with policy-makers and different stakeholder groups. Being initiated by donor agencies, in 2004 BEI has made a remarkable step in CG by developing the voluntary CCG for Bangladesh (2004) which is the only voluntary code for Bangladesh and more comprehensive than the CG guidelines which were introduced by the SEC of Bangladesh.

Besides these, Bangladesh has also some credit rating agencies since 2002 that contribute towards qualitative development of the money and capital markets and enhancement of transparency of financial information and credibility of the corporate sector in Bangladesh.

Thus, CG is directly or indirectly influenced by two prime bodies – the government and the international donor agencies (eg: the World Bank, the ADB etc). The principle legal instrument for enforcing CG in Banks is administered by Registrar of Joint Stock Company (RJSC) and the Ministry of Commerce. The Government of Bangladesh exerts its influence through the Ministry of Finance, the BB and the SEC; whilst donor agencies are intervening through two sources - regulatory bodies and the private think-tanks. However, the Government has indirect influence over the BEI. The details of these CG provisions are provided in the following section of this chapter.

concealment. In 1999, being funded by World Bank, ICAB took initiatives to develop audit standards in Bangladesh named Bangladesh Accounting Standards (BAS) and Bangladesh Standards for Auditing (BSA) in the light of the International Accounting Standards (IAS) and International Standards on Auditing (ISA) respectively. The Financial Reporting Standards prescribed by the ICAB are known as Bangladesh Financial Reporting Standards (BFRS) which is originally based on IAS. However, in more recent times, the ICAB has adopted the updated BFRS which is modelled on IAS and International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board.
ii. Components of CG in Bangladesh

The OECD Principles of CG were issued in 1999 and amended in 2004 which eventually “became a widely accepted global benchmark that is adaptable to varying social, legal and economic contexts in individual countries” (Krambia-Kapardis and Psaros, 2006, p. 127). Since its inception, it has worked as a guide for CG reforms, especially in developing countries. However, members of APEC considered that the OECD guidelines have the problem of ‘one size cannot fit all’ because all codes are not applicable to all countries and developed a set of guidelines in line with the OECD principles, considered as a middle step, for emerging markets to achieve a better CG.

Prior setting the Code of Corporate Governance (CCG) for Bangladesh other international Codes and Principles of CG has been consulted. Finally, in 2004, Bangladesh Enterprise Institute (BEI) published the Code of Corporate Governance (CCG) for Bangladesh that is suited for financial institutions including banks to improve the general quality of CG practices. Aligning with the countries socio-cultural, economical, political and legal framework, the Code defined best practices of CG and specific steps that banks, particularly, can take to improve CG. The primary objective of the Code was “to improve the general quality of CG practices in Bangladesh” (BEI, 2004, p.4).

According to the Code, its provisions are formulated by combining the indigenous needs of Bangladesh and the recommendations of different international codes and Principles on CG by combining the local purposes and international standards. On full compliance of the CCG, companies in Bangladesh will be able to:

1. Attract more investment and higher quality

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166 At the same time, existing literature also suggests that domestic forces have significant influences over code development which causes divergence among code contents. Cuervo(2002) identifies that local political interest, differences in relevant legislations, differences in perception regarding stakeholders’ role in CG and countries level of development are some of the major factors which cause the existing divergence among code contents. Also, scholars like Aguilera and Cuervo-Cazurra(2004);Doble(1997);Erwin(2011);Judge(2012); Mallin(2010);Rahman(2010); Zingales(2000)etc have strongly emphasized that codes should be developed setting the best practice recommendations as a benchmark which should be conditioned according to a country’s infrastructural features and unique demands.

167 That includes: the Combined Code(2003) of UK, the OECD Corporate Governance Principles, the Commonwealth Association for Corporate Governance Guidelines, the King Report (South Africa), the Sri Lanka Central Bank Code, the CII Code of Desirable Corporate Governance India, the Pakistan Code of Corporate Governance, the Myners Report (UK), the Malaysian Code of Corporate Governance; and a variety of institutional investors code from United States (BEI,2004,p.7).
investors, 2. Enhance company reputation as a destination for investment, 3. Ensure greater economic growth by enabling the country to maximize its resources and by efficient allocation of capital and 4. Address the pervasive corruption that hinders the economy and development as a whole (BEI, 2004). Since development, the Code has not been revised and no panel was formed for discussing the applicability of the Code in Bangladeshi context.

The Code content is extensive (the full Code is presented in Appendix-17) and covers a wide range of recommendations. Hence, for ease of analysis, following the organization of the Code, its entire contents have been divided into three groups – Group1: Code of Corporate Governance; Group 2: Basic checklist for implementation; and finally Group 3: the NGO (Non-Government Organizations principles shown in Figure-7.

**Figure-7: Organization of the Code of Corporate Governance for Bangladesh**

In the CCG, **Group-1** is the most significant section as it contains almost all of the recommended provisions which are divided into four sections- 1) Board Issues – recommends different provisions for the BoDs; 2) Role of Shareholders – outlines responsibilities of
shareholders; 3) Financial Reporting issues – recommends provisions relating to financial reporting disclosure and audit issues; and finally, 4) some sector specific provisions. Code provisions included in sections 1 to 3 are generally applicable for all types of companies, whilst the provisions of section 4.1 are some additional provisions applicable to banks. Group-2 outlines the basic checklist for implementation which highlights the major provisions for instance: BoDs, employees, shareholders, financial institutions and so on. In Group-3, the Code sets out principles for NGOs.

The present study is concerned with the provisions which are generally applicable for Financial Institutions and particularly for Banks (i.e. the provisions included in section 1.1, 1.2, 1.3 and 1.4.1 of Group 1 in Figure-7). The sector specific code provisions (‘section 1.4.2 and 1.4.3 of Group 1 in Figure-7) and NGO principles have been excluded from the comparison because the nature of the research issues is concerned about understanding of governance standards of the banking companies. Though the detailed CCG is provided in Appendix-17; however, some essential component of CCG on the Financial Institutions (FIs) is provided in the following Table-18.

### Table-18: Component of the CCG of the Financial Institutions

<table>
<thead>
<tr>
<th>No</th>
<th>Group 1.1</th>
<th>Group 1.2</th>
<th>Group 1.3</th>
<th>Group 1.4.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Mission of the Board of Directors</td>
<td>Shareholders’ Handbook</td>
<td>Accounting Standards</td>
<td>Duties to Depositors and Customers</td>
</tr>
<tr>
<td>II</td>
<td>Duties of the Board</td>
<td>General Meetings</td>
<td>Preparation of Accounts</td>
<td>Disclosures</td>
</tr>
<tr>
<td>III</td>
<td>Board Membership Criteria</td>
<td>Voting Rights and Duties</td>
<td>External Auditors</td>
<td>Board of Directors</td>
</tr>
<tr>
<td>IV</td>
<td>Nomination of New Board Members</td>
<td></td>
<td>Internal Audit</td>
<td>Credit Assessment and Asset Monitoring</td>
</tr>
<tr>
<td>V</td>
<td>Training</td>
<td></td>
<td>Disclosures</td>
<td>Debt Recovery</td>
</tr>
<tr>
<td>VI</td>
<td>Separation of Chairman and CEO</td>
<td></td>
<td></td>
<td>Risk Management</td>
</tr>
<tr>
<td>VII</td>
<td>Board Composition</td>
<td></td>
<td></td>
<td>CG Compliance</td>
</tr>
<tr>
<td>VIII</td>
<td>Board Compensation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IX</td>
<td>Board Agenda</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Committees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XI</td>
<td>Directors’ Report</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XII</td>
<td>Code of Conduct</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XIII</td>
<td>Company Secretary/ Compliance Officer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XIV</td>
<td>Access to Senior Management, Outside/Professional Advice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XV</td>
<td>Evaluation of Board Performance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Code development is just the beginning which cannot ensure better governance standards and nor can even a best model serve as the best solution for ever. For the code to be effective, it is important to monitor its implementation and level of compliance; measure to identify gaps between standard and reality; and amend to accommodate changes needed. However, the full implementation of the Code in all banks of Bangladesh would undoubtedly take a number of years and would require the cooperation of a vast number of relevant stakeholders (BEI, 2004). That is why research on measuring code compliance is encouraged throughout the world and a huge number of studies have emerged over time. Surprisingly, in this rich stream, a systematic evaluation of banking companies’ CG standard in Bangladeshi PCBs is absent.

As explained in Chapter-2 and evidenced in Chapter-3 and 4 that there is efficiency and profitability gap exists among 1st, 2nd and 3rd generation of PCBs which particularly motivated this research to investigate the causes of performance gap in the light of CG. To facilitate such analysis, the following sections briefly discuss the methodology of the research on banking CG in Bangladesh.

5.3 Qualitative Research Design

This section addresses the methodology used and methods of collecting the primary data through semi-structured interview. Also, it discusses the data analysis technique below.

5.3.1 Data Collection

The aim of this chapter is to understand the causes of gap of efficiency and profitability among 1st, 2nd and 3rd Generation PCBs under non-compliance of the CCG and the challenges that PCBs face to ensure good CG in Bangladesh. Considering the qualitative nature of the research issue, interview method has been adopted to address the research aim. There exist structured, semi-structured or unstructured/open-ended interview method; however, a semi-structured interview method is chosen for this research because that allows exploring problems in depth. Moreover, in the absence of adequate research on the CG issues in
Bangladesh, it will allow stakeholders to talk about different problems that they are facing in real life which would not be possible under structured or open-ended interview method\footnote{168}. 

As the concept of banking CG is relatively new in Bangladesh and sensitive in nature; an informal and unstructured conversation is likely to help interviewees to concentrate on the core issues relating to banking activities while exploring aspects of CG related general practices. Thus, a semi-structured interview method lies in between both of these methods and helps to capture the research theme in depth because it has “a series of interview questions that are in the general form of an interview schedule but is able to vary the sequence of questions....and in addition the interviewer also has some latitude to ask further questions in response to what are seen as significant replies” (Bryman and Bell, 2007, p. 213). Saunders et al. (2000) argue that semi-structured interview method is an ideal case for situations that need a clear direction and enough flexibility which confirms that semi-structured interview method is the appropriate process to conduct this research.

Besides, semi-structured interviews are more conversational, less intrusive, well focused and encourage two-way communication. Often the information obtained from interviews provides not just answers, but the reasons for the answers because it allows appropriate topical trajectories in the conversation that may stray from the guide. For this research, the perceptions from different stakeholder groups is considered where the guided interview question is modified or omitted depending on the type of interviewees and depth of their knowledge. Besides, semi-structured interviews audiences are specifically targeted who are allowed to express their views or opinions in more detail in sensitive topics; however, it is needed to assure and maintain the confidentiality of the data.

Conducting a good semi-structured interview requires a thoughtful planning and an excellent interviewing skill as semi-structured interview is time consuming and resource intensive. Prior commencing the interview, identifying the relevant respondents, deciding the number of interviews and preparing a well-thought questionnaire is needed. A comprehensive analysis of the obtained data also requires specialized skills.

\footnote{168 In a structured interview method, interviewees’ opinions are limited within some predetermined option whereas an unstructured/open-ended interview approach is thought to be inappropriate because this approach is usually informal where the interviewees have the opportunity to talk spontaneously (Belal, 2004).}
5.3.2 Design of the Interview Questionnaire

One of the major challenges of interview method is that the interviewees do not allow enough time to discuss all the required areas. Thus, it needs to prioritize questions depending on the interviewees and to guide them through a sequence. To ease the interview process, the questionnaire is divided into four broad segments where each segment is mutually exclusive; however, collectively they are under one umbrella of banking CG and have influence on each other. The description of the parts is as follows:

**Part I:** is based on the codes mentioned in BEI (the full code is provided in Appendix-17) where the interviewees are guided to cover the common areas (eg: Board Issues, Role of Shareholders and Financial Reporting, Auditing and Non Financial Disclosures) and Sector Specific Provisions (eg: Financial Institutions). This part is primarily emphasized to explore the problems of banking CG in Bangladesh among all generations. The questions are mostly direct and designed by combining some possible answers followed up by probing questions. The main aim is to understand the possible causes of CG noncompliance and issues relating to the appropriateness of the CG model. Thus, the languages of the questions are kept simple to avoid ambiguity. Finally, in Part I, it also allowed the interviewees to express relevant examples which have not been covered by the interview guideline.

**Part II:** is based on the findings of the Chapter 3 – Efficiency of PCBs in Bangladesh which showed that there is a gap of efficiency between 1st Gen with 2nd and 3rd Gen banks. Furthermore, that showed that 1st Gen banks are old, experienced and larger in size than the comparatively new conventional 2nd and 3rd Gen banks but they are not necessarily revenue efficient. Rather the large size banks of Gen 2 and Gen 3, that may be the medium-sized banks in the overall banking sector, are the most revenue efficient. This part explores the reasons of revenue efficiency gap in the light of CG.

**Part III:** is inspired by the findings of Chapter 4 – Profitability of Commercial Banks in Bangladesh where the results confirmed that there exists not only an efficiency gap but also a profitability gap between 1st Gen with 2nd and 3rd Gen banks. The most significant finding came from the results of the interaction between the 1st Gen and the NPL Ratio which revealed that 1st Gen banks are less profitable than the average due to higher NPL ratio ceteris
Furthermore, issues regarding family dominance of 1st Gen banks are a crucial area of an in-depth research to get a complete review of determinants of banks’ profitability in Bangladesh.

A sample interview guideline is attached in Appendix-18 and the next part explains the selection process of the samples for interview.

### 5.3.3 Sample Selection

An in-depth understanding is required to explore the perceptions of different stakeholder groups considering the nature of CG research on banks. Based on the theoretical definition of stakeholders and the background information related to compliance issues of banking codes and its appropriateness, selected groups of stakeholders are interviewed who have direct influence over the code formulation, implementation and supervision. Following this strategy, four stakeholder groups are identified who are: the Chairperson/Directors, the Managing Directors (MDs)/CEOs, the Heads of Credit Division and the Regulators. The interviews are conducted on 6 selected conventional PCBs of 1st, 2nd and 3rd Generations. Table-19 provides the detail of these interviewees.

#### Table-19: Categories of Respondents

<table>
<thead>
<tr>
<th>Category of Respondents</th>
<th>Chairperson/ Director</th>
<th>MD/ CEO</th>
<th>Head of Credit</th>
<th>Central Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Respondents</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Executives/Non Executive</td>
<td>Non Executive</td>
<td>Executives</td>
<td>Executives</td>
<td>Non Executive</td>
</tr>
<tr>
<td>Board Member/Non Board Member</td>
<td>Board Member</td>
<td>Board Member</td>
<td>Non Board Member</td>
<td>Non Board Member</td>
</tr>
</tbody>
</table>

Out of 23 conventional PCBs, 6 banks are selected based on their size, market share and year of incorporation. 20 respondents are selected from those banks which are relatively bigger in size, holds comparatively high market share and are operating in the banking industry for a long time. The rationale for selecting these categories of respondents is provided below:
The *Chairperson* of a board is also a *Director* who holds a clear set of responsibilities as the head of the bank. According to BB guideline, the responsibilities of the Chairman include: work-planning and strategic management, lending and risk management, internal control management, human resources management and development, financial management, formation of supporting committees and appointment of MD/CEO (explained in details in Appendix-17). They are included as interviewees because in a bank, they are considered as the highest authority to provide the leadership and to promote the standards of CG.

The *MDs/CEOs* are responsible for managing banks in accordance with the strategy and long term objectives approved by the BoDs by achieving targets, ensuring compliance in discharging routine functions, providing disclosure to the board regarding memo, reporting to the BB on violation of laws and recruiting and selecting employees (Appendix-17). In a bank, they are the bridge between the management and the board who implement the decisions taken by the BoDs. They are most important respondent group who knows both the Board and the management dynamics regarding the CCG construction and implementation in respective banks. The MDs/CEOs also maintain a liaison with the regulatory authority because they are appointed by the BB and can have indirect contribution in formation of the CG guideline. Moreover, they are responsible for reporting to the BB regarding any violation of CG practice in their respective banks.

The *Heads of Credit* are also considered an essential respondent group because they are closely related in the implantation process of the CGC approved by the BoDs. The main responsibilities of the head of credit include - review and approval of commercial credit proposals and to maintain a good balance between returns and risks exposure; ensure high standard credit quality of the portfolio by using various credit assessment tools; engage in the development, implementation, review and monitoring of various credit programs; provide training and coaching to continuously upgrade the competency of the team members; and review and develop credit approval policies and guidelines. As banks are in the business of lending money, the credit department plays the most important role by thoroughly evaluating each customer’s loan proposal and determine the likelihood that the loan will be repaid in full in due time. Thus, the head of credit plays a crucial role in increasing revenue and minimizing losses by prudentially analyzing the creditworthiness of applicants for loans and other types of credit.
The *Legal and regulatory bodies* are also included because for any country, they are considered as prime stakeholder groups to frame the CCG which companies need to comply. They ensure that the Code provisions are in accordance with the fundamental legal and regulatory requirements while monitor the CG practices amongst banks in a regular interval. Thus, to represent the views of the regulatory bodies, two high ranked officials of the BB are selected who are closely associated with the formulation of CG policies for banking sector in Bangladesh. However, the other regulatory bodies have less and indirect influence on the banking sector compared with the Bangladesh Bank.

During the session, the semi-structured interview guideline was followed. Since the interviewees were selected keeping in mind that they have a certain amount of knowledge to contribute in the research topic, a little clarification and probing questions have helped them to focus in depth. However, depending on the category, interest, experience and depth of knowledge of the interviewees’ related and additional questions are also asked emphasizing on the empirical findings of Chapter-3 and Chapter-4.

### 5.3.4 Data Collection and Presentation

Data collection was the most difficult job because the selected respondents were not available; though, the contacted directors and MDs expressed their willingness for interviews but could not manage to take out time from their busy schedule. Initially 27 respondents had been contacted for interviews through personal networks; out of which 20 respondents timeslot matched and provided times depending on their convenience. Later, each of them was communicated through emails to make the procedure formal. They were also sent the interview guideline with a cover page containing the general information of the research and its process. Furthermore, a copy of the ‘*Letter of Confidentiality*’ is attached as a requirement of the ethical committee to protect the confidentiality about the respondents’ identity and data of this research.

The interview experience was mixed because some of the interviewees where hesitating to provide sensitive information while the interviews were carried out in their offices. So, it was needed to return to them again in out-of-office places and repeat the whole procedure. In few cases, the questions of the interview guidelines were asked in different orders or in an open-
ended fashion following a conversational style depending on the barriers of the interviewees. Furthermore, the interview questions were not bank-specific, rather general in nature which made them relaxed and enthusiastic enough for discussion.

Although interviewees were initially hesitating to reveal the sensitive information; however, once they became confident about the anonymity issue, they were comfortable enough to discuss matters openly and provided some concrete examples. The duration of each face-to-face interview varied from two to more than three hours depending on the willingness of the interviewees. On top of that, with the permission of the interviewees, all the interviews were voice-recorded. At the end, all the interviews concluded with a thank you note and a promise of anonymity that neither interviewees nor their respective banks’ names would be identified in the subsequent writing up of the interview data.

5.3.5 The Method of Qualitative Data Analysis

Semi structured interviews are commonly used for collecting qualitative data; however, the dilemma arises while taking decision on the data analysis method. There are many ways to analyze responses about their experiences where ‘Thematic Analysis’ is one of the methods. Themes are identified by ‘bringing together components or fragments of ideas or experiences, which often are meaningless when viewed alone’ (Leininger, 1985, p. 60). Thus, to analyze the responses, this chapter is using the pragmatic process of thematic analysis by consolidating 20 interviewees’ responses.

Thematic analysis encodes qualitative data into a list of themes or sort into categories where the pattern is found from the information to describe or organize the observations or responses. According to Boyatzis (1998), thematic analysis is a process of ‘encoding qualitative information’ and to develop codes, words or phrases that serve as labels for sections of data depending on the research questions. Referring to this, Boyatzis (1998) explained, there could be a list or a complex model with themes that are causally related or something in between where thematic analysis helps to construct from a broad dataset towards discovering patterns and developing themes. Themes are also defined as units derived from patterns such as ‘conversation topics, vocabulary, recurring activities, meanings, feelings or folk sayings and proverbs’ (Taylor and Bogdan, 1989, p.131).
As variety of approaches can be obtained to construct themes, this chapter generates several ideas and patterns/themes by analyzing the conversations of the respondents focusing on identifying patterns of attitudes, behaviors and factors. For the analysis, the collected audio-taped conversations data are transcribed to identify patterns of experiences including direct quotes or paraphrasing, common ideas and examples from the respondents’ experiences. Different stakeholders’ group came across different factors those are present and hindering to implement CG properly in Bangladeshi PCBs. All the themes are combined and classified later into two sub-themes that fit under the specific pattern to answer the research questions.

According to the thematic analysis procedure, two major research questions are answered. For the First research question, it formed plausible causes of non-compliance of CCG and briefly talks about the consequence in the banking sector; whereas for the Second research question, themes are derived basing on the findings of Chapter 3 and 4 that identify specific factors for performance gaps between 1st Gen PCBs with 2nd and 3rd Gen PCBs. The factors of the themes are identified and formed preliminarily from the analysis of the responses obtained from the BoDs, MDs/CEOs, Heads of Credit and Regulators. However, to build a valid argument for choosing the themes, the related literature played a great role allowing inferences with the respondents. Once the literature has been studied and the themes have been collected from the responses, the factors have been formulated to develop the story line to answer the research propositions. The responses 4 groups are interwoven to develop the story line to comprehend the banking CG process, understand the lacking, figure out the hindering factors and motivate all to comply with.

It is important to note that themes are emerged from the respondents’ stories which are pieced together to form a comprehensive picture of their collective experience because the ‘coherence of ideas rests with the analyst who has rigorously studied how different ideas or components fit together in a meaningful way when linked together’ (Leininger, 1985, p. 60). As the interviewees belong to different stakeholder groups, their opinions were diverse where some were complementing each other and others hold total disagreement. An internal analysis among different stakeholder groups are conducted keeping in view that the claims of the respondents extended and clarified their understanding not only by strong reasons but also are supported by evidences’ like real-life situation or examples. The gist of findings is presented in the next section.
5.4 Responses and Analysis of Interviews

This section provides the consolidated responses of different stakeholders groups which include 6 Directors, 6 MDs/CEOs, 6 Head of Credit of Generation 1, 2 and 3 conventional private commercial banks and 2 regulators. In the second part of this section provides a detailed analysis of their responses.

5.4.1 Presentation of Responses

The responses of the participants are provided in this section. It started with a very concise summary of each issue and then the responses of the Directors, MDs/CEOs, Head of Credit and Regulators are provided; however, the completed version of interviews is provided in Appendix-17. This section has three parts where Part I is about the Banking Corporate Governance, Part II is on PCBs’ Revenue Efficiency and Part III is on PCBs’ Profitability in Bangladesh.

PART I: Banking CG in Bangladesh

In this section, the responses of three general issues which are Board Issues, Role of Shareholders and Financial Reporting, Auditing and Non-Financial Disclosures are presented. However, the last part of this section provides the Sector-Specific Provisions: Financial Institutions which are particularly relevant for the banks.

a. Board Issues

The Board Issues\(^{169}\) contains fifteen subcategories and holds the notion that the BoDs are the central entity in a functioning CG system, since they are the governing body and are accountable to the stakeholders. Boards must adapt the guidelines and requirements of the CCG by defining objectives, roles and responsibilities as well as provide strategic policy and

\(^{169}\) There are 15 sub-categories of the Board Issues. The consolidated responses are presented below with a brief description of each category.
direction to management, but should not be involved in operational decisions. Management is accountable to the board to provide relevant, transparent and material information.

The first subcategory is the **Mission of the Board of Directors** which deals that the BoDs should lead and oversee strategy and policy of the company and provide direction to the management. Board actions should be in the best interests of the company and shareholders.

The responses are the followings:

### I. Mission of the Board of Directors

<table>
<thead>
<tr>
<th>Directors</th>
<th>*To lead and oversee strategy and policy of bank; *To provide direction to the Management; *Take actions for the best interest of the bank and shareholders; *To make banks more profitable</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDs/CEOs</td>
<td>*To oversee the management’s performance; *To formulate the short and long term strategy for bank; *To provide all kind of possible support to the top management to be more profitable</td>
</tr>
<tr>
<td>Heads of Credit</td>
<td>*Setting broader spectrum of operation and area for loan/advances; *Carefully scrutinise any loan proposal to minimize risk; *More interested in short-term credit facility rather than long-term</td>
</tr>
<tr>
<td>Regulators</td>
<td>*To attend in the Board Meeting and supervise the activities of the top management of any bank; *To attend in the committee meetings of the board of directors to make it more functional; *To promote good governance as per the applicable laws, rules, regulations, guidelines and notification and to focus on sustainable profit</td>
</tr>
</tbody>
</table>

The issues regarding the **Duties of the Board** are that the BOD will serve the interests of shareholders, communication of material information, compliance with laws and regulations, determine-monitor-evaluate strategies/policies, management performance criteria and business plans, monitor key risk areas, competitiveness of technology and information systems, monitor risk management systems and internal control mechanisms, and appointment the MD. The responses are the followings:

### II. Duties of the Board

<table>
<thead>
<tr>
<th>Director</th>
<th>*To supervise the Management Team of the Bank; *To protect the interest of the Shareholders; *To attend in the meeting of BoDs; *To formulate the strategy and internal policy; *To formulate KPI for the Management, including MD; *To appoint the MD/CEO; *To supervise internal and external compliance; *To hold regular meeting of the committees of the BoDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD/CEO</td>
<td>*To serve legitimate interests of shareholders and/or owners and account to them fully; *To ensure complies with all relevant laws and regulations including the CCG and other codes of best practice; *To determine, monitor and evaluate strategies, policies, management performance criteria and business plans; *To identify and monitor key risk areas and performance indicators; *To ensure that technology and information systems used in the organisation are sufficient to operate the organisation effectively and maintain competitiveness; *To review and monitor risk management systems and internal control mechanisms to enable decision making and maintain the accuracy of financial results; *To participate in the appointment of senior management</td>
</tr>
<tr>
<td>Head of Credit</td>
<td>*To assess the risk of any proposed investment; *To guide the management on potential investment sector; *To formulate the strategy on loan advance to earn more revenue</td>
</tr>
<tr>
<td>Regulator</td>
<td>*To protect interest of the depositors; *To protect interest of the shareholders; *To make the bank more profitable</td>
</tr>
</tbody>
</table>
The issues regarding **Board Membership Criteria** include qualification of each director, time devotion and attendance in the meeting. The responses are the followings:

<table>
<thead>
<tr>
<th>III. Board Membership Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director</strong></td>
</tr>
<tr>
<td>* A person having 2% of total issued share capital of any bank is eligible to be a director of the bank except independent director; *10 years experience of related profession, management or business; *He is not a loan defaulter</td>
</tr>
<tr>
<td><strong>MD/CEO</strong></td>
</tr>
<tr>
<td>* BoDs criteria are specified in the Bank Companies Acts and By Laws; *To hold at least 2% of issued shares of the bank; *To have 10 years related experience</td>
</tr>
<tr>
<td><strong>Head of Credit</strong></td>
</tr>
<tr>
<td>* To possess related experience of 10 years; * To have 2% shares of the bank; * To sign a declaration not to disqualify according to the published guidelines for directors</td>
</tr>
<tr>
<td><strong>Regulator</strong></td>
</tr>
<tr>
<td>* To comply with the mandatory provisions of respective guidelines for directors; * To have 10 years’ experience in related business or profession; * To have a good background</td>
</tr>
</tbody>
</table>

The issues regarding **Nomination of New Board Members** include the mix of director characteristics, experiences, diverse perspectives, skills, qualifications, education, current directorships and any interests in the company. The responses are as follows:

<table>
<thead>
<tr>
<th>IV. Nomination of New Board Members</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director</strong></td>
</tr>
<tr>
<td>* To assess the profile of any proposed Director diligently; * To discuss the issue in the Board on related expertise and necessity; * To send the board decision on appointment of new Board Members to BB for their approval</td>
</tr>
<tr>
<td><strong>MD/CEO</strong></td>
</tr>
<tr>
<td>* Nomination of new member is a matter of formalities of the existing and powerful board of directors; * Not to nominate anyone who does not own less than 2% shares of the bank; * Not to nominate anyone who does not have a clean CIB report</td>
</tr>
<tr>
<td><strong>Head of Credit</strong></td>
</tr>
<tr>
<td>* Nominations are from concentrated families of Board of Directors; * Nominated new board members have 2% shares; * Bangladesh Bank hardly interfere on the nomination process</td>
</tr>
<tr>
<td><strong>Regulator</strong></td>
</tr>
<tr>
<td>* To consider the related experience before nominating any new board member; * To consider the ethical standard of any person at the time of nomination for new membership; * To consider anyone who is intending to be a Director whether he owns 2% of bank shares or not</td>
</tr>
</tbody>
</table>

The issues regarding **Training** include the opportunities and funds for training of individual directors and the development of the board to increase their skills and knowledge on directors’ liabilities, best board practices, strategic planning and CG orientation or training. The responses are as follows:

<table>
<thead>
<tr>
<th>V. Training</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director</strong></td>
</tr>
<tr>
<td>* BoDs are well trained businessmen in their field; * BoDs usually do not undergo any formal training</td>
</tr>
<tr>
<td><strong>MD/CEO</strong></td>
</tr>
<tr>
<td>* BoDs do not have formal training sessions; * It is very much essential to have formal training; * Since directors are from successful business background they usually know how to make profit</td>
</tr>
<tr>
<td><strong>Head of Credit</strong></td>
</tr>
<tr>
<td>* Formal Training would give directors foresee-ability on risk free investment; * Training Scheme is necessary for reducing NPL; * No formal training is on place at present</td>
</tr>
<tr>
<td><strong>Regulator</strong></td>
</tr>
<tr>
<td>* Formal Training are there for Bank Management NOT for BoDs; * BoDs Fit and Proper Test as per published guidelines are serving similar purpose; * It is encouraged that banks directors should visit different banks in different jurisdiction to have experience and insight of board practices</td>
</tr>
</tbody>
</table>
The issue regarding *Separation of Chairman and CEO* states that the positions of Chairman and CEO should be filled by different individuals since their functions are necessarily separate and for appropriate counterbalance and check to the power of the MD/CEO. The response about this issue is the followings:

<table>
<thead>
<tr>
<th>VI. Separation of Chairman and CEO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director</strong></td>
</tr>
<tr>
<td>*Chairman is not involved in day to day business and management of the Bank; *MD/CEO is appointed by the Board subject to the approval of Bangladesh Bank; *MD is responsible to carry on the banking business as well as run the operation of the bank</td>
</tr>
<tr>
<td><strong>MD/CEO</strong></td>
</tr>
<tr>
<td>*Legally speaking MD is independent from the Board except board’s goal and ambition as far as operating the bank is concerned; *Chairman gets involve in all major decision making process; *BoDs hardly listen to the MD in case of any business policy decision</td>
</tr>
<tr>
<td><strong>Head of Credit</strong></td>
</tr>
<tr>
<td>*Chairman and MD are always separate persons; *Any proposed regular investment memo will be approved or not mostly depend on Chairman, *MD is somehow strictly compelled to cooperate with Chairman’s personal agenda</td>
</tr>
<tr>
<td><strong>Regulator</strong></td>
</tr>
<tr>
<td>*Chairman is the guardian of the BoDs and supervise the overall long term policy of bank; *MD is appointed by the bank proposal with the approval of the Bangladesh Bank; *Chairman and MD’s roles are well separated as per related laws</td>
</tr>
</tbody>
</table>

The issues about *Board Composition* consists the number of directors, directors expertise and experience, composition of non-executive, executive and independent directors, requirement of quorum, directors’ retirement and rotation. The responses are as follows:

<table>
<thead>
<tr>
<th>VII. Board Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director</strong></td>
</tr>
<tr>
<td>*Maximum members of the BoDs are 20; *A person can be a director of any bank for two consecutive terms each of them can be of maximum 3 years and thereby for total 6 years; *Maximum 3 independent directors shall be there out of 20 directors</td>
</tr>
<tr>
<td><strong>MD/CEO</strong></td>
</tr>
<tr>
<td>*BoDs is comprised with maximum 20 members including 3 independent directors; *Maximum 2 persons from one family can be the members of board of directors; *MD is an ex-officio member of the BoDs and he is the only executive director in the board</td>
</tr>
<tr>
<td><strong>Head of Credit</strong></td>
</tr>
<tr>
<td>*Generally BoDs retire after two tenure, i.e. after 6 years; *Independent Directors are not the shareholders and Chairman of the Audit Committee has to be an Independent Director; *Board is usually a Chairman’s show</td>
</tr>
<tr>
<td><strong>Regulator</strong></td>
</tr>
<tr>
<td>*Board is comprised with shareholder Director, Independent Director and MD who is an executive; *It is mandatory that Board has Executive Committee, Audit Committee and Risk Committee; *Board Members are of 10 years experienced</td>
</tr>
</tbody>
</table>

The issue regarding *Board Compensation* concerns to compensate directors like sitting fees, professional fees, reimbursement and any other benefits provided individually or the board as a whole for the time and effort required to complete their duties well. This is especially important to nurture professional directors. The responses are as follows:
The issues regarding **Board Agenda** include input and comments on agenda items like annual operating plans and different budgets, manpower, quarterly results, internal audit reports, materially important show cause/demand/prosecution notices, fatal or serious accidents, default interest or principal on deposit/secured creditor/financial institution, joint venture or collaboration agreement, recruitment/remuneration of senior officers and labour issues and proposed resolution. The responses are as follows:

<table>
<thead>
<tr>
<th><strong>IX. Board Agenda</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director</strong></td>
</tr>
<tr>
<td>*Agenda are generally circulated before the meeting except the miscellaneous items; *Chairman has got influential role in decision making process; *Loan related matters are mostly resolved by executive committee.</td>
</tr>
<tr>
<td><strong>MD/CEO</strong></td>
</tr>
<tr>
<td>*Board Meetings are held with different Agenda prepared by the Board Secretary under the instructions of the Chairman; *BoDs do not provide equal feedback or add value in the board meeting; *All agenda are discussed in summary or in detail and chairman is the decisive authority; *On Agenda of technicality, BoDs rely on the expertise of the MD</td>
</tr>
<tr>
<td><strong>Head of Credit</strong></td>
</tr>
<tr>
<td>*Loan proposal are placed before the Board’s Executive Committee as Agenda; *Management and Credit Department are always in uncertainty as to the approval loans; *Agenda are not always scrutinised meticulously hence short-sighted decisions are taken.</td>
</tr>
<tr>
<td><strong>Regulator</strong></td>
</tr>
<tr>
<td>*Board Meetings are always held with Agenda; *Proceedings of Meetings of the BoDs are guided by the related rules and laws; *Issues to be decided by the BoDs as per banking laws are taken as Agenda and circulated before the board meetings.</td>
</tr>
</tbody>
</table>
challenge and changes in accounting policies; approve appointment and removal of internal auditor; assess independence and objectivity of external auditors, their qualifications, expertise, resources and effectiveness; review and approve annual audit plan. *Remuneration Committee* deals with the compensation to the BoDs and *Nomination Committee* oversees the process for nomination to the board and committees. Responses on the issues are as follows:

**X. Committees (Type, Structure, Responsibilities)**

<table>
<thead>
<tr>
<th>Position</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>*Mainly Three Committees, i.e. Executive Committee (EC), Audit Committee, Risk Committee; *Roles and Responsibilities, i.e. terms of reference of each committee are guided by banking laws; *Audit Committee Chair is an Independent Director</td>
</tr>
<tr>
<td>MD/CEO</td>
<td>*Board Committees are the integral part of the BoDs; *EC Committee supervises loans and other advancements; *Audit and Risk Committees are there to work in a specified terms of reference; *BoDs time to time may form different other committees on need basis on specific terms</td>
</tr>
<tr>
<td>Head of Credit</td>
<td>*Board supervises the bank management through committees; *EC Committee is very powerful and gives day to day decision to the management; *Risk committee addresses risk pertaining to the banking business</td>
</tr>
<tr>
<td>Regulator</td>
<td>*Board functions through its main three committees, EC, Audit and Risk Committee; *Banking law has defined the structure and responsibility of those committees; *Without the support from the management, committees cannot function diligently and efficiently</td>
</tr>
</tbody>
</table>

*Directors’ Report* is the document of communication between shareholders and the BoDs includes explanation of results; CCG compliance and/or non-compliance; deviations from IAS; current market value of the company; strategy and future prospects; material risk factors and uncertainties; ownership structure disclosing shareholders owning more than 5% of shares; loans to directors; details of investments; report on the relatives of directors as employees or members of the board and shareholdings; director remuneration; attendance of board meetings; legal actions against/by the company; donations; employees’ benefit plans; contingencies etc. The responses regarding the issue are as follows:

**XI. Directors’ Report**

<table>
<thead>
<tr>
<th>Position</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>*Directors report is published before Annual General Meeting; *Reports includes banks investment and advances be those funded or non-funded; *Information on all ups and downs of the banks journey in the any specified year before the AGM</td>
</tr>
<tr>
<td>MD/CEO</td>
<td>*Directors report addresses issues of banks major involvements including Financial Performance, Loans and Advances, Compliance, Products and Services, Capital Adequacy Under Basel II, Risk Management, Foreign Exchange Reserve and remittance, CG, Human Resources, CSR, Dividend, Audit, etc; *Reports are detail and supported with facts and figures; *Management prepares the report in the name of Directors Report and send to the Chairman to sign</td>
</tr>
<tr>
<td>Head of Credit</td>
<td>*Directors Reports prepared to portray a good and progressive image of the bank; *Irregularities, misconducts and ethical issues are often suppressed; *Reports never explain how they artificially calculate the operating profit concealing the bad debt and showing them rescheduled debt</td>
</tr>
<tr>
<td>Regulator</td>
<td>*Directors reports is the communication between the BoDs to shareholders and other stakeholders; *Shareholders get the complete picture from the Directors’ Report; *Reports are detail and mention all corners of banks’ involvement</td>
</tr>
</tbody>
</table>
The issues about Code of Conduct refer detailing directors’ roles, responsibilities, and duties which is reviewed and agreed every year. The board should also create Codes of Conduct for Management and Employees which should be signed and agreed as a condition of the contract of employment. The responses are as follows:

<table>
<thead>
<tr>
<th>XII. Code of Conduct</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director</strong></td>
</tr>
<tr>
<td>*Code of Conduct for directors is well regulated by the BB’s related Guidelines; *Directors’ Duties, Responsibilities and Accountability are mentioned in specific terms; *Board formulates the standard of code of conduct for the Management and Employees aligning with the BB’s related guidelines and rules</td>
</tr>
<tr>
<td><strong>MD/CEO</strong></td>
</tr>
<tr>
<td>*Directors never follow code of conduct rather they function and run in their very personal way; *Though Bangladesh Bank formulated Rules and Guidelines for the Directors but they use their absolute control from the board to the management so that not a single investment, supply chain and human resources related issues are done without directors’ involvement</td>
</tr>
<tr>
<td><strong>Head of Credit</strong></td>
</tr>
<tr>
<td>*BoDs follow little code of conduct; *Directors are eager to follow code of conduct for the management and employees rather than for themselves; *Directors Code of Conduct are well governed but require proper implementation as it lacks enforcement and adequate sanction</td>
</tr>
<tr>
<td><strong>Regulator</strong></td>
</tr>
<tr>
<td>*BB publishes elaborated guidelines and rules for directors and MD; *There are some examples where BB gives sanction for any deviation from the Code of Conduct</td>
</tr>
</tbody>
</table>

The issues about Company Secretary/Compliance Officer state that companies should employ a qualified Company Secretary or other qualified Compliance Officer to advise senior management and the board. They should provide advice on internal controls and keep annual record of the company’s compliance/non-compliance and in the event of non-compliance explanations are sought for the record from the board. The responses are as follows:

<table>
<thead>
<tr>
<th>XIII. Company Secretary/Compliance Officer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Directors</strong></td>
</tr>
<tr>
<td>*Both Secretary and Compliance Officer positions are there in the bank; *Banks’ Secretary mostly look after the affairs related to the Board, RISC, Shareholders, etc; *Compliance Head is responsible to ensure that the organisation is compliant with internal and external laws and rules; *BoDs receive little advise from company secretary and compliance officer due to their obligatory feeling towards the board</td>
</tr>
<tr>
<td><strong>MDs/CEOs</strong></td>
</tr>
<tr>
<td>*Company Secretary is more or less dependent on the BoDs and hardly does have capacity to advise them on point of concerns; *Rarely company secretary brings some important issue to board attention in a gentle way; *Compliance Officer is something ornamental and they require continuous whipping to do adequate work to ensure good CG; *More training would enhance the quality and capacity of these two important roles</td>
</tr>
<tr>
<td><strong>Head of Credits</strong></td>
</tr>
<tr>
<td>*Role of Company Secretary and Compliance Officer is huge in promoting good CG; *Compliance Officer’s activities are sometimes more visible than the Secretary; *Company Secretary deals with external stakeholders and hence can campaign for good CG; *Compliance Officer needs to be placed in a business process so that his vetting may be required proactively and reactively before taking any exposure; *Ultimately all depends on the BoDs who can empower these two posts and make the banks’ CG stronger</td>
</tr>
<tr>
<td><strong>Regulators</strong></td>
</tr>
<tr>
<td>*Law defines the roles and responsibility of both company secretary and compliance officer; *Sometimes employees in the management and down the line suffer lack of confidence when they talk and meet with BoDs that should be changed from both sides; *BoDs should encourage and live by example so that compliance officer and company secretary get strengths to advise them to uphold good CG</td>
</tr>
</tbody>
</table>
The issues regarding *Access to Senior Management, Outside/Professional Advice* refer that the board may seek or invite senior management positions, employees, other non-directors or outside professionals to board meetings for access information deemed appropriate or necessary to effectively deliberate on decisions. The MD/CEO shall be informed of all requests for information put to management. The responses regarding this issue as follows:

<table>
<thead>
<tr>
<th>XIV. Access to Senior Management, Outside/Professional Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director</strong></td>
</tr>
<tr>
<td><em>Board consult with senior management of the bank when it needs any technical or factual information in deciding any point;</em> <em>Sometimes, legal advisor from outside the bank is invited in the board meeting to have some legal advice on serious legal issues;</em> <em>It is almost a practice of banking sector that Deputy MDs and CFOs are present to elaborate on any point of concern in Board Meetings</em></td>
</tr>
<tr>
<td><strong>MD/CEO</strong></td>
</tr>
<tr>
<td><em>Board prefer to hear from MD about all field level and technical information;</em> <em>Board rarely invite outsider in the Board Meeting to have clarification or guidance to resolve any relevant issue;</em> <em>Head of Investment / Credit Wing is usually present in every Board Meeting by invitation</em></td>
</tr>
<tr>
<td><strong>Head of Credit</strong></td>
</tr>
<tr>
<td><em>Sometimes Board invites Head of Credit in the Board Meeting to clarify the bank’s position on proposed investment;</em> <em>Board hardly give chance to the invitee to justify any proposed memo rather board goes on as per its preconceived notion;</em> <em>Sometimes, board imposes their idea in resolving any agenda / proposal though the senior management advise otherwise</em></td>
</tr>
<tr>
<td><strong>Regulator</strong></td>
</tr>
<tr>
<td><em>There is no bar inviting senior management or outside in the Board Meeting.</em> <em>Recently, law made it mandatory that all banks shall have maximum three independent director in the board;</em> <em>Independent Directors would be any technical and experienced person</em></td>
</tr>
</tbody>
</table>

The issues regarding *Evaluation of Board Performance* state that the board should evaluate its own performance, both collectively and individually including the performance of the chairman to ensure it is operating effectively and adjust its constitution and policies accordingly. Boards may also consider using an independent outsider to conduct an external evaluation of the board and its performance to make recommendations based on its evaluation. Responses in this matter are as follows:

<table>
<thead>
<tr>
<th>XV. Evaluation of Board Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Directors</strong></td>
</tr>
<tr>
<td><em>Board evaluates its performance by its own initiative;</em> <em>Board has to be complied with the rules and regulations of applicable laws;</em> <em>Almost every year at AGM new director is appointed and retiring directors leave the board. In doing so there is an automatic evaluation of performance</em></td>
</tr>
<tr>
<td><strong>MDs/CEOs</strong></td>
</tr>
<tr>
<td><em>Its rare Board reviews its own performance;</em> <em>Rather, the pulse is Board is always right;</em> <em>Board never rely on external person to evaluates its performance</em></td>
</tr>
<tr>
<td><strong>Head of Credits</strong></td>
</tr>
<tr>
<td><em>Board is habituated evaluating others not themselves;</em> <em>Board collectively revise its strategy in dealing with management and senior management</em></td>
</tr>
<tr>
<td><strong>Regulators</strong></td>
</tr>
<tr>
<td><em>BB’s guidelines are self-contained and directors performance are automatically reviewed and checked by each other’s actions;</em> <em>Committees of the Board is designed in such a way so that one committee is checked and reviewed by other committee’s work</em></td>
</tr>
</tbody>
</table>
b. Role of Shareholders

This section of the CCG applies primarily to public companies to comply with all legal and regulatory requirements. Regulatory bodies have the mandate to uphold the rights of shareholders while shareholders themselves have a responsibility to advocate good CG practices in accordance with international best practice. However, most shareholders are not aware of their rights or how to exercise them and often misunderstand their function as shareholders, focusing instead on the corollary benefits of share ownership (such as attending the AGM in a nice location) rather than the substance of company management. In Bangladesh, a major problem affecting relations between shareholders, BoDs and management is the disruption and control of AGMs by a few, organised individuals. Besides voting procedures are difficult to follow or do not account for multiple shareholdings result in disenfranchisement of shareholders\(^{170}\).

There are three subcategories where the first issue is *Shareholders’ Handbook* that educates and informs shareholders about basic requirement for listed companies because shareholders do not know or understand their rights and responsibilities.

<table>
<thead>
<tr>
<th><strong>Shareholders’ Handbook</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director</strong></td>
</tr>
<tr>
<td><em>All vital information are stated in the Annual Report for shareholders;</em></td>
</tr>
<tr>
<td><em>Annual Report contains all relevant information about risk and revenue of the bank;</em></td>
</tr>
<tr>
<td><em>Shareholders other than directors are continuously taken care by the share department of the bank</em></td>
</tr>
<tr>
<td><strong>MD/CEO</strong></td>
</tr>
<tr>
<td><em>Directors are very much in touch with the Board and assert some kind of direct ownership;</em></td>
</tr>
<tr>
<td><em>Annual Reports are there as a shareholders’ handbook to inform and educate about the rights and responsibilities of the shareholders;</em></td>
</tr>
<tr>
<td><em>As a listed company bank gives disclosure to the stock exchanges about price sensitive information</em></td>
</tr>
<tr>
<td><strong>Head of Credit</strong></td>
</tr>
<tr>
<td><em>General shareholders are simple and general people who hardly go through shareholders’ handbook;</em></td>
</tr>
<tr>
<td><em>Shareholders hardly look at annual reports rather they go by perception</em></td>
</tr>
<tr>
<td><strong>Regulator</strong></td>
</tr>
<tr>
<td><em>Shareholders Handbook is very helpful for the shareholder to learn and educate about their rights and responsibilities;</em></td>
</tr>
<tr>
<td><em>It is not largely circulated and available among the shareholders rather they are provided with the annual report of the bank</em></td>
</tr>
</tbody>
</table>

The issues relating to *General Meetings* consider that the general meetings are the primary source for communication between shareholders, management and the BoDs when they receive information about company resolutions, decisions and operations where the outcome and proceedings are recorded and verifiable. The responses are as follows:

\(^{170}\) Role of Shareholders includes 3 issues.
The issues relating to Voting Rights and Duties stated that within a class of shares, all shareholders should have the same voting rights. To enfranchise and facilitate voting by shareholders, proxy voting rules should be simple and easy to follow. Restrictions on appointing proxies should be withdrawn or reduced to widen the participation at AGMs. The responses in this regard are follows:

### III. Voting Rights and Duties

<table>
<thead>
<tr>
<th>Role</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>*All shareholders are equal to vote at poll; *In AGM or EGM, proxy form is sent with the notice of that meeting so that shareholder’s attendance may be secured by proxy even</td>
</tr>
<tr>
<td>MD/CEO</td>
<td>*General shareholders are minority but they have adequate awareness about their voting rights; *Different Classes of shares are no longer in place for banking companies; *All shares have same voting and preference rights</td>
</tr>
<tr>
<td>Head of Credit</td>
<td>*Directors are elected by the vote of the shareholders; *Proxy is allowed for attend in General meeting and for giving votes</td>
</tr>
<tr>
<td>Regulator</td>
<td>*All shareholders enjoy equal right to vote in AGM or other General Meetings; *There is no different class / category of shares</td>
</tr>
</tbody>
</table>

### c. Financial Reporting, Auditing & Non-Financial Disclosures

Financial reporting and disclosures\(^{171}\) provide the tools by which stakeholders can monitor and evaluate an organisation’s CG practices. In Bangladesh, the main hurdle to overcome is to improve the quality and reputability of financial statements and disclosures which is a joint

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\(^{171}\) The issue covers five areas of concern.
undertaking of the regulators and organisations’ themselves. Accounting and auditing scandals in recent years have shown how important this profession is to safeguard investor funds and ensure transparency. Without reform, the corporate sector in Bangladesh may be heading towards such disasters.

There are five subcategories where the first issue is Accounting Standards that consider companies’ accounts should conform and implement with all Bangladesh Accounting Standards (BAS). Companies that are striving to conform to international standards should prepare and have their accounts audited to conform to full International Accounting Standards (IAS) to ensure accurate and reliable financial reporting. The second subcategory is Preparation of Accounts that concerns companies’ must employ qualified personnel with professional accounting qualifications with at least five years of experience to prepare financial statements and accounts. The Balance Sheet and Profit and Loss Statement should be reviewed and signed off by the Board Chairman, MD/CEO and Chief Financial Officer (CFO) and the Chairman of the Audit Committee to certify that accounts reflect a true and fair picture, conform with BAS, no post balance sheet events or off-balance sheet items, assets are safeguarded, expenses incurred company’s business, no material information has been omitted. The responses on those two issues are as follows:

<table>
<thead>
<tr>
<th>I. Accounting Standards &amp; II. Preparation of Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director</strong></td>
</tr>
<tr>
<td>*Banks are bound to follow the published guidelines for Accounts preparation; *As Banks are listed in the stock exchanges, they are more focused to maintain Bangladeshi and International Accounting Standards aligning with the Rules, Regulations, Guidelines and Circulars of BB; *Accounts are prepared by a highly skilled and experienced Accounts Team of the bank; *Internal Auditor audits the account diligently</td>
</tr>
<tr>
<td><strong>MD/CEO</strong></td>
</tr>
<tr>
<td>*Bangladeshi Accounting Standards are followed by Banks; *International Accounting Standards requires further compliance that is beyond the requirement of the BB; *Banks are striving to implement BASEL II; *Accounts are prepared by an experienced team; *Accounts are audited internally and externally; *Audit Committee of the BoDs certify the account of the bank</td>
</tr>
<tr>
<td><strong>Head of Credit</strong></td>
</tr>
<tr>
<td>*Sometimes noncompliance as to the operations and business is seen in the Accounts of the Bank. However, it does not mean that the said Account is prepared in violation of the applicable Accounting Standard; *Bangladesh Accounting Standard is followed by the Banks; *Sometimes figures are manipulated for good evil; *In respect of window dressing of accounts, both management and board speak in the same language.</td>
</tr>
<tr>
<td><strong>Regulator</strong></td>
</tr>
<tr>
<td>*Banks are required to follow Banking Laws for its all activities including preparing their Accounts; *Banks are working hard towards building up capacity maintain international standards; *BB is very strict in ensuring the compliance at Accounts Preparatory stage; *Accounts are prepared following Bangladesh Accounting Standard; however, BB always come across complaints from unknown sources regarding accounts manipulations.</td>
</tr>
</tbody>
</table>

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172 Companies should comply with the standards like Deferred Tax, Revenue, Effects of changes in foreign exchange rates, Borrowing Costs, Accounting for Investment, Consolidated Financial Statements, Disclosures in financial statements of banks, Interim Financial Reporting etc.
Issues’ regarding *External Auditors* considers that external auditors should be independent, well-qualified and free of conflicts of interest; appointed by the shareholders prior the AGM. Audit firms or partners are to be rotated at least every three years and should not be engaged in accounting or non-audit consulting in enterprises and should not hold shares in companies they audit. The responses are as follows:

### III. External Auditors

<table>
<thead>
<tr>
<th>Role</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>*External Auditors are appointed and confirmed in Annual General Meeting; *Only Auditor with strong experience gets appointment from any Bank; *Audit by external Auditors are impartial and correct; *External auditors pay structure is low compared to the neighbouring countries.</td>
</tr>
<tr>
<td>MD/CEO</td>
<td>*External Auditors are usually appointed for 3 years by the Resolution in AGM; *External Auditors rarely find anomalies and non-compliance in Banking as they are usually briefed by the Board of Directors to look at their personal interest; *External Auditors are more interested to please the BoDs to have positive reference in order to get future works in different Enterprises.</td>
</tr>
<tr>
<td>Head of Credit</td>
<td>*External auditors are close and know the BoDs; *External Auditors are somehow work under pressure and afraid of finding anomalies and non-compliance in sanctioning credit facilities to clients; *External Auditors are more focused on administrative anomalies in accounting than actual fault in accounts.</td>
</tr>
<tr>
<td>Regulator</td>
<td>*Appointment and Functions of External Auditors are defined by rules and laws; *External Auditors are there to maintain check and balance in Banking; *External Auditors are independent</td>
</tr>
</tbody>
</table>

Issues relating to *Internal Audit* concerns that all listed companies must have an internal audit function within the organisation and be independent from management, with direct access to the Board of Directors and the Audit Committee. The internal audit department should have a letter from the board or chairman of the audit committee giving it the authority to access any records in any location at any time. The responses are as follows:

### IV. Internal Audit

<table>
<thead>
<tr>
<th>Role</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>*Internal Audit team is the main watch dog in the banking organisation; *Internal Audit team is very powerful and can go to any level to ensure Accounts are maintaining rightly; *Internal Audit Team Reports to the Chairman of The Audit Committee of the Board</td>
</tr>
<tr>
<td>MD/CEO</td>
<td>*Internal Audit team is the main force to ensure transparency and accountability in the Account; *Internal Audit team scrutinize accounts to ensure compliance; *Audit committee receives the internal audit report and risk management covering credit risk, operational risks, including money laundering risks, market and liquidity risk; *Structural adjustment is needed; *Eg: separate risk management department. Again internal control system needs to be streamlined; *Internal Audit team never finds anything that goes against the personal interest of the BoDs</td>
</tr>
<tr>
<td>Head of Credit</td>
<td>*Internal Audit Team is sincere and dedicated to ensure Accounting Standard which sometimes impeded due to high officials interference; * Does Branch Audit and finds anomalies in sanctioning; *Banks do not have the appropriate manpower for the implementation and execution of guidelines</td>
</tr>
<tr>
<td>Regulator</td>
<td>*Internal Audit Team does the primary and big task of auditing PCB’s Accounts; *Internal Audit plays important role ensuring Accounting Standard; *Internal Audit Team doesn’t report to the BB rather they report to the Audit Committee Chair of the BoDs of their concerned bank.</td>
</tr>
</tbody>
</table>
The issue regarding *Disclosures* discusses the topics that the BoDs should present a balanced assessment of the company’s position and prospects those are understood by shareholders. It is needed to disclose about the Ownership structure - BoDs shareholding and any changes therein, report on the relatives of directors as employees or members of the board and their shareholdings, directors’ remuneration, meeting attendance, directors loans, information on related party transactions; Accounting and Financial - funds raised from the public, any material contractual agreements, contingent liabilities, new creditors and details of material loans, credit rating, details of investments, sensitive accounting policies and basis of estimates used in financial reporting. However, in the following section that is **Sector-Specific Provisions: Financial Institutions** also contains components regarding “Disclosure”. The responses are provided in that section because it includes the general as well as sector specific reflection of thoughts of the respondents.

**d. Sector-Specific Provisions: Financial Institutions**

This section of the Code applied to all banks and is specifically addressed due to their unique position as the lifeblood of any economy. The health of banks and public confidence are necessary to sustain and expand economic activity, as FIs form an essential link in the chain of national economic development. The BB has the statutory power to regulate commercial banks to reduce systemic risk and the moral suasion to encourage high standards of probity and competitiveness, while commercial banks require following good risk management systems to achieve high standards of CG through the application of differential banking facilities. Besides, banks are beneficiaries, fiduciaries and managers of “other people’s money” and as such have a unique responsibility to uphold the highest standards of CG.

For banks, **Duties to Depositors and Customers** refer to safeguard depositors’ funds with highest standards of care and due diligence in assessing and monitoring risk (credit, interest rate, operational, political etc). Information should be provided to depositors, customers and the public to adequately judge the strength and health of the bank and whether its directors and managers are adequately safeguarding depositors’ funds and should have system for handling customer complaints. The responses in this regard are as follows:
For banks, issues related to **Disclosures** refer to providing transparent and comprehensive disclosures to stakeholders which includes type and percent of capital relative to credit exposures; credit rating; exposure concentration on individual, groups or industries; maturity grouping of assets-liabilities; information on market risk; related parties affiliation; Code of CSR; systems for handling complaints; conflicts of interest with directors or senior managers; Board structure, Senior management structure; incentive structure (remuneration, executive compensation, bonuses, stock options). The responses are as follows:

### I. Duties to Depositors and Customers

| Directors | *Banks now a days are more service oriented organisation; *Bank cares highest standard of care towards the loans and advances so that Depositors’ interest are protected; *Customers are at the focal point of banking services and hence duties to the customers are highly maintained. |
| MDs/CEOs | *This is the most important duty of bank; *Comprehensive feasibilities and CRG followed before giving loan from depositors money; *To be more customer service oriented, many value added services are being introduced and thereby banks are being more competitive |
| Head of Credits | *Duty of care to the depositors and customers are the most priority to the credit department; *Hundred percent safety is ensured before dealing with depositors money; *Risk is rigorously assessed and customer service is designed accordingly |
| Regulators | *Banking Rules and Regulations clearly articulates duties towards depositors and customers; *Banks are being more proactive to brand for their service as the sector is more competitive; *Customer service adding more value to attract new customers |

### II. Disclosures

| Director | *Bank maintains policies and rules relating to disclosure; *Annual report contains directors report and account disclosing all relevant facts and figures and Specific Disclosure are published in public domain; *Shareholders guide is also helpful as a disclosing instruments; *Sometimes, it is difficult to take decision by the Board members as Memos prepared by the management lack of clarity and information |
| MD/CEO | *Annual report discloses about ownership, loans and advances, accounts, etc; *Directors report discloses matters related to board and governance; *As a listed company PCBs are bound to disclose all price sensitive information through Stock Exchange; *Most of the price sensitive information, such as, capital base, assets and liabilities, affiliation, new initiatives, CSR, Bad Debt are disclosed; *OBS are not disclosed properly; *Depends on the Board’s influence with Regulators, directors do not disclose matter that goes against their interest |
| Head of Credit | *Disclosure is not properly maintained; *Most of the big loans are sanctioned in favour of businessmen connected to directors; *Annual Report deals with minimum disclosure required by law; *There are few bad debts those are not disclosed as classified as the BoDs don’t label them as classified that might impact the banks status; *Credit Rating is disclosed in the industry by the BB and Banks regularly report the Credit Rating of their Clients to BB; *Laws are there to maintain proper disclosure but not followed properly |
| Regulator | *Banks are under duty to Disclose on issues required by law; *As a listed company bank also gives disclosure on price sensitive information; *Credit Ratings are to be disclosed to BB by all Banks regularly; *Balance Sheet has to be published as per standard; *Receive lot of complains about the corruption and unethical practises by BoDs and the top management of the bank; Unethical practise mainly takes places in areas like; loan disbursement, employee employment, foreign travel, use of bank’s asset for personal purpose |
For Banks, issues related **Board of Directors** consider their functions; fit, proper and competent test; directors’ essential financial competency and recognized professional or management experience; training for directors with non-financial specialties; role of the Audit Committee; role of an Executive Committee with particular emphasis on major loan approvals, debt restructuring and risk management. The responses are as follows:

### III. Board of Directors

<table>
<thead>
<tr>
<th>Role</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>*Directors are highly qualified businessmen and comply with directors guideline and fit and proper test; *Directors participate in Board Activities through different Board Committee and Board Meetings; *After amendment now BoDs are comprised with 20 members where maximum 3 members can be independent Directors; *According to new law, only independent director can be the chairman of Audit Committee.</td>
</tr>
<tr>
<td>MD/CEO</td>
<td>*BoDs are the deciding body of any important and big issues concerning bank; *Most of the Directors are just businessmen without having banking technical knowledge; *Chairman is the super authority and supersedes any decision; *Family dominancy is apparent though law says there cannot be more than two directors in one bank from one family.</td>
</tr>
<tr>
<td>Head of Credit</td>
<td>*BoDs are less concerned about the technicality of loan and advances; *Directors influence Loan sanctioning process heavily; *Classified Loans are maximum those loans disbursed at directors influenced; MDs are officio members of the Board who places different memo's in the board and reply questions asked by the Directors; *MD’s are little valued in decision making process where Chairman exercises most of the power in Bank's Board ultimately; *From Senior Management to the down level corporate structure and business process are defined but sometimes, some senior management personnel are appointed or promoted by influence of member of the BoDs; *Privileged employees always try to be loyal to close Board Member and sometimes get involved with organisational politics.</td>
</tr>
<tr>
<td>Regulator</td>
<td>*BoDs are constituted as per the Banking Laws and Companies Act; *Directors are the major stakeholders in Banks and hence very much concerned about the development of their Banks; *Directors are appointed once they are qualified as per Companies and Bank Companies Act and Fit and Proper Test; *According to the new amendment only two persons from a same family are eligible to become directors of a bank.</td>
</tr>
</tbody>
</table>

For banks, **Credit Assessment and Asset Monitoring** consider matters like borrowers’ business plan and strategy for the funds borrowed, isolation of credit assessment and loan approval process, personal conflicts of interest and political influence, training of personnel assigned to Credit Risk Management functions and methods of loan authorization and allowing lending limits. Besides, **Debt Recovery** means there needs a separation of personnel and reporting responsibility between loan origination/marketing, credit approval, transaction processing and loan recovery. The responses are as follows:
For banks, **Risk Management** refer that CG arrangements should include systems and procedures to identify, monitor and manage business risks where staff have assigned responsibility for risk management systems and training should be provided. It is a part of the responsibilities of all senior management and directors. The responses are as follows:

### IV. Credit Assessment and Asset Monitoring & V. Debt Recovery

| **Director** | *All financing are done by thorough Credit Assessment, Asset Monitoring and Feasibility Test; *Information Manual is verified before placing to the Board for approval; *Debt Recovery is good in recent years as organised team is there to follow up recovery; *Management is required to provide report on recovery to the Board on regular basis. |
| **MD/CEO** | *Each and Every Proposal are supported with feasibility study and practically verified; *Sometimes, due to directors pressure and influence management compromise with professional standard of verification and assessment before granting loan; *There are designated unit for debt recovery and separate external professional credit recovery agency; *Bank’s Legal and Recovery Department is huge and constantly work towards recovery. |
| **Head of Credit** | *Banks independently assess risk pertaining to each and every loan proposal besides professional Credit Rating; *Non-funded financing are sometimes relaxed and can expose to unascertained risk; *Diligent scrutiny and proposal level helps for later recovery; *Personnel and units are well organised for Debt Recovery; *Policy and Process relating to Credit Assessment and Asset monitoring is manual but workable; *Credit Department with full dedication ensure compliance with applicable laws and requirements; *Debt recover team is organised but problems arises due to court intervention. |
| **Regulator** | *Compliance standard is higher than any other neighbouring countries with respect of Credit Assessment and Asset Monitoring; *Bangladesh Bank’s CIB report is must before considering loan sanction from any Bank; *CRG is defined; *Bank focus on recovery before and after classification of the bad debt; *There are internal recovery unit and external professional debt collection agency. |

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### VI. Risk Management

| **Directors** | *There is a separate Risk Committee and Risk Department to work on risk; *Different training and awareness programmes are conducted on risk; *Prime duty of the board is to minimize different kinds of risks of the bank; *Sometimes, management does not provide the true picture of the different risk scenario and when the Board knows about that, it already is too late and damage has already been done. |
| **MDs/CEOs** | *BB is recently put greater emphasising on Risk Management; *Designated Risk Officers are there to identify and address risk; *Trainings are organised and carried on regularly; *Though the Board is overall responsible to manage the core risk; however, Management Committee deals with different types of risk associated with day to day operations. |
| **Head of Credits** | *Risk management team performs routine job description; *Training and awareness programmes are not adequate for managing risks; *BoDs needs to be more prudent in managing risk; *Recently, lot of reforms have taken place particularly on loan classification and provisions to strengthen Balance Sheet; *Policy reform relating to risk based capital adequacy has tremendous impact on banks capital structure and on lending operation. |
| **Regulators** | *Risk Management Guidelines of 2012 is very comprehensive; *BB takes appropriate measure to ensure that Banks are managing risk properly; *Internal Control and Compliance, Foreign Exchange dealing, Anti Money Laundering etc - all are crucial in managing core risk; *BB issues guidelines for handling risks in effective manner; but, both bank board and top management lacks commitment. |

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For banks, the issues regarding *Corporate Governance Compliance* concerns that banks should have an officer assigned to monitor and report on corporate governance compliance and should make regular reports to the board on the adequacy of corporate governance arrangements. The responses in this regard are as follows:

<table>
<thead>
<tr>
<th>VII. Corporate Governance Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Director</strong></td>
</tr>
<tr>
<td>- BoDs always encourages for best practice in CG Compliance; *Board Functions collectively and through committees, management is clearly organised as per efficient organogramme; External Auditor, Internal Audit, Risk Committee, Internal Control, legal department and many more are there to ensure good CG and compliance; *Overall, management is getting experienced with practising good CG; *Needs young and dynamic employees in management level as their adaptability to the changing circumstances is high</td>
</tr>
<tr>
<td><strong>MD/CEO</strong></td>
</tr>
<tr>
<td>- Sometimes, BoDs are involved in unethical and corrupt practises particularly in loan disbursement and employee employment; <em>Symbiotic Relation</em> exists between the directors of banks; *Directors buy the property of the loan defaulters through legal process at a very low price; *BODs bribe the Central Bank by allowing liberal terms and conditions for loan, offering free foreign trips, sending valuable gifts in different occasions etc. that the high officials remain one eye closed while handling any complaint against them; *Forward distribution of loan: Loan is given to political people/ relation/friends without due process by influencing and persuading the management; *Loans are given to third party to purchase the property of directors at exorbitant rate despite the property is sited on a disputed land and a remote area from the locality; *Sometimes loan is given to regulator, senior bureaucrat and higher up the government official to please them without due compliance; *The moral values and ethical principle of the BODs are not strong in the banking sector of Bangladesh</td>
</tr>
<tr>
<td><strong>Head of Credit</strong></td>
</tr>
<tr>
<td>- Most of the BoDs are corrupt, greedy and self-concerned with low moral integrity; *Due to pressure and persuasion of influential BOD, it needed to provide loan to the relatives or friends of the directors without due processing; *Improper documentations are sometimes intentionally done so that in future when defaulted, it cannot be recorded through legal process; *Inadequate overvaluation of securities is very common for Mortgaged security which is intentionally overvalued by managing the agent; *Sometimes loans are disbursed in favour of political people due to power politics; *Top management is captive in the grip of the Board and sometimes misuses power; *Senior Management suffers from organisational politics and are very conservative to adopt changes and reforms; *It is vital to know the big clients closely where the investment wing head plays vital role for exploring the possibility of investment; *Unethical practise mainly takes places in areas like: loan disbursement, employee employment, foreign travel, use of bank’s asset for personal purpose, spending in inappropriate heads, etc; *Violation of bank laws/rules is very common in Bangladesh</td>
</tr>
<tr>
<td><strong>Regulator</strong></td>
</tr>
<tr>
<td>- The BB monitors PCBs activities thoroughly; *BB promotes good governance and encourage bankers by Award for best practice; *Strong steps are taken for non-compliance; *Reforms are being made and now its result time; *Need to wait to see how much impact these reforms are making; *CEO and seinier management is very slow in implementing different reforms particularly those which brings them under accountability structure; *CEO and other senior executives are very much involved in organizational politics which hinders the growth and smooth operations of the bank; *BB receives many 'Benami' letters about irregularities and unethical practises of bank management and upon investigation, those found merit in the alleged allegations</td>
</tr>
</tbody>
</table>
PART II: Efficiency of PCBs in Bangladesh

This section is based on the finding of Chapter-3 which measured Revenue Efficiency of the Bangladesh PCBs from 2001-2012. Results of the chapter revealed a significant gap in revenue efficiency among different generation’s conventional PCBs during the stipulated period. Using the bootstrap DEA, it is also found with that the revenue efficiency of 2nd and 3rd Gen PCBs are identical whereas it is different from Gen 1 banks. It also found that there exists a positive relationship with size and revenue efficiency. In the banking sector of Bangladesh, the Gen 1 banks are the biggest in terms of size despite they are revenue inefficacy. Furthermore, the ranking based on Revenue Efficiency of the conventional PCBs changed every year. The plausible responses of different stakeholders are provided below:

| Performance of Revenue Efficiency of 1st, 2nd and 3rd Generation PCBs |
|--------------------------|--------------------------|--------------------------|
| Director                 | Generation 1              | Generation 2              | Generation 3              |
|                         | *Could not manage the board and management effectively and efficiently as lacked experience and expertise. *During incorporation, 1st Gen PCBs were new and had no benchmark to follow whereas 2nd and 3rd Gen PCBs could learn a lot from 1st Gen PCBs; *Over the years, cleaning up of the accumulated losses of the past is still happening; *Till now 1st Gen PCBs are fighting age-old default loan cases in the court; *Lacked competition as they were the first in the industry. | *Incorporation of 1st Gen PCBs board, management and regulator all to accumulate loss outauded system and inefficient manpower is concerned; *Heavily lacked operational efficiency in early ages; *In some 1st Gen bank classified loan increased alarmingly as high as 30% and levelled as problem bank by the regulators; *Observer was appointed to sit in the board to control; *Competition increased after the incorporation of 2nd Gen PCBs which boosted efficiency. | *2nd and 3rd Gen banks are in better position compared to 1st Gen banks as they accumulated loss outauded system and inefficient manpower is concerned; *1st Gen PCBs management were inexperienced in processing loan proposals; *New banking law made 2nd and 3rd more compliant and efficient; *3rd Gen PCBs incorporated and operated in a competitive market environment that compelled to be dynamic and forward thinking. |
| MD/CEO                   | *1st Gen PCBs initially operated in relax environment, there were very loose monitoring and control system by the regularity authority; *Employees of 1st Gen PCBs were hired from NCBs who were enough experienced but less dynamic in terms of attracting clients; *1st Gen PCBs enjoyed the first movers advantage because of their early start; *They have large number of clients and more branches compared to 2nd and 3rd Gen PCBs; *In relative sense, earning of the 1st Gen PCBs are poor compared to 2nd and 3rd Gen PCBs in spite of having bigger size in terms of number of branches and clients; *Historically 1st Gen PCBs have more classified loan compared to 2nd and 3rd Gen PCBs requiring 1st Gen PCBs to maintain more provision; *Revenue efficiency of banks does not follow any pattern over time and is very much dependent on provisioning and business cycle | *The sponsor and the management of 1st Gen PCBs did not have much experience and expertise about the operation and management while the scenario was different after fifteen years in case of 2nd and 3rd Gen PCBs which impacted on the revenue efficiency; *All executives and officers of 1st Gen PCBs were recruited from NCBs who had traditional and bureaucratic mentality while 2nd and 3rd Gen PCBs started with smart, forward looking and dynamic bank executives; *Size of the bank, particularly, in terms of number of branches does not have any correlation with the revenue efficiency of the bank; *As accounts are manipulated and the records do not reveal true picture, the PCBs ranking on revenue efficiency is unreliable and meaningless; *The pattern of PCBs revenue efficiency is inconsistency because the among of provision that are direct charges which kept against operating profit. | *Internal control system, risk management structure and other mechanism was initially absent in case of 1st Gen PCBs while the situation improves substantially in setting up PCBs in last 90’s; *1st Gen PCBs formed with inexperienced board and weak management team which has some lingering effect even today; *Initially, inexperience increased the cost of doing business for 1st Gen PCBs and also increased the percentage of classified loan which accumulated over the years and considered a major drawback to generate revenue which is relatively low for 2nd and 3rd Gen PCBs; *There might have some kind of pattern in ranking of PCBs based on operating profits, however, if pre-tax or post tax profit is considered, the pattern revenue efficiency may not show consistency because provisions are direct charges which kept against operating profit. |
### PART III: Profitability of PCBs in Bangladesh

The questionnaires for this section are based on the finding of **Chapter-4** which measured the profitability of all (includes conventional, Islamic and state owned) 34 commercial banks in Bangladesh from 2001 till 2012. This section provides the causal relations of those major findings and the opinions of different stakeholders are noted. It explores areas like banking concentration and market power, the influence of management efficiency on profitability derived from **Chapter-3**, the status and causes of NPL in the light of CG and ownership structure, influence of family dominance on operational and management process etc. most importantly, it will explores the rationale of the profitability gap that exist between 1\textsuperscript{st} Gen PCBs with 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs from CG and BoDs’ perspective. The reasons are explained here:

<p>| Head of Credit | 1\textsuperscript{st} Gen PCBs, being first PCBs had to go through trial and error which had implication on cost and revenue; | Relative poor performance of the 1\textsuperscript{st} Gen PCBs in term of revenue efficiency is mainly caused by higher number of employee per branch, high percentage of classified loan, low productivity of employees measured in terms of per employee deposit, advance, earning, etc.; 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs were better positioned in terms of board, management and different operating system; The management system of 1\textsuperscript{st} Gen PCBs is not dynamic, bureaucratic in nature, not open for transformation and restructuring and working environment is not friendly; The financial exposure or loan given to different sectors varies significantly from bank to bank and depending on the performance of that sector revenue generation and PCBs efficiency ranking varies. | Change in the board as well as change in key personnel in top management affects revenue efficiency of the bank resulting inconsistency in revenue generation and ranking of PCBs over the years; 1\textsuperscript{st} Gen PCBs should have a clear understanding and proper public commitments from the Chairman and MD that the “old” ways of working are not acceptable and the journey towards a “new” system and structure is badly needed by the transformation of organizational culture and mindset; 1\textsuperscript{st} Gen PCBs failed to understand the changing market dynamics and implement CG properly because of that 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs are resulting better revenue efficiency compared to 1\textsuperscript{st} Gen PCBs |
| Regulator | The earning pattern of 1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs are different over the years; Sector-specific performance of the economy determines the revenue performance of PCBs which makes some banks to do better in terms of revenue generation compared to other banks depending on the sector specific exposure; While issuing the 1\textsuperscript{st} Gen PCBs license, BE’s activities was not sophisticated enough to check the profiles of sponsors which created a inexperienced, in terms of banking, 1\textsuperscript{st} Gen BoDs; Due to time gap of incorporation the 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs became experience from the mistakes of 1\textsuperscript{st} Gen PCBs; Bank Companies Act, 1991 compelled 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs to implement several rules from the time to incorporation which made them compliant that directly influence on revenue efficiency; BE rates banks depending on 6 variables where it has seen most of the 2\textsuperscript{nd} and 3\textsuperscript{rd} Gen PCBs scored better and 1\textsuperscript{st} Gen PCBs which automatically eliminate them to set as benchmark |</p>
<table>
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<tr>
<th>Performance of Profitability of 1st, 2nd and 3rd Generation PCBs</th>
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<tr>
<td><strong>Generation 1</strong></td>
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<tr>
<td>Director</td>
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<td>MD/CEO</td>
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<td>*1st Gen PCBs have more classified loan compared to 2nd and 3rd Gen PCBs, they are required to maintain more provision which lowers their profitability; *Management sometimes provide inflated profit figures but the actual profit is low after keeping provisions against bad loans are maintained; *The NPL ratio, employees per branch ratio etc are relatively high in 1st Gen PCB compared with 2nd and 3rd Gen PCBs; *Management is short term focused and have a tendency to defer NPLs to provide high profitability.</td>
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<td>*The board of 1st Gen PCBs are now formed with sponsors directors extended family members; *There is no concentration in the banking sector because no collusive behaviour or price setting to earn monopolistic profit has been observed so far; *Market share is a bank-specific variable and clearly there is a positive relationship between 1st Gen PCBs and higher market share because they enjoyed the first movers advantage; *Banking business is very risky and volatile because of uncontrollable uncertainties inherent to the business thus profit figure sometimes show erratic pattern over the years despite having efficient management. *The percentage of NPL varies from bank to bank as well as from 1st Gen to 2nd Gen to 3rd Gen; *Board always want to see more profit; *Sometimes profit fluctuates while BoDs makes deliberate decision to postpone long-term benefits to achieve short term goal; *Percentage of NPL in 1st Gen PCBs is much higher compared to 2nd and 3rd Gen PCBs because it has been accumulated over the years; *Loan recovery is more impossible which is evident from the aging of pending loan recovery cases where in some cases it extends over decades; *Wilful default is also very common in Bangladesh which is very difficult to handle due to the weak judicial procedure and internal corruption; *Corruption and unethical practices increases the amount of NPL; *Directors buy the property of defaulters through legal process at a very low price.</td>
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<td>*Family members concentration is present in 1st Gen PCBs boards whereas 2nd and 3rd Gen PCBs have business conglomerate concentration in the BoDs; *No concentration exist and no collusive behaviour in setting interest rate is observed to earn monopolistic profit; *1st Gen PCBs have much higher banking share compared to 2nd and 3rd Gen PCBs because they are in operation for a long period of time; *Generally, there is a positive relation between bank profitability and managerial efficiency where 1st Gen PCBs are more traditional in their management style which they inherited long before that lowers their performance; *All banks need to grade their credit risk before lending to ensure quality of lending but the reality is most branch level managers do not understand and can not compute Credit Risk Grading properly; *Board wants to defer classification of loan by rescheduling where in most cases big defaulter cannot pay the down payment required for rescheduling; *NPL leads to classification of loan accounts resulting to keep high provisioning amounting direct charge against profit which means profit is reduced to the extent of provision; *Recovery of NPL is very difficult and time consuming in Bangladesh due to lengthy and cumbersome legal process; *In 1st Gen PCBs, loan is given to third parties to purchase the property of directors at exorbitant rate; *Directors of 1st Gen PCBs enjoyed undue advantages as the law was not stringent prior 1991.</td>
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<tr>
<td>Head of Credit</td>
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<td><em>The board is mainly dominated by few influential sponsor directors, theirs children and/or their designated persons in 1st Gen PCBs whereas at the board of 2nd and 3rd Gen PCBs have a mixture of different types of businessmen;</em></td>
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<td><em>Profit performance and management efficiency of 2nd and 3rd Gen PCBs are relatively better compared to 1st Gen PCBs because they have more supportive, responsive and enlightened board who interfere less in managerial decisions;</em></td>
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<td><em>By the instruction of the BoDs management defer/underestimate the amount of loan provision to show inflated profit by manipulating accounts and rescheduling the defaulted loan;</em></td>
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<td><em>Bank sometimes provide additional fund to the big loan defaulter to pay the rescheduling amount because the sudden shock will be difficult to adjust with the profit;</em></td>
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<td><em>In most of the banks, for handling NPL there is a department titled Law and Recovery department but this department cannot work properly due to the pressure of the influential directors which also increases the cost of doing business and affects profitability;</em></td>
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<td><em>Loans go bad because of improper documentation by the branch and overlooking attitude by the top management and the Board -</em></td>
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<tr>
<td><em>BoDs of 1st Gen PCBs have huge family dominance in the board and are formed with sponsor directors, their extended family members and their ploy persons which is often observed in 2nd and 3rd Gen PCBs as they are more compliant;</em></td>
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<tr>
<td><em>One of the most important benchmarking factors on banks profitability is the NPL ratio where the higher values indicate that the PCB is under stress caused by loans that are not paying as scheduled where the NPL ratio is relatively high in 1st Gen PCBs compared with 2nd and 3rd Gen PCBs;</em></td>
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<tr>
<td><em>In terms of number of clients, branches, total asset, deposits etc. 1st Gen PCBs hold a major market share;</em></td>
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<td><em>Reciprocal relationship is one of the main reasons for higher percentage of NPL which happens between the directors of two banks when director ‘X’ bank gives loan to directors of ‘Y’ bank while ‘Y’ bank directors reciprocate;</em></td>
</tr>
<tr>
<td><em>MD does favouritism within his capacity to some employees and clients due to his any kind of relationship with them which increases overhead costs and sometimes NPL;</em></td>
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<tr>
<td><em>Most of the 1st Gen PCBs violate the BB rule of case of forming their BoDs where they have more than 2 directors from one family to hold their directorship which is different from 2nd and 3rd Gen PCBs;</em></td>
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5.4.2 Analysis of Responses

This section addresses two research propositions using the data obtained from the semi-structured interviews on Directors, MDs/CEOs, Heads of Credit and Regulators who have direct influence on the CG practices of banks in Bangladesh. The analysis of their responses are also divided into two section based on the research propositions. In the first section, it exhibits the causes of non compliance of banking CG in Bangladesh under present situation identifying the factors that hinder the proper implementation of the CCG in the conventional PCBs. And in the second section, it identifies few factors those differentiate the performance in terms of efficiency and profitability of 1st Gen with 2nd and 3rd Gen PCBs. Also, some examples and sensitive verbatim quotations from the interviewees are provided where necessary to present their strong opinion and feeling about the research matter.

a. Ineffective CG Implementation - Causes and Consequence

From the responses of the interviewees of the diverse interest groups few factors can be generalized to describe the present causes of non compliance of the Codes of Corporate Governance (CCG) and its lingering effects in the conventional Private Commercial Banks in Bangladesh. Combining the responses of the interviewees, in the following part, identified factors are analysed.

i. Power and Political Pressure in Loan Sanctioning

Influential board members, confrontational politics and politicized bureaucrats create a substantial impediment in the process of sanctioning loans in the banking sector of Bangladesh. Normally, the influential directors or their nominated persons are the chairman of the Executive Committees in the commercial banks under whose jurisdiction loans are sanctioned. Per a Managing Director of Gen 2 Bank –

“Directors treat the bank as their family property and does all to abuse their position for their personal gain rather looking at general shareholders’ interest”
It is also clear from the responses of the MDs and the Heads of Credit that they work in a confined environment where they have less autonomy and can not consent against the decision of the Boards. Almost all loans are sanctioned according to the inclination of the directors rather prioritising the merit of the proposal. In this regard, Heads of Credit of a Gen 1 Bank stated that -

“Sometimes, I feel that we are like monkeys ... get the instruction from above and act upon that ... no site visiting, no evaluation of proposal, not checking the compliance issues, do not worry about collateral given or not... just follow the order and send the memo to the board quickly”

As a response to that, a Director of Gen 3 Bank said –

“My board does not allow any kind of favouritism in case of loan sanctioning and loan rescheduling. It’s not my money I am dealing with rather I am holding a huge responsibility of all the shareholders of the bank by investing their deposits in the most potential areas.”

Regarding the power and political pressure in loan sanctioning opposing responses came up from the interviewees where the Directors’ group remains on one side and the MDs and Heads of Credit on the other side. The Regulator group remained neutral about this matter and provided general answers without taking any sides. But regulators agreed with MDs that “Board Members are practically representatives of influential sponsor shareholders ... law is there to regulate ... however, little they do comply”

Some interesting reasons that came out of the interviews that influential directors and politically affiliated people take loan from the bank. One of Gen 1 bank’s Head of Credit said that “they take loans in another person’s name who does not belong under the ‘family definition’ of directors”\(^\text{173}\). After the loan is being sanctioned the money eventually credited to the respective directors account and in majority cases these loan turns into a bad debt. An example is provided by the MD that the board approved loans of BDT 160 million for purchasing ships and withdrawn through four pay orders; however, the money is later ended up into a director’s son’s account in another bank.

\(^\text{173}\) There are restrictions for directors to take loan from their own bank.
Another reason provided by one of Gen 2 bank’s Head of Credit is that “they receive a percentage of commission of the total amount of loan when the money is disbursed”. Another way of swaying credit facility is to lien an underprivileged property and to withdraw an inflated value. Another example is provided by an MD that a loan of BDT 250 million is given to third party to purchase a property in a slum of a Gen 1 director at exorbitant rate. In this regard, the MD of a Gen 2 bank said that

“... sometimes on personal agenda Directors use Banks ... we hardly could do anything against such abuses other than sitting like a zombie...”

On the other hand, respondents named many newspapers\textsuperscript{174} where articles are published showing the nexus between the Board of the commercial banks and the political parties, while one needs funds to run political activities or for personal agenda and the other demands undue privileges in return. In this regard, one of the Gen 1 bank’s MD stated that –

“My whole board supports the ruling party. BB is in the Chairman’s pocket. What can I do ...nothing basically ... I am just counting the days of my retirement.”

Due to all these power pressures from influential directors and politically affiliated persons, big loans to directors and/or political leaders and/or their nominated persons are turning into bad debts; loans are not sanctioned on time and in most cases genuine beneficiaries are deprived from loan facilities.

Sometimes, the loan is sanctioned for one purpose the loan money is used for another purpose. As shame and remorse, it is also found from one participant that corruption in sanctioning loan spread to a wider sphere of in the banking sector. Because the Board allows unhealthy practices, in certain cases, the banks’ employees’ also indulge in corrupt practices and openly demand for bribes to process the loan application or to disburse money.

\section*{ii. Insider Trading\textsuperscript{175}}

In Bangladesh, almost all commercial banks have their membership\textsuperscript{176} in the Dhaka Stock Exchange and Chittagong Stock Exchange. Though these stock exchanges enlisted members are separate entity; however, they are the sister concerns or brokerage subsidiary of the respective banks and the BoDs have full control over their investments and portfolios. As the BoDs and their extended family members are the bulk and major shareholders of the banks in most of the cases, they have stronger incentives to monitor the share price movement. According to one of the \textbf{Head of Credit} of a \textbf{Gen 2} banks “\textit{directors artificially controls the share price by inflating or deflating them time to time for their personal gains}”.

This concern is also supported by the MDs of all three generations. They said that the share department is accountable to the Executive Committee (EC) for its performance. Thus, the interested directors of the EC always became aware of the portfolio composition of the affiliated brokerage house. On this note, the \textbf{Managing Director} of a \textbf{Gen 1} bank said that-

“…every morning \textit{(Brokerage House In-Charge’s name) calls Sir (EC Chair) and asks what to buy and what to sell and how much. Most of the time, I even don’t know what he (Brokerage House In-Charge) is buying or selling ...in spite the fact, I am the MD..!!!!... If he (Brokerage House In-Charge) needs fund, only then I get a call...and I am just a rubberstamp to sanction the said amount for the share department}”

In Bangladesh, all most all banks’ directors’ are financially excessive solvent, possess different kinds of business and do have substantial investment in the stock market. A BoDs and his or her family members’ can not buy/sell or transfer share of the respective company where he or she a director without declaration to the SEC and to the DSE. On top of that, if a director involves in any bulk transaction of his or her stipulated company’s share then it gives a signal to the market. Thus, to avoid the hassle that they opt to buy shares in the name of

\textsuperscript{175} \textbf{Insider trading} is the trading of a public company's stock or other securities by individuals with access to non-public information about the company. The term actually includes both legal and illegal conduct. The legal version is when corporate insiders—officers, directors and employees—buy and sell stock in their own companies and report their trades to the SEC. Illegal insider trading refers to buying or selling a security, in breach of a fiduciary duty or other relationship of trust and confidence, while in possession of material, non-public information about the security.

\textsuperscript{176} Out of 23 conventional Commercial banks, 22 of them; out of 7 Islamic Commercial banks, 3 of them and out of 4 state owned Commercial banks, 1 of them have membership in Dhaka Stock Exchange.
those who are beyond the family definition and in some extreme cases “they buy shares in the names of their drivers, maids, genitors and gardeners”, reported by the Managing Director of a Gen 3 bank.

They also urged that these bank affiliated brokerage houses allow margins (which sometimes cross the limit) for the relatives of the directors to buy shares in disguise, if the bank expects any positive trend in the near future. Regulators are aware of this fact and most of the cases impose financial penalty. In this regard, one of the Regulators said that -

“...it’s a pity that directors seek undue favour from us and in return they offer expensive gifts; free Nepal or Bangkok trip...I admit, we all are not saints...sometimes some of us fall into this money or honey trap...but it’s also true that we take all necessary action if there is any gross violation... just on that day, BSEC fined (name of a brokerage house affiliated with a Gen 1 bank) Tk10 lakh for violating the margin loan rules by providing more loans to a BSEC executive director’s wife to buy shares…”177

According to some of the respondents, it is easy for the BoDs to materialize the sensitive information prior to earnings announcements. Because other corporate insiders have less leeway to maximize them as it requires huge investment to trade in bulk quantity to manipulate the market. Also, the corporate insiders provide tips about the future trend to their relatives and well-wishes. In this regard, a Head of Credit of a Gen 1 bank said that -

“Our stock market is not that sophisticated and efficient. So, inside information are always remain available to the board and sometimes to the MD, particularly regarding cash dividend, bonus share, issuance of right share, cases to be rescheduled and written off. They capitalise these information for their own benefits.”

It is interesting that Directors of all three generations claimed that “…all directors are from rich business background, they work for free for the interest of the shareholders.” They showed more interest on their other business affairs rather than trading stocks because they

think for trading shares in the stock market is the job of the investment banker. As per a **Director** of a Gen 3 bank -

“As Director of a bank we are fiduciary bound to protect the best interest of shareholders and depositors. We always try to discharge our duty as a director with utmost sincerity.”

In short, there exist low transparency, weak regulatory impediment and poor minority shareholder protection in the banking sector of Bangladesh. This increases the informational asymmetries between corporate insiders and the capital market which opens up the scope for insider trading and creates a large impact on stock market.

**iii. Board Remuneration and Management Compensation**

Board Remuneration and Management Compensation is a highly contentious area of debate in corporate governance because this package contributes to a culture of wrong-doing by the board members and excessive risk-taking attitude of the management. Regarding management compensation, a **Director** of a Gen 3 bank said that –

“Compensation is a key factor for attracting and keeping the best employees in an increasingly competitive market ... They need to be adequately compensated for their time, effort, skills and knowledge...Otherwise, dissatisfaction can lead to absenteeism, turnover, low performance ... and in extreme cases strikes and grievances”

All Directors and Regulators are aware of the fact that banking sector is highly competitive where all banks are striving to capture a large portion of market share by creating new products and/or delivering superior service to attract and retain customers. Therefore, every bank needs highly motivated and dedicated work force that will go above and beyond their job descriptions to ensure customer satisfaction where compensation structure plays the main role in keeping them motivated and loyal to the organization.

However, in Bangladeshi commercial banks, there is no formal Remuneration Committee to set the compensation package for the BoDs and the Management. Normally, the Human Resource (HR) Department determines the pay structure and other benefits for the Deputy
Managing Director (DMD) and down the line employees depending on the standard practise in the sector which varies from bank to bank. But, the compensation package for the Managing Director (MD) and the Additional Managing Director (AMD) is set by the Board depending on the basis of negotiation and later ratified by the Bangladesh Bank. Recently, Bangladesh Bank has tightened the conditions for rise in salary of the MDs/CEOs while they urged that “MDs/CEOs of banks would not be entitled to pay hike unless the key indicators and CAMELS rating improve”. Regarding the compensation package of MDs, one of the Regulators said that -

“MDs will not be given a salary he asks for ... it has to be consistent with what other MDs of other banks are receiving ... besides, financial condition of the bank, his qualification, past successes, age and experiences shall also be considered”

In practice, the compensation package of the MDs contains both direct and indirect compensation in form of base pay, house rent allowance, medical allowance, conveyance, festival bonus, gratuity and other fringe benefits. “Sometimes, MDs abuse their freedom by making foreign trips in the name of expansion of business overseas ... every month they fly in the business class and intentionally prolong their stay” said a Director of a Gen 2 bank. As profit sharing or stock options are not considered as a normal practice, they may not bother about the long term performance of banks. But, Deputy Managing Director (DMD) and down the line employees sometimes receive performance bonus and merit based payment due to their good performances besides the base package.

On the other hand, BB does not define the quantum of remuneration that should be awarded to the board members. On this note, the MD of a Gen 1 bank said that “…it’s the shareholders’ rights of having access to the information ... knowing the process of electing directors, approving their remuneration ... informing before any related party transactions ...”. In reality, the remuneration of the BoDs is an internal arrangement which varies from bank to bank. The Chairman of the bank does not receive any fixed salary except the logistic supports provided by the bank like separate office, personal secretary and a vehicle. Like MDs, they also take advantage of the bank by going to foreign pleasure trips with family in the name of ‘meeting the foreign delicates for business expansion’ travelling into first class. Moreover,
after conducting the Executive Committee Meeting, Audit Committee Meeting or Board Meeting they receive a minimal token amount of money as a form of honoraria.

A Head of Credit of a Gen 1 bank added that –

“...our directors are very generous...happy with a nominal remuneration for attending meetings where they sanction loans of million of taka...they don’t need remuneration or salary like us because they directly get incentives or indirectly receive benefits from those loans they sanction...”

In the banking sector of Bangladesh, the salary structure is not high enough according to the workload of the employees which discourages them to work hard. Most of the time payment hikes are made on the basis of seniority and favouritism which increases the turnover rate. In order to attract and retain competent employees, commercial banks must adjust their compensation policies by shifting from relation-based to merit-based compensation structure for which banks require information about the employees’ performance and efficient performance appraisal regularly. Moreover, it is truly the shareholders’ right to know the Executive and the Non Executive Directors’ remuneration package which remained vague in the annual reports of commercial banks in Bangladesh.

iv. Lack of Auditors’ Independence

All commercial banks in Bangladesh have internal audit committee178 and external auditors to monitor that banking activities are performing in a compliant manner. With a minimum of 3 directors, the internal audit committees are chaired by an independent director who should be a financial expert possessing either professional qualification or experience in preparing, auditing, analyzing or evaluating financial statements. On the other hand, the external auditors are appointed by the BoDs in the AGMs who attest the validity of the half yearly and the annual reports of the banks prepared by the management.

178 Formation of audit committee is made compulsory by Bangladesh Bank and SEC for all banks to constitute with a minimum of three members and it will hold at least three meetings in a year.
Preliminary, the management prepares the financial reports which are presented to the audit committee to ratify. “As constitution of audit committee is mandatory for banks, every bank has it in existence but their effectiveness is merely in accountable” - commented an MD of a Gen 1 bank. The management also thinks that impact of audit committee independence and banks’ performance does not have any relationship because directors are not enlighten enough to understand the effect of abnormal accruals in the long run. Moreover, “…they are the root cause of making NPL and we need to manipulate accounts to hide their deeds... by their instructions” urged a Head of Credit of a Gen 3 bank.

Regulator also agreed with the management that audit committees work as an additional control mechanism to ensure that the shareholders’ interests are being safeguarded by reviewing the financial reporting process, the internal control system and management of financial risks, the audit process, conflicts of interest, infringement of laws etc. In the banking sector of Bangladesh, though the chair of the audit committee is an Independent Director; but, serves the purpose of the influential directors as s/he is nominated by the BoDs. A Regulator in this regard urged that –

“... where the top (board) is polluted and shallow ... there, expecting a true and fair reporting of financial statement is mere a day-dream ... it became a practice that banks are misstating their profits in the financial statements and external auditors are also certifying those as ‘true and fair’…”

Internal management is handmaiden to the directors of the audit committee; however, the external auditors are also not free from their grip. In practice, external auditors in the banking sector of Bangladesh are initially selected by the BoDs and the MDs; later, the shareholders ‘appoint’ the auditor merely by putting a ‘rubber stamp’ at the AGM. The appointed auditor tends to negotiate any accounting disputes with management with the approval of the BoDs and come to a decision in line with their wishes, even if it is not consistent with auditors’ own belief. “External auditors are not considered as ‘independent’ or sufficiently qualified to attest the validity of the financial statements of banks” – commented a Head of Credit of a Gen 2 bank.
Besides, the threat of litigation against external auditors for their misconduct and regulatory penalties are practically absent in the banking sector. Moreover, when they are threatened to lose a client due to any strong resistance against the BoDs desire, they got encouraged to forgo their independency. In this regard a Head of Credit of Gen 3 bank said that -

“... there is no formal mechanism to evaluate auditors’ performance. Instead of serving the general shareholders, external auditors are more interested to please the Board for enhancement of audit fees and extension of tenures before the AGM...”

“The audit quality in Bangladesh is challenged mainly by low audit fees because it is extremely poor compared with the neighboring countries” – stated by a Director of a Gen 3 bank. Regulators also urged that audit profession is losing its lustre and independency because consultancy services sometimes override the attestation services because to survive auditors are engaging themselves in other non-audit service. They added that Bangladesh Securities and Exchange Commission (BSEC) issued a CG order in 2006 that prohibited auditors to provide non-audit services such as appraisal or valuation services, financial information systems design, book keeping services, actuarial services, internal audit services.

Other respondents also agreed that a low audit fee creates impact on the governance standards as it forces auditors to compromise their ethics and independence at the cost of the audit quality. Besides, some of the members of the Institute of Chartered Accountants Bangladesh (ICAB) misuse their power and do not monitor the process of auditing properly; despite they hold the legal responsibility to monitor audit quality of commercial banks in Bangladesh. In short, the CG in the banking sector has seriously questioned about the independence of the audit committee and the external auditor appointed by the commercial banks. Due to the lack of auditors’ independence and poor audit quality, manipulation of accounts remains ignored, overlooked and intentionally or unintentionally uncovered.

v. Large Scale Institutional Corruption and Lack of Ethics

In the banking sector of Bangladesh, institutional corruption is systemic and endemic in nature (evidence are provided in previous sections) and is directly connected with politics and power pressure within the banks. According to several respondents, in this sector institutional
corruptions are seen to be sponsored by insiders and sometimes indirectly by outsiders that cause scandals and administrative malfeasance. One of the Regulators urged that “...our banking sector faces many forms of institutional corruption... the most common form is pecuniary bribes... and it goes up to abuse of authority, nepotism, favoritism, fraud, patronage etc. etc...”. Respondents also believe that lack of ethics has infused the banking corruption and today it has become an inherited culture in the banking sector in general.

The respondents seem unclear about the concept of ‘right way of doing business’ as there is no direct standard in practice and the standard of ethics appears to vary from person to person. The outsiders, particularly the politicians and the bureaucrats, are not directly involved in the corruption process rather they involve the insiders, the BoDs and the top level executives, to fulfill their objectives. Politicians of the ruling parties with collaboration of influential businessmen of the society are setting up banks, regarding which one of the Regulators said that “…the commercial banks are not being able to work independently because all of them are given licenses on political consideration; thus, they are obliged to the political parties and need to cater their demands...”.

Management also added that the inference and abuse of authority of the BoDs are spread into the banks’ regular activities like loan disbursement, branch establishment, purchase decision, selection and recruitment of employees and corporate social responsibility (CSR). They seemed concerned and frustrated about the situations of the commercial banks because continuation of these abuses of power will create banking instability and clients’ deposits would pose to risk. According to them, it is nepotism that makes the directors believe that they have the inherited right to enjoy free ride within the bank. One of the MDs of Gen 3 bank said that –

“...in the name of CSR, our directors sanctioned money for the development of their personal organizations or build leisure cottages in their village... leased out their personal property to bank at very unreasonable price, sanctioned millions of loan in the name of different person nominated...”

In response to that directors believe that involvement of directors, being prominent businessmen in the country, in loan approval process is a very balancing safeguard to any
potential bad loan because directors already get field information about the business nature of any big client. Notwithstanding, question of integrity and ethics find very strong substances when it is found that directors, take all possible benefit from bank using or abusing their positions. In this regard, a Director of a Gen 2 bank boldly mentioned that -

“we hold significant percentage of banks shares and we all are successful tycoon in our respective fields....in a small country, like Bangladesh, it is natural and an unavoidable reality, that we are somehow connected with the businessman who are also bank’s clients... if someone portrays that a client who gets his loans from the bank is connected with any specific director, will be wrong and misjudged…”

It also came up from the respondents that in the commercial banks, the relatives or close persons of the BoDs and other high officials have been given appointments without considering the eligibility of the candidates. One of the Heads of Credit of a Gen 1 bank gave examples that as per rule, a job seeker with 3rd class cannot apply for the post of an officer, but the authorities hired that employee because he is a distant relative of one of the BoDs. “...all rules and regulations are applicable to general people but not applicable to the villagers’ of the BoDs or directors’ relatives or the ones who they want...”, he added.

Apart from violating the rules and regulations, relevant authorities also take bribes for offering jobs in different post. However, depending on the post and location of posting the amount of bribe varies. Promotions, lucrative postings and other benefits are often based on relationship and political affiliation rather than merit. Regulators and BoDs are also aware of this issue whereas the media and daily newspapers widely exposed all these kind of institutional corruption related to kinship. One of the Directors of Gen 3 bank said that

\[179\] There are several other examples who holds 2nd class by now working in different commercial banks E.g - an employee, Syed Mehedi Hasan, has been recruited and is now working in Barisal branch; another employee, Rangalal Bala, with a similar result is now working in the bank’s principal branch; Atiqur Rahman also falls in the same category and works at the Barisal branch.

\[180\] Examples of bribery to get jobs in the banks - seeking anonymity, an employee said that he got the job in exchange of a bribe. Another employee paid BDT 200,000 for getting the job in the post of a junior officer but he paid only BDT 35,000 and thus he was not given the post he wanted. Similarly, another employee working in Khulna branch said he got the job paying a bribe of BDT 200,000.

\[181\] Example of kinships and name of the newspapers are provided in the previous sections.
“…we heard rumors that employee alleged of being pressurized by our management to pay bribe... this is just an attempt to dim the esteem of our management and our reputation...no real truth in it... ... we (the BoDs) are allowed to appoint 2 employees every year with our discretion...”

Discrimination of power is an old story that is also observed in the banking sector of Bangladesh starting from setting up a bank till delivering services to the clients. The most common form of institutional corruption counts of recruiting less qualified persons without any advertisement allegedly in exchange of bribe by the authorities. On the other hand, the extreme case is to sanction loans to politicians, bureaucrats and the BoDs without sufficient collaterals and proper documentations. From the responses and examples it is evident that this sector has a dearth of honest and ethical educated people where institutional corruption is endemic; however, that does not mean that everyone in the banking sector is corrupt. Regulators are hopeful that even among this entire corrupt environment ethical people will be vocal to stop institutional corruptions which may not be eliminated in one day but surely reduced by proper knowledge, concern, awareness and pressure from other stakeholders and particularly by the media.

vi. Lack of Transparency in Financial Reporting

Bank transparency has several aspects; however, the basic but the most important aspect for ensuring effective market discipline is the issue of openness and disclosure of information about the financial health of the bank in the reports. In reality, starting from day-to-day banking activities and regular management operations to preparation of financial report are not transparent and very much debatable in the banking sector of Bangladesh. In this regard, on of the Regulators said that -

“... particularly in the area of banking, good regulations can’t always ensure success. This is very much dependent on the integrity and accuracy of all the parties involved in the process; especially, the persons responsible for the preparation and verification of financial reports.”

\(^{182}\) Example is provided in the footnotes.

\(^{183}\) Market discipline means that the entity has stakeholders from the private sector, who may suffer a financial loss as a result of the decision of that body, and who can “discipline” bank or affect its activities.
Regulators also conferred that there are different regulatory agencies to perform periodic examinations of the banks that consist of a comprehensive review of six components\textsuperscript{184} of a bank’s financial conditions. Banks are assigned a score for each component and a composite rating, known as CAMELS ratings, is given that ranges from 1 through 5 where 1 indicating the highest rating. If the examination reveals serious weaknesses then regulators take formal administrative actions by providing specific instructions that contains both governance provisions requiring changes in board and management and operation practice provisions regarding the reserve and loan loss provision. However, the regulators most of the time can not take strong step because “... the BoDs bribe the Central Bank ... so that the high officials remain one eye closed while handling any complains against them” stated the Head of Credit of a Gen 2 bank.

According to all Heads of Credit, not only the high official of the Bangladesh Bank but also the internal and external auditors of the commercial banks are handmaiden of the board. Because of their relationship, they manage the certificate from the external auditors regarding compliance of corporate governance that is annexed with the directors’ report and is distributed annually to all the shareholders and to the Stock Exchanges. They added that this lower information quality creates greater uncertainty about investment by the shareholders and lending decisions of management which results in greater risk exposure for the banks. Heads of Credit are also aware of the importance of having a high quality accounting system because greater transparency facilitates the decision making and internal monitoring of a bank’s loan portfolio by managers and its BoDs.

However, sometimes they need to prepare and send memos to the board with improper and false documentations which are intentionally done so that in future when defaulted, it can not be recorded through legal process. One of the Gen 1 bank’s Head of Credit said that -

“In most of the cases financial statements of are dressed up and cosmeticed. You can compare them with a modern bikini - what they reveal is interesting but what they conceal is vital...”

\textsuperscript{184} Six components are adequacy of capital, quality of assets, capability of management, the quality and level of earnings, adequacy of liquidity, and sensitivity to market risk. The acronym is known as CAMELS.
It is interesting to observe that particularly in respect of window dressing of accounts and financial statements; both MDs and Directors speak in the same language. The MDs intentionally ignore and obscure information and facts those may bring monetary implication in near future. As they are appointed for a 3 years by the Bangladesh Bank with the reference of the BoDs; they predominantly restrain to write off any big amount of bad loans during their tenure because it will affect the overall profitability of the bank for that particular year. For short-term, this policy will artificially inflate the profit figure but in the long-run, bank will end up with a portfolio consists of weaker assets and those non performing loans could be a cause for bank failure. In this regard, a Gen 3 bank’s Head of Credit said -

“In our banking sector, there is rampant violation of rules and regulation by the board members… but hardly reported by the MD to the CB... because they (MDs) perceive that the Board can create many problems ... on top, their (MDs) extension of tenure depends on the Board ... so, they don’t dare to antagonize the board ... though there is a negative attitude towards each other ... but also exists an unholy alliance”

On the other hand, MDs argued that they follow the disclosure aspects mentioned in BASEL accords carefully. They are optimistic that all the mandatory disclosure in the financial reports has shown a high level of compliance and voluntary information such as corporate social disclosure, human resource issues, community issues, client related issues, environmental issues, risk-related voluntary information etc. are in an on going process of perfection. The MD of a Gen 3 bank said that –

“We follow the highest standard of disclosure practice in the sector, especially in mandatory disclosure and have made some progress in voluntary disclosure as well”

Banks’ Directors in Bangladesh, regarding transparency in financial reporting, play a dual role and perform contradictory activities. In one side, they promote business ethics in the Directors’ Report, managers’ conference and even in this interview session. On the other side, they are the one who violate all the rules, manage the external auditors, handle the inspectors of the Bangladesh Bank, grant loans to their nominated parties, instruct the top management about the rescheduling and writing off of their desired loans etc. According to them, it is difficult for Board to supervise the disclosure and transparency issue but the Board does not
compromise with issues those brought in the board by the Managing Director. However, “I personally experienced at different occasions that MD sometimes mislead the Board and does not give full disclosure when needed to serve his hidden agenda” claimed by a Director of a Gen 3 bank. It is also true that all directors are not responsible for the misconduct in financial reporting where a Director of a Gen 2 bank said that –

“...we disclose everything to our valued shareholders because we believe full disclosure help shareholders and other stakeholders to assess bank’s performance. It is also our ethical responsibility to restore credibility and achieve greater acceptance of people by eliminating their misconception.”

In reality, there are few banks in Bangladesh those went through turmoil of sudden drop in profitability and consequently fall in share price. Shareholders uncover the deterioration of the bank’s health when media and regulatory authority intervene and eventually revealed the reason for the problem. Most of the cases, it has observed that the shock came from the issue of non-disclosure of bad loans that remained in the account for years to deceive the shareholders showing fabricated profit.

vii. Inadequate Role of Independent Directors

In 2006, the institution of independent directors has evolved due to a circular of Bangladesh Securities and Exchange Commissions (BSEC) in the banking sector of Bangladesh185. Since then, commercial banks are appointing independent directors as a MUST; however, their role in the Board remained dubious. Basically, the role of independent director is to act as a watchdog of the other directors’ (particularly the block shareholders’) and management’s activities of banks and to protect minority shareholders' interests; but, in reality a Head of Credit of a Gen 1 bank thinks -

“... in our banking sector, the term independent director is itself an oxymoron ... either be a director or be an independent... but not both ...”

185 In Bangladesh, SEC in its notification (Feb20,2006) made it compulsory to appoint at least one-tenth of the total number of company’s board of directors subject to a minimum of one, independent director to enhance core competencies considered relevant in the context of each company.
Shareholders elect the BoDs who formulate strategies and business policies, ensure internal control, monitor, evaluate and compensate the top management to enhance the profitability and effectiveness of the bank where the extent of these activities are checked and balanced by independent directors through regular internal auditing. In this regard, a Director of Gen 2 bank said that

“... normally, we select independent directors who are diligent and are judgemental on the characteristics of the management ... awake of the banking corporate culture to encourage compliance with regulations and ethical behaviour...”

In reality, “... to keep Independent Director in the board is mandatory, that’s why they are there ... not at all concerned about the performance and profitability of the bank ... in fact, how could you expect from an outsider to have full sincerity towards the growth of the bank” commented the MD of a Gen 3 Bank. According to the MDs and the Heads of Credit, the BoDs and managements have financial stake, have far more information and knowledge regarding the affairs of banks; thus, protect their interests vigorously. One of the Regulators added that -

“... independent directors are more specialized than the inside directors to run and monitor banking activities successfully ... aimed to prevent misuse of resources and enhance performance”

On the other hand, most of the times, these Independent Directors does not have proper knowledge about the banking activities and thus can not contribute meaningfully. Rather, they are appointed according to the choice of the BoDs who would always serve their interest best. Almost in all cases it is observed that they are the distant relatives or nominated persons of the influential directors of the board, confirmed by the MDs. In this regard, a Head of Credit of a Gen 1 said -

“...on the other day, our bank appointed the independent director... you would be surprised to know her background ... she did not pass year 10 even, let alone 10 years of experience... ... very beautiful to look at ... ... its all about connection ...”
Independent directors with good business sense, strength of character, dedication and positive attitude are playing a major role in improving corporate governance. Politicians and bureaucrats can become wealthy by corrupt and illegal means whereas business leaders and entrepreneurs have opportunities through innovation, work and business acumen in which independent directors, being the trustees of shareholders’ wealth, play the main role by ensuring that all parties are performing duties as per rules and regulations. Regulators are expecting that after the full incorporation of 2013 amendment of provisions regarding Independent Directors, commercial banks’ accounts will be verified frequently and insightfully. MDs and Heads of Credit are also hopeful to experience some real improvement in the internal processes and controls where auditors will demonstrate more gumption to raise questions on related-party transactions and revenue recognition.

**viii. Lack of Training**

In the banking sector, the concept and need of training requirement varies and is different for the BoDs and the management. As per the laws related to the banking sector in Bangladesh, there is no mandatory requirement for Directors training on how to be compliant in performing duties and responsibilities; however, there are needs for management to be trained up. According to a Regulator -

“… in recent years, training of directors has become a demand of necessity because training on compliance and its rewards and sanction would enhance the good corporate governance and best practices.”

Majority of the respondents transpired that training is perceived to be an essential task for the mid-level employees; not for the top management or the BoDs. It is in practice that all private commercial banks do have their own training academy for their own employees to enlighten about concurrent issues. As a new trend, seldom official are sent for overseas trainings and workshops to acquire specialized skill for a particular banking service. It is obligatory for employees to attain a minimum number of training sessions in a year depending on the requirements and policies of the banks. According to a Head of Credit of a Gen 3 Bank -
“...our training sessions are very effective and meaningful...particularly, foreign experts’ presentations contain such diverse issues which we are not even aware of ... overseas training programmes are also rewarding because we get chance to acquire specialized skills as well as see their banking system and corporate culture closely...”

However, there is no formal guideline published by the Bangladesh Bank regarding directors’ training except the ‘fit and proper’ test. In reality, it is the BoDs who decide the business operations and the destiny of the bank due to their significant influence of power in the banking sector of Bangladesh. As they are the ultimate decision making authority, they are also required to be trained sufficiently. According to an MD of a Gen 1 bank -

“...lack of formal and well-designed training on duties, functions and responsibility as a director are one of the biggest obstacles in dispensing good corporate governance in private commercial banks...”

According to the MDs and Heads of Credit, sometimes it becomes difficult for them to make the BoDs understand about the long term implication or the legal complications of some particular decisions because most of the BoDs are from non-financial/legal backgrounds. “Having formal training on some financial and legal matter would undoubtedly enhance the capability of directors to decide on risk free loan disbursement”, a Head of Credit of Gen 1 bank commented. They also added that in recent times different scandalous reports have been emerged on bad loans approval where the management bears allegation and victimized because they are accused of not explaining the nitty-gritty appropriately. Regarding this concern a Director of a Gen 1 bank said that –

“... in 1 or 2 sessions of training, we of course wont learn everything...even wont have that honed ability to challenge our executive and most importantly, we trust them...”

It is obvious that directors’ training will enhance the Board’s effectiveness and eventually will contribute to the overall success of the banking sector. However, “… they are less concerned about their contribution to the bank rather more interested in personal benefit...” said a Head of Credit of a Gen 2 bank. Obviously, undergoing through a training programme is an intense and tedious task for which BoDs required to have the willingness to commit time and
energy. Moreover, as they do not need to enhance their career prospects as an executive or non-executive director to other institutions, they do not bother for training. In this regard, an MD of a Gen 3 bank said that -

“...our BoDs are experienced businessmen in their own field or hold a reputed position in the society... because they are highly successful they are filled with pride and ego... and not open enough to accept change... to them training means undermining their expertise, experience and social dignity...”

Training should be an integral part and an ongoing process not only for the management but also for the BoDs for developing skills that contribute to the creation of an effective board and enhance banking performance. Thus, commercial banks need to train their strategic thinkers, i.e.: the BoDs alongside the day-to-day operators, i.e.: the management to complement each other for overall benefit by developing mutual competences.

ix. Ineffective Legal and Regulatory Provisions and Enforcement

All respondents’ opinions indicate that there is a big gap between the ideal standard and reality in the legal and regulatory system in Bangladesh and this weak system is the top most challenge for commercial banks. Regulators claimed that the typical agency problems or other existing issues would remain and continue to create impact in the banking CG, if the legal system is strong and effective enough.

In Bangladesh, the banks are basically governed by the Bank Company Act, 1991 where BB provides regular notice, circulars, rules and guidelines according to the provisions of this Act. According to all groups of respondents, the legal provisions are inadequate and ineffective even after the periodic reforms and because of that there are many provisions which have become inappropriate in today’s context. Interviewees also criticized the SEC Guidelines and as a shortcoming a Regulator said that “the SEC Guidelines do not contain any detail on the independent director provisions”.

Besides the inadequacy, the legal provisions in the banking sector are considered to be ineffective to enforce as the political parties have strong nexus with industrialists who
influence any legal amendment process for their own benefit. It is normally seen and happening as a practice since ’90s that all commercial banks are backed by one or more present or ex-parliament members. Sometimes they remain in the Bank’s board; if not, they send their nominated persons to represent. A statement from an MD of a Gen 1 Bank is remarkable to note here that –

“...there is a strong link between the parliamentarians, the influential industrialists and the Board of Banks ... From early 90s this practice established that bank license will be given only to the politically-backed industrialists ... so this trio – the Directors, who are entrepreneurs, who also run the parliament will never make any law that will hamper or restrict their absolute freedom...”

Respondents (MDs and Heads of Credit) also believe that the lack of implementation of legal provisioning and monitoring is another challenging factor for the country. According to them even within the existing drawbacks of the legal system, comparatively better governance could be established if the provisions are properly implemented and compliances are duly monitored. But, in reality, the main regulator of the commercial banks, the Bangladesh Bank is also captive in the grip of these influential directors and politicians because the appointment of the Governor of BB is held by the Ministry of Finance.

Moreover, other high-officials of the BB do not have that much of courage to raise voice against the BoDs who are highly politically patronized. One of the regulators provided an example that there are rules that 2 members from one family can remain in the Board but there are banks where up to 6 members from one family are in the board. Knowingly Bangladesh Bank is silent because the influential BoDs have direct link with the members of the ruling party. In this regard, one of the Gen 2 banks Head of Credit added that -

“instead of ensuring good governance, our legal and regulatory bodies play a dummy role ... especially the BB ... they are the ‘indirect catalyst’ for bad corporate practices in the banks because they cater unethical practices and prevalent corruption ... their sluggish attitude inspires to continue the wrong-doings and illegal activities because it’ll never be caught... even if got caught, can be managed by bribing...”
On top that, the punishment mechanism for gross mistake lacks strength to create pressure to comply with legal provisions. Regulators also agreed and opined that the punishment method is extremely insufficient compared to the crime. They added that the domination of the ‘special nexus’ halt and manipulate the legal implementation process and punishment system at any level; even to the extent that the political parties often makes the legal professionals compromise with their ethics. One of the Regulators believes that “the legal implementation process will not be able to work properly unless it is independent ... made free from the influence of national politics ... and allow to punish the true criminals”.

In response to that, Directors opined that due to the absence of proper monitoring and punishment mechanism by the regulators, many banks are submitting false reports of compliance. To them, following the banking compliance is just a ‘box-ticking’ formalities which carries no value in reality. In this regard, a Director of a Gen 3 bank said that -

"... law imposition without follow-up ... without enforcement ... does not mean anything in reality... many banks in their annual reports state that they are complying with governance provisions ... but ... if you dig in, you’ll find the worst scenarios ... No one cares to check the actual status"

The overall legal system in Bangladesh is perceived to be weak to ensure good CG for banks. Though Bangladesh has a good number of rules and regulations to ensure proper banking CG practice; however, in reality they are routinely flouted due to lack of enforcement by the relevant agencies. Also, regulators lack a competence workforce and enough legal power to dominate over the nexus between the powerful BoDs and politicians. Thus, inadequacy of legislation, absence of timely legal action and weak law enforcement are directly or indirectly encouraging bad corporate governance in the banking sector and its ineffectiveness encourages the wrongdoers to continue their bad practices.

x. Biased CB Surveillance and Lack of Integrity of Watchdogs

Bangladesh Bank being the Central Bank (CB) is the main regulator of the banking sector that oversees the operation in theoretical terms. According to the majority of respondents, the Bangladesh Bank is more interested in giving rules, regulations, guidelines and directives and
sometimes amending those, rather than monitoring the implementation of the compliances whereas they have the full authority to guide and supervise any established or projected practice of commercial banks. One of the **Regulators** provided a neutral statement that -

“… we are very prompt to address any non-compliance related issue that comes to our knowledge from any source …”

In reality, the MDs are the one who should report the CB for any kind of irregularities happening in the Board and based on that the CB steps in. However, the respondents from the management claimed that ‘the high official are bought and carrying the inherited culture of corruption’ because of the overall system of the country is corrupted. They also believe that the alarmingly poor pay structure of the government officials is the cause of creating such culture which force them to accept bribes from the influential people and do unlawful activities for some extra income. Regarding this an MD of the **Gen 2** bank said that -

“…to directors, banks are their personal property... it is the BoDs who define the compliance, not the Central Bank ... the Governor, other high officials -all are in their pocket...no point of complaining against them....”

The essence is that the BoDs are politically and businesswise heavily influential and are united in achieving their personal agenda be it in compliant manner or not. In spite of the fact, the BoDs are well aware of their compliant and non-compliant action, they remained least bothered because they are also aware of that they are more powerful than those governmental offices - the CB or other watchdogs. Ultimately, compliance is defined by the discretion of the BoDs of all commercial bank in reality.

Mainly because of these reasons it is getting common day-by-day that commercial banks are suffering from corruption and non-compliance. Bangladesh Bank’s role is not visible in identifying these issues and there is no effective deterrence from the CB. However, respondents also uphold the fact that sometimes the Bangladesh Bank appoints observer for different problem banks to closely monitor and report their activities. In this regard, a **Head of Credit** of a **Gen 1** bank said –
“… rarely these observers are able to supervise the BoDs and mostly they fail to maintain strict surveillance against any alleged bad practice ... even in their presence, directors not only pick and choose the loan proposal but also dictate us to prepare loan proposals for their chosen specific clients ... ”

Respondents further mentioned about Bangladesh Securities and Exchange Commission (BSEC) also acts as a regulator whereas Credit Rating Agencies Bangladesh (CRAB) and the media play the role of watchdog for corporate governance. As far as commercial banks’ involvements in shares and securities issues, BSEC monitors and provides guidelines.

However, some of the respondents mentioned that BSEC also fails to maintain appropriate surveillance in recent share market scam in 2010. Regarding CRAB, complaint emerged that they produce biased credit reports in favour of the influential parties. Most of the respondents believe that proper enforcement of legal and regulatory power would help these organizations to perform better. In this regard, a Director of a Gen 3 bank said that -

“Our watchdogs are actually toothless because they don’t have guts, lack legal power and necessary funds. Striving for their survivals instead of monitoring others...”

Unlike other watchdog groups, the role of the media was widely appreciated by the all groups of respondents. However, they raised the concern that the print media can sometimes be prejudiced by influential people of the society and do publish unauthenticated reports. An MD of a Gen 1 bank thinks “...sometimes the media is pressurized and bribed to hide the hardcore reality from general public...”. Conversely, they also opined that at the present time privatization of news and electronic media has brought some changes in corporate behaviour.

In totality, lack of legal power is limiting the CB and other watchdogs to perform their activities accurately. Lack of funding is another challenge for continuing the CG related projects. Most importantly, yet not they are capable enough to cope with the pressures given by the disadvantageous groups in the banking sector of Bangladesh. Eventually, it is the commercial banks suffer the most due to non-compliance by the direct and/or indirect influence of the BoDs.
xi. Ineffective Annual General Meeting (AGM)

Interviewees from MD, Heads of Credit and Regulator group strongly criticized the quality of banks’ AGM held in Bangladesh. According to them, due to the absence of substantial pressure from powerful shareholders, institutional shareholders and prudential legal monitoring system, AGMs have become a mere formality and are managed beforehand. Regulators also urged that “there is penalty provisions for not appropriately organizing an AGM but those provisions are old and inadequate to execute in reality”.

All MDs and Heads of Credit agreed on the fact that some kind of prearrangement takes place prior the AGM dates. They also said that the board also sanctions a good amount for the AGM purpose where the money is spent for hiring a venue, publishing the annual report, food and beverage for the shareholders, and miscellaneous purposes. On this note, the one of Gen 1 bank’s Head of Credit said that -

“There are 2 sets of shareholders who attend and participate in the AGM and whom the bank need for their ‘dummy AGM’ to be successful. First group goes there for a ‘biryani packet’ and a cold drink... and the second group participates going up the stage, providing some rubbish speech with full of praise of the board and management... and for this they get money from the fund allocated for AGM purpose... Most importantly this group of people is seen in almost all AGMs and known as ‘AGM Manage Parties’ who hold 10 to 50 shares at max.”

Furthermore, it became evident from the respondent groups that all of them are aware of this ‘AGM Manage Parties’ who are a group of rowdy people hired by all banks to dominate in the AGM, indirectly to support the decisions of the boards and sometimes to create chaos in any kind of disagreement. According to the interviewees these hooligans are neither local terror nor patronized by any political parties, rather they are the people who are unemployed, purchase a minimum amount of shares of many different companies and lead livelihoods by charging commission of attending AGMs. It also came up from the interviews that there are some shareholders who are knowledgeable and expert enough to challenge the board and management but even they do not participate due to the havoc created by those ‘AGM Manage Parties’. In this regard, one of the Regulators commented that -
“The enlightened shareholders do not attend the AGMs because of 2 reasons... firstly, its not worthy for them in terms of time, effort and energy because they know their suggestions will not make any difference... and secondly, these enlightened people are gentleman who don’t want to loose their respects by the abusive words of AGM Manage Parties”

In contrary, Directors’ group thinks that the shareholders are reluctant to attend the AGM because they do not find it worth in terms of their time and energy. According to a Gen 3 bank’s Director –

“We do not discriminate among our shareholders by the number of shareholdings and weight all of them equally. On the day of AGM, we stay in the dais from the beginning till the end to listen to everyone’s complains, suggestions and advices. It’s not our responsibility to invite shareholders personally rather it’s their responsibility to attend in the AGM and to provide constructive feedbacks.”

In reality, the effectiveness of an AGM in Bangladesh is considered to be hampered due to the unethical mindset of banks to pollute and manipulate AGM environment by hiring the AGM Manage Parties to discourage the enlightened shareholders to participate and to prevent regulators from the check and balance practice. Nevertheless, one of the Regulators seems positive about the future because he thinks that “though there are few knowledgeable people participate in AGMs and raise their voices ... if these experts join then it will inspire others and will ensure a successful AGM”.

xii. Lack of Motivation to Comply with the CCG

The banking compliance issues incorporate different stakeholder groups where particular emphasis is bestowed on the Regulators, the BoDs and the management to comply with the CCG. All respondents believe that the specified norms of the CCG are a matter of self-enforceability and endogenous motivation to conform. They strongly feel that there is a lack of motivational forces and incentives need to enhance compliance in the banking sector.
In this regard, the BoDs and managements think that the regulators have a huge role to promote the goodness of being compliant and motivate commercial banks to follow the CCG. One of the Directors of Gen 2 bank claimed that –

“...who will recognize the contribution in CG compliance?... we get tax advantage donating in government fund ... but it will neither bring achievement award nor tax advantage becoming the most compliant bank ... rather being law abide and fully compliant, we’ll welcome further complications ... what’s the point of being so charitable and aware ...

Regulators also explained that there is no official standard for good banking CG in Bangladesh. Some banks are doing well, having a better governance standard and on the other hand some have failed and but so far none of them became bankrupt. Moreover, regulators are willing to provide adequate training and support to the BoDs and the management but do not receive much positive responses. One respondent from the Regulators stated that -

“…one of the major problems that we faced to convince directors about the need for better governance is their lack of motivation to follow any guideline or rules...they think they are the rule maker and rule breaker...

In reality, if a bank wants to be truly compliant then it would have to uncover different hidden issues which might go against its performance and profitability. Moreover, there are some agenda those will directly go against the comfort zone of the BoDs. In this regard, bank executives argued that during the training of bankers at their beginner level, it is taught that there is no option but to be compliant. Learning the same the employees of credit department prepare different loan proposal complying with compliance and place before the BoDs and in response those proposals got rejected due to specific director’s very personal agenda or they do not have any personal interest on such compliant loan proposal. A Head of Credit of Gen 1 bank stated that “there is no ‘comply or explain’ provision for the BoDs”. In contrary, the BoDs accused the management, particularly the Heads of Credit, about their level of ethics and integrity while receive complains. Regarding this a Director of a Gen 3 bank stated -
“...who is 100% compliant these days... starting from the peon to the MD, everyone is after money...our head of credit is the biggest culprit... openly demands bribe to send the memo to the board with dodgy papers...”

On the other hand, management and executives perform the day-to-day operations but are not owners and the overall control of the banks lies with the BoDs. Their salary is not well compensated in consideration to the effort they provide everyday. Besides, they see that BoDs take out millions from the banks through their chosen clients regardless of proper feasibility study. This is the point when management and executive lose their motivation of being law abide and become least bothered about the misuses of compliance. They also know that if any non-compliant issue occurs and is identified by the BB, then the BoDs are influential enough to handle that. On top of that, the bankers’ remuneration is not linked to the CG rather it is more dependent on their performance and risk exposure. It makes them more motivated to generate short-term profits and increase the risk at the cost of long-term sustainability of the bank. One of the MDs of Gen 1 bank said that -

“... is there a reward for me being compliant? ... or any punishment for NOT being compliant .... so, why taking this extra hassle..! ...”

Banks’ executives also stated that they try hard to perform their duties in the right way, believing the values ‘doing things right’. However, all these good deeds become meaningless when they find that the BoDs give promotions to those employees who are not that much compliant rather always kept them busy in satisfying some influential directors of the board compromising with compliance. This kind of unhealthy practice of the BoDs harms the motivational level of the employees to follow the code of compliance. The Head of Credit of a Gen 1 bank said that –

“...there is no reward to follow the code of compliance.... rather you’ll be rewarded if you are successful in showing your skills of performing directors’ wish blindly regardless of anything...”

In principle, the issue of compliance should be seen as a friend not foe; however, in Bangladeshi banking sector, it is more a fancy word without real effect. A collective effort in
respect of attitude, actions, honesty, accountability and sense of responsibility of all stakeholders are needed to restore and ensure the culture of good CG practice to ensure the well-being of all its stakeholders. Otherwise, the best legal standards even will not guarantee success if the mindset of the stakeholders are not changed.

b. Performance Gap: Gen 1 with Gen 2 and 3 Banks

According to the findings of Chapter-3 and Chapter-4, it is apparent that there is a performance gap in terms of Revenue Efficiency and Profitability between 1st Gen PCBs with 2nd and 3rd Gen PCBs. In the following section, the reasons of performance gap are analysed based on the responses of the interviews of different stakeholder groups.

i. Dominance of Family Ownership

Prevalence of family dominance and kinship in ownership structure is one of the predominant factors not only in the non-financial institutions but also in the financial institutions; particularly, in 1st Gen PCBs in Bangladesh. Unlike other FIs, banks are unique in nature as it deals with depositors funds where the ownership structure is a dominant component to ensure good CG under the Bank Company Act, 1991. According to a Regulator, “…as legal requirements, persons holding at least two percent shares are eligible to be in the Board as Directors other than Independent and Depositors Directors … … maximum two persons from a same family can be the Directors … … the tenure is maximum six consecutive years…”.

However, as a matter of fact, few banks violate these rules where more than two persons from the same family hold director’s position either in person or in guise of proxy directorship for more than six years which is evident from the interviews and also from the directors’ profiles of the respective banks’ annual reports186. Until recently, no step has been taken by the regulators to restrict family dominance in Banks’ Boards which continued to allow full of family members from one or few specific powerful families to remain as BoDs. This trend is historically practiced in 1st Gen PCBs because some of the sponsor directors deceased while others become elderly to work and their directorships are inherited by “their second

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186 One of the Heads of Credit of Gen 1 Bank provided example of AB Bank and National Bank Ltd.
generations who are self-centred, interested to increase own wealth and less caring about the bank like their fathers” urged an MD of a Gen 2 Bank. This ostensible non-compliant practice is a known fact in the industry where all MDs agreed that -

“... the control of the banks are concentrated among 2-3 families who continued dominating the Board for years after years... the sponsors were better than their successors... at least, they used to care for others but their children are so thirsty for wealth that don’t distinguish between right and wrong...”

From the incorporation till to-date, these 1st Gen PCBs have become ‘very personal property’ of such controlling sponsor shareholders’ families and have tremendous influence on the strategic and the major operational decisions. Conversely, the situation is different for 2nd and 3rd Gen PCBs because they are relatively new, incorporated after the Banking Company Act made them more compliant, have sponsor directors from diverse backgrounds, got talented employees and possess a well-defined public commitment. As PCBs’ performances are heavily influenced by the multifaceted decisions taken by the BoDs, a direct nexus exist between the composition of BoDs and PCBs’ performance. All respondents agreed that for 1st Gen PCBs, NPL is the root of causing the performance gap in terms of Revenue Inefficiency and Poor Profitability. Comparing 1st Gen PCBs with 2nd and 3rd Gen PCBs, one of the Head of Credit of a Gen 2 bank expressed that -

“... Board members of 1st Gen PCBs have the sentiment of possessiveness and the feeling of inheritance ... all most all NPL are resulted from their favoured decisions against the risk warning by the Credit Division ... however, this tendency is least apparent in 2nd and 3rd Gen PCBs as the BoDs are business conglomerates from different backgrounds...”

Not only the Heads of Credit but also the MDs admitted that NPL in Gen 1 PCBs are more than Gen 2 and 3 PCBs where the main reason is exercising un-scrutinised credit sanctioning decision by the family dominated board. As most of the BoDs of Gen 1 banks are personally connected to each other due to family relationship or through business networking, they work as a ‘family-team’ and maintain a ‘symbiotic relationship’ among themselves. Their family

187 ‘Symbiotic Relation’ exists between the directors of two banks. Director of 'X' bank gives loan to directors of 'Y' bank, while 'Y' bank directors reciprocate allowing another loan from his bank in favour of ‘X’ director or giving a percentage of the loan obtained from ‘X’ bank.
dominance and kinship made them reckless to handle credit risk at the time of sanctioning loans besides their political patronage and monetary power of managing the BB. These BoDs are more interested to serve their own purposes by taking loans from their respective banks in unauthorised manners with the intention to wilful default. In this regard, few interviewees expressed their personal experience of dissatisfaction with the Board’s Decision those turned into NPL

“... more than half of the board members are from his family... got connection with most of the politicians... top officials of the BB salute them due to power... considering these, fighting for the right of depositors and shareholder is mere stupidity... ... they will retain me as long as I play with their tunes and will kick me off in the next minute if I act differently... ethics, honesty, dedication - are just dictionary words to them...”

Performance gap between 1st Gen with 2nd and 3rd Gen PCBs are causing due to NPLs where NPLs are the direct consequence of favoured and capricious credit sanctions by family dominated boards. Due to the early incorporation, 1st Gen PCBs have long aged loans and pending law-suits which also impact their revenue efficiency and profitability. However, directors disagreed with the family domination claim and passed-on the burden on the managements’ shoulders while a Director of a Gen 1 Bank said -

“....initially, our management was inexperienced that increased the cost of doing business, increased the percentage of classified loan that accumulated over the years and now

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188 RK Food Ltd was given a loan of Tk 69.85 crore without assessing its business transaction and capacity who withdrew Tk 40 crore within four months. "The then branch manager helped embezzle the money. It was clear that the money was embezzled in connivance with the client and the authorities of the bank," said the Central Bank report.

189 The board approved loan of Tk 16 crore in where the borrower withdrew the money in the name of purchasing ships through four pay orders however he did not use that money to buy ships and the money ended up in the accounts of other banks.

190 A board led by Abdul Hye Bacchu approved a loan of Tk 7.9 crore without seeing the documents. The branch did not find the borrower's residence, office and factory. Against this loan, the Central Bank's special inspection found no business transactions, as the money was withdrawn by individuals from the credit accounts in cash.

191 The Central Bank inspected BASIC Bank and found evidence of serious anomalies in approving loans by doling out Tk 683 crore in loans to 16 borrowers, all of whom took the money through illegal means

192 Having good liaison with Board and Management clients take loan with intensions of default - EX: Sahara Import Ltd withdrew Tk 12 crore, without any business purpose, within 12 days of the sanction of the loan
considered as a major drawback to generate profit... whereas 2nd and 3rd Gen PCBs learnt from our mistakes, operating more efficiently and doing better revenue-wise...

Also, manipulation of annual accounts happens in some of these family dominated 1st Gen banks where actual NPLs and provisions are often not accurately disclosed and profitably artificially beautified by the instructions of the BoDs, claimed by some of the MDs and Heads of Credit. They also added that boards of these banks want to defer classification of loan by rescheduling them for years where in most cases defaulter cannot deposit the required down payment for rescheduling. “...interestingly, in this situation, my bank provided additional fund to the defaulter to pay the rescheduling amount because the loan is taken by such a company where two of our directors are the major owners...” added one of the Heads of Credit of a Gen 1 Bank. Consequently, big defaulters in association with directors always take the advantage of this situation since they know that bank cannot absorb the 'shock' if the amount is classified.

It appears by analysing the interviews and scrutinising the annual reports that 1st Gen PCBs have favouritism and nepotism among themselves while selecting the board members and from its incorporation till to-date these banks are dominated by sponsor directors, their extended family members and proxies. While BoDs should provide strategic decisions to the management to enhance banks’ performance; these family-dominated boards are self-centred, lacked transparency, manipulate regulations for their personal interest, lacking of banking experience, hold short term vision and do exercise extensive influence on operational aspects, particularly in large loan sanctioning and determination of NPLs, which make them revenue inefficient and less profitable than 2nd and 3rd Gen PCBs.

ii. Featherbedding of Employees

It transpires from the interviews that favouritism, nepotism and featherbedding of employees are other reasons to create a distinction in performance between the Gen 1 banks with Gen 2 and 3 banks. All respondents agreed with Pareto superiority that keeping excessive manpower does not bring any extra benefit for any particular bank. Rather, one of the Regulators argued that -
“...it not only lessens productivity and efficiency by creating overcrowding but also reduces banks’ profitability by increasing overhead costs...”

The BoDs and the management also appreciate the concept; however, the implementation of the theory seems less effective in Gen 1 banks. One of the plausible reasons provided by an MD of Gen 2 bank is that most of the employees of Gen 1 banks were hired from the NCBs, as they were established first in the banking sector and there were no other alternatives to recruit employees from them other than the fresh graduates from the market. Over the time, these employees got promoted and positioned in high ranks of the banks but their way of operations remained old fashioned which became redundant with the passage of time. He added that –

“...they entered into a new system of competition with traditional experiences which are not dynamic and somehow manual in nature... making the organisation less productive... in the era of computers you can’t work completely relying on calculators...”

Besides, during that period the scarcity of dynamic employees was huge because the newly independent country could not nurture highly talented graduates by providing adequate education and training for the banking industry, the BoDs added. On the other hand, Gen 2 and 3 banks enjoy the privilege that Gen 1 banks suffered regarding recruiting employees. As they incorporated from 1992, after the enactment of the Bank Company Act – 1991, they got the opportunity to be selective and more compliant. The BoDs of Gen 2 and 3 banks agreed that they always look for dynamic people who can optimise the available resources to have maximum output and making banks’ more efficient. In this regard, a Director of Gen 3 bank said that -

“... my bank always capitalize the productivity of each employee of each branch... I instructed my management to position the right person in the right place...in every alternate months, I gather spreadsheets on employee per branches and advances, deposits and NPLs per employee... ”

The respondents also confirmed that Gen 1 banks have relatively higher number of employees per branch compared to Gen 2 and 3 banks which contributes to increase the personnel
expenses, allocation of bonuses and reserve for gratuities but is not an addition to revenue efficiency and profitability. Furthermore, this excessive manpower is not only becoming unproductive but also they are not placed according to their qualifications. A lot of the long-serving employees of Gen 1 banks are from unrelated educational backgrounds like History, Civics, Bengali etc. whereas Gen 2 and 3 banks hire employees with related qualifications like - Accounting, Finance, Economics and Banking. Some of the respondents also urged that these employees were appointed, got promoted and placed in top management levels by the blessings of the BoDs and virtue of seniority; not because of their extra-ordinary performances. One of the Heads of Credit of a Gen 3 bank opined in this regard that –

“...there exists a conceptual and perceptual gap of understanding among Gen 1 banks where smart employees clearly figure out if bosses are naive...resulting in poor and delayed policy response, vague justification of accounts, indolence in workplace...”

Moreover, due to favouritism and nepotism of the BoDs in terms of promotions, posting, salary increment and other fringed benefits the work environment of Gen 1 banks were not conducive enough for the bright employees which made them to switch to Gen 2 and 3 banks. Managing Directors of Gen 1 banks agreed that their banks suffer from ‘brain drain’ due to the excessive involvement of BoDs into management, poor pay structure and biased career progressions of employees. One of the MDs of Gen 1 bank said that -

“...for old banks, mid level employee turnover is very high causing serious manpower problem ...we teach and train them from scratch... and after obtaining the training certificate they switch to another bank with pay rise and better position...”

It became apparent that Gen 1 banks are suffering from the qualified manpower, particularly at the upper level of management since its incorporation. As inexperienced or dissimilar experienced manpower are designated in inappropriate positions, they are becoming less productive in terms of revenue efficiency and profitability. Also, organizational politics violates the healthy working environment of the Gen 1 bank by creating various groups and sub-groups of pocket or power centres with collaboration of the BoDs. Moreover, unholy alliance with the BoDs for promotion, pay package, posting etc. distinguishes the performances of the employees of Gen 1 banks from Gen 2 and 3 banks.
iii. Effect of Denationalisation and Long-standing NPLs

From the complete set of commercial banks, 6 of them are conventional Gen 1 banks where 2 banks denationalised from State Owned Commercial Banks (SOCBs) after the independence in 1971 and the rest 4 banks got new licenses during the period of 1982 - 1991. According to the respondents, the newly denationalised banks did not only experienced the newly changed ownership structure; but also carried a huge amount of NPL, sector-specific loans, inadequate collaterals, limited branch networking, poor management and overall low operating profit along with them.

As “...Gen 1 banks started their operation during the period of Denationalization and Expansion ... they carried the legacy of the nationalised banks and continued operations in the preceded manner... moreover, people were less dynamic then...” opined a Director of a Gen 1 bank that they have accumulated a huge amount of NPLs. Furthermore, “...the Banking Company Act was enacted in 1991 and after that Gen 1 banks got the proper direction to operate in the compliant manner...” stated one of the Regulators. It is apparent that 1st Gen banks experienced the early staged turmoil in the banking sector whereas Gen 2 and 3 banks established after the incorporation of the Bank Company Act, 1991 which is tighter banking control and supervision that helps them to become much more CG compliant.

All respondents agreed that Gen 1 banks were inexperienced, heavily politically influenced, lacked direction from regulators, had poor internal management, made high-risk loans to new entrepreneurs, tend to salvage the sick industries and invested in priority sectors with low interest rate are the main causes of high default rate. On the other hand, Gen 2 and 3 banks took lessons from the example set by Gen 1 banks and starting from formation of banks till day-to-day operations, they try to perform in the CG compliant manner. Till today, none of the banks follow the CCG completely; however, Gen 2 and 3 banks are in a better position in terms of assessing credit risks and managing the level of NPLs compared with Gen 1 banks. In this regard, a MD of a Gen 1 bank stated –

“...we are carrying these NPLs for ages ... if we write off these bad loans in one go then the bank will be in negative equity which will be catastrophic for the shareholders and for the
economy... we are actually rescheduling as well as writing off these NPLs gradually every year”

However, management of Gen 2 and 3 banks argued differently. According to them, though the top management of Gen 1 banks are highly experienced; but, they are traditional, less dynamic and conservative in nature. Moreover, they are least interested to adopt the state of the art technologies, new marketing skills and indirect loan recovery procedure. In this regard, a Head of Credit of a Gen 2 bank provided an example where one of the commercial banks hired and sent a group of transgender to one of the big wilful loan defaulter's house and made him compelled to come to an agreement of making the full and final loan repayment. Besides, the judiciary system in Bangladesh is also slow in providing decisions regarding the pending loans on NPLs. In this regard an MD of Gen 3 bank stated that -

“...lending money against mortgaging property is simple but selling or repossessing the mortgaged property to recover NPLs is a lengthy and difficult task because of the critical and complex legal procedure...”

It is apparent from the arguments that Gen 1 banks carried a huge amount of NPLs prior the incorporation of the Bank Company Act, 1991 which are being carried till to-date through rescheduling. Though they have written off most of their bad loans; but, still hold a huge portion in their accounts. On the other hand, Gen 2 and 3 banks are relatively new and do not hold such a long legacy of NPLs and manages bad loans through sufficient collaterals which also made them efficient in generating revenues and earning relatively higher profits.

iv. No Threat of Takeover

The banking sector of Bangladesh has experienced privatization of commercial banks but yet not experienced any threat of merger, acquisition or takeover till today. Their performances partially reflect in their share prices mostly because if the profit starts to decline then the market manages to gain information. According to a Regulator

“...there is potential threat of banks takeover among banks... which is an important monitoring function when the financial system is viewed as a whole... as long as banks are
profitable the outsiders do not intervene and the inside management continues to manage; otherwise, potential investors can take over the management and reorganize…”

According to the respondents, shareholders’ interests are better protected by the pressure of capital markets and the threat of takeovers but unfortunately the Gen 1 banks are free from any such kind of threat. Gen 1 banks, in this regard, are fortunate enough because some of the banks share price had gone below the face value and enlisted into ‘the problem bank category’ by the BB; still, they were resistant for merger, acquisition or takeover by their competitors. All respondents came up with the consensus that the acquirer bank needs to be much larger than the target bank and the size of Gen 1 banks are too big to be taken over. A Managing Director of a Gen 3 bank gave the idea about the size of Gen 1 banks stating that -

“…if you combine our bank, (name of another Gen 3 bank) and (name of a Gen 2 bank) then it will be the size of only one Generation 1 bank in terms of their credit exposure and number of branch ...its not in our reach to acquire and manage such big banks...”

The respondents provided an apparent logic that the larger the bank, the greater the amount of resources it will need to take over and to manage efficiently the resulting combined entity. Though Gen 1 banks are revenue inefficient (according to Chapter-3) and less profitable (according to Chapter-4) compared to Gen 2 and 3 banks; they possess some unique qualities which are inimitable and can not be reproduced in a day.

This observation is consistent with the conjecture that Gen 1 banks reduce their probability of being taken over by increasing their size through capturing a huge clientele portfolio by disbursing loans and receiving deposits, creating wide branch networking in remote rural areas and increasing the tier 1 capital to enhance single party exposures.

One of the Regulators argued that –

“...takeover or acquisition is not the panacea for all ills facing banks; including Gen 1 banks... instead analysing the logical reasons behind the problems, sanctions and disbursements are needed to be reconsidered...”
Moreover, there is no high exposure to local institutional stake-holding, no foreign ownership or government shareholdings in Gen 1 banks which insulated them from possible raids by outsiders and threats of being taken over. Furthermore, Gen 1 banks think that in any financial calamities the Government will step in to salvage them because a Director of Gen 1 bank versed that -

“... we (all Gen 1 banks) collectively gather the lion’s portion of remittance which is very much essential for the closed currency economy of Bangladeshi ... Gen 2 and 3 banks don’t have networking like us... also we pay huge amount of tax to the government and most importantly, we are massively contributing to evade unemployment, salvaging not a person but his entire family...”

Finally, consolidating the amount of disbursement, client portfolio, branches networking, employment generation, remittance earning etc. gave Gen 1 banks an incomparable advantage over Gen 2 and 3 banks which also made them relaxed to consider any potential threat of takeover. Though they are inefficient in generating revenues and less profitable due to the huge amount of NPLs; they are controlling the largest portion of market share. Stopping Gen 1 banks from doing non-profitable business will not help much; rather, adopting an effective recovery mechanism will bring benefit for them and for the economy as a whole.

5.5 Chapter Conclusion

Based on 20 semi-structured interviews responses, this chapter firstly addresses the prevailing situation of Banking CG in Bangladesh with particular emphasis on the causes that hinder implementation of BEI (2004) given CG codes properly and the consequence of non-compliance. Secondly, in the light of Chapter-3 and Chapter-4, this chapter explores and elaborately explains the plausible reasons for the performance gap among three generations where Gen 1 PCBs are different from Gen 2 and 3 PCBs in terms of Revenue Efficiency and Profitability.

The empirical analysis provides enough evidence that relationship between the level of CG and the performance of PCBs is causal where the implementation of CG codes and non-
compliance causes weak performance due to several reasons. Echoing with several studies, published newspaper articles and combining the responses of 4 groups of interviewees, 12 factors have been identified those considered as important causes that obstruct the proper implementation of the CG codes at present.

Out of them, *Power and/or Political Influence* from influential directors and politically affiliated persons in sanctioning big loans to their nominated persons is the primary reason for under performance. Besides the daily newspapers, several authors like Rahman et al (2008), Huque (2011), Azmat and Coghill (2010), Chowdhury (2003), Jamil (2007) etc are also aligned with the empirical finding that power and political affiliation exists among PCBs where loans are sanctioned without proper scrutiny which turns into bad debts deliberately in the long run. Respondents also mentioned that *Low Board Remuneration and Management Compensation* is another reason of hinder Codes implementation because violation of CCG provides them better incentives than abiding with those. They think that executives’ salary structure do not compensate their workload and merit compelling them to take bribes whereas the BoDs do not bother about the insignificant amount of remuneration as they engulf a percentage of sanctioned loans from different parties. Moreover, interviewees believe that most of the BoDs hold sufficient inside information of their banks which causes informational asymmetries between insiders and the capital market that opens up the scope for *Insider Trading* resulting improper execution of CCG (also supported by Ahsan, 2011; Byron, 2011; Byron and Rahman, 2011).

Respondents also agreed that due to the *Lack of Auditors Independence* and poor audit fees, external auditors compromise their ethics at the cost of the audit quality. In this regard, Habib and Islam (2007), Imam et al. (2001), Kabir et al. (2011), Karim and Moizer (1996) also mentioned that manipulation of accounts remains ignored, overlooked and intentionally or unintentionally uncovered because of auditors independence. Besides, respondents also stressed the *Large Scale Institutional Corruption* that is endemic in the banking sector where the most common version is alleged to take bribe while extreme is to sanction loans to the BoDs, Political Parties, Bureaucrats and Businessmen without sufficient collaterals and proper documentations. Along with the Regulators Group, Rahman et al (2008), Habib-Uz-Zaman (2010), Haque (2007), Reaz (2006) are hopeful that ethical people will be vocal to
eliminate institutional corruptions by proper concern, awareness and pressure from other stakeholders and particularly by the influence of the media.

Once the awareness among the stakeholders is developed and sufficient funding is allocated, *Improved Surveillance by the Central Bank and Other Watchdogs* is expected to be strong and extended, by the respondents. Haque (2007), Reaz (2006), Belal and Roberts (2010) also supported and added that the surveillance team members need to be courageous enough to handle the pressure from the political parties and influential BoDs. In this regard, along with the respondents, Belal and Owen (2007), Uddin and Hopper (2003), Akhtaruddin (2005), Mollah (2010), Belal and Roberts (2010) emphasized the *Effective Legal and Regulatory Provisions and Their Enforcement*, where inadequate banking legislation, absence of timely legal action and weak law encourages the wrongdoers to continue their bad practices. Despite the Banking Acts providing sufficient rules to ensure proper banking CG practice, the enforcement is impeded due to the lack of competent workforce and enough legal power to dominate over the influential BoDs and powerful politicians. Respondents also believe that some awareness building programmes and effective *Training* will help to implement the CCG properly.

Besides these, all respondents agreed that there is a *Lack of Transparency in Financial Reporting* in the banking sector of Bangladesh where the BoDs blamed the management and vice-versa. Similar to the respondents, Belal (2001), Belal and Owen (2007), Bhuiyan and Biswas (2007), Habib-Uz-Zaman (2010), Imam (2000), Sobhani et al. (2009) consented that inadequate check and balance mechanism, non-disclosure of bad loans, absence of strong legal system, corrupt mindset of the upper tier of the banks, lack of knowledge and short-term perspective of decision makers are responsible for the financial turmoil caused due to the lack of transparency. Echoing the views of internal malpractices and control, interviewees also mentioned the *Inadequate Role of the Shareholders/Independent Directors*, who should enforce proper implementation of the CCG, prevent corruption and protect their rights (see Rashid et al., 2010). Rather, in the PCBs of Bangladesh these independent directors remain in the board not because of their merit but due to their kinship, marital connection, political power and are mere proxies of the influential BoDs.
Respondents also acknowledged the fact that general shareholders individually are incompetent to do anything against these politically patronized and wealthy BoDs to implement the CCG properly (see Sobhan et al., 2003; Farooque et al., 2007). They manipulate the Effectiveness of the AGM by hiring the AGM Manage Parties to discourage the enlightened shareholders to participate and to raise their voices. Mir et al. (2009), Belal (2004), Belal and Roberts (2010), Belal and Owen (2007) opined with the respondents that Lack of Motivation to Abide with Compliance is another cause that hinders to proper CG implementation in the banking sector of Bangladesh. A collective effort in respect of attitude, actions, accountability and sense of responsibility of all stakeholders are needed to ensure and develop the culture of practicing CG where issue of compliance should be considered as beneficial to all its stakeholders.

The empirical finding of the second research issue on the performance gap between 1st Gen PCBs with 2nd and 3rd Gen PCBs also identified 4 factors. Based on the quantitative findings of Chapter-3 and Chapter-4, respondents believe that Family Dominance in 1st Gen PCBs board is the most important reason for their Revenue Inefficiency and Lesser Profitability. The composition of the BoDs have a direct linkage with performance, as concluded by Imam and Malik (2007), Rashid et.al (2010) Haque (2007), Farooque et al. (2007), Uddin and Choudhury (2008). Besides the interviewees’ responses, scrutinising the annual reports and from several daily newspapers, it became apparent that unlike 2nd and 3rd Gen PCBs, the Board of 1st Gen PCBs have favouritism and nepotism among themselves while selecting the board members and from its incorporation until today these banks are dominated by sponsor directors, their extended family members and proxies. Due to political patronage, societal influence, control over the Central Bank, symbiotic relationship among themselves, self-centered mentality, lacking of banking experience these 1st Gen PCBs’ BoDs sanction loans to favoured parties with intention to willful default. On the other hand, the prevalence of family dominance in Board of 2nd and 3rd Gen PCBs is not noticeable and the interference in loan sanctioning is minimal, which made them more profitable than the 1st Gen PCBs.

Some of the respondents highlighted Featherbedding of Employees that causes poor performance of 1st Gen PCBs as employees are hired, retained, posted and promoted not based on their merit but because of their relationship and connection with the BoDs. Comparing with 2nd and 3rd Gen PCBs, their efficiency deteriorated due to this inappropriate
mix, particularly at the upper level of management since incorporation, as most them were hired from State Owned Commercial Banks whose mentality is bureaucratic in nature and less flexible to change.

Due to the Effect of Denationalisation and lack of banking expertise, the 1st Gen PCBs had been through harsh trial and error where they accumulated a huge amount of NPL while Directors claimed that most of these Long-standing NPLs are already written off; but, still, they hold a substantial portion. These non earning assets of 1st Gen PCBs have a twofold effect by increasing Revenue Inefficiency in one side and lowering Profitability on the other side. Conversely, 2nd and 3rd Gen PCBs are relatively new, do not hold a long legacy of NPLs, manages credit risk loans through sufficient collaterals, have supportive BoDs and dynamic management team which made them efficient in generating revenues and earning relatively higher profit. Nevertheless, the 1st Gen PCBs’ performances are relatively inferior to the 2nd and 3rd Gen PCBs but enjoyed the first mover advantage and captured a huge clientele group. The size of each 1st Gen PCBs in terms of assets, number of employees, remittance earning and branch networking are almost thrice a 2nd or 3rd Gen PCBs which made them relaxed while the current institutional arrangement lacks any potential Threat of Takeover.

In a developing country like Bangladesh, according to the respondents193 - corruption is common, the legal system suffers from fragility, society is dominated by wealthy and influential people and government is prejudiced; the incorporation of the CCG will face obstacles in every lag. In a situation like this, having a first-class CG code will not guarantee that the performance of banks, particularly the 1st Gen PCBs, will improve. Rather, an overall change of people’s mindset and culture is needed where the existing and improved CCG will be adopted and followed enthusiastically, particularly, by the BoDs, Management and Regulators without any power or political interference. Regular monitoring of compliance, reviewing their effectiveness, understanding the possible scope of improvement, adopting an effective recovery mechanism will bring benefit for all generations of banks and for the economy as a whole.

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193 From the analysis of the responses and from the allegation from the social media and daily newspapers.
Chapter 6

Conclusion
6.1 Introduction

The objective of this doctoral thesis is to examine banking Corporate Governance (CG) in the light of the ownership structure of 1st, 2nd and 3rd Generation conventional Private Commercial Banks (PCBs) in Bangladesh focusing on two performance indicators – Revenue Efficiency and Profitability. It also extended by exploring the causes which hinder the implementation of Code of Corporate Governance (CCG) and the reasons behind the generational differences. In this concluding chapter, the major findings of the previous empirical chapters are bridged together to reveal the overall contribution of the thesis and to develop recommendations for improving banking Corporate Governance (CG) in Bangladesh. In addition, the chapter discusses the limitations of this research and suggests potential areas for future research.

6.2 Research Summary

This doctoral thesis addresses the interaction of 1st, 2nd and 3rd Generation Private Commercial Banks’ (PCBs) performance gap in the light of Corporate Governance (CG) and ownership characteristics. To achieve this objective, the thesis is divided into 2 main parts consisting of 6 chapters where Chapter 1 provides the motivation and reasoning behind study while Chapter 2 discusses the banking history, types and generations of banks, prevailing banking CG and the socio-economic context of Bangladesh. The quantitative part (Chapter 3 and 4) estimates the performance gap and the qualitative part (Chapter 5) empirically explores and explains the plausible causes of the performance gap. The related findings are distilled below:

6.2.1 Findings on Efficiency and Profitability

Under the quantitative part, Chapter-3 measured 23 conventional PCBs’ Revenue Efficiency using bootstrapped data from 2001 to 2012 employing Date Envelopment Analysis, a non-parametric frontier approach. A novelty of the methodology is the use of a bootstrapping technology due to Simar and Wilson (2000), which minimizes the bias involved in standard
DEA and enables appropriate statistical inference. While measuring the efficiency of 1st, 2nd and 3rd Gen Private Commercial Banks (PCBs), this chapter found an efficiency gap between 1st Gen with 2nd and 3rd Gen PCBs whereas no efficiency gap between 2nd and 3rd Gen PCBs is observed. Using the same input and output variables for all three generations, the results revealed that during the sample period 1st Gen PCBs are Revenue Inefficient compared with 2nd and 3rd Gen PCBs. Further, incorporating proxies for size - logarithm of total asset and number of branches - the results found a positive correlation with size and revenue efficiency. Though 1st Gen PCBs are bigger in size, they are revenue inefficient; hence, 2nd and 3rd Gen PCBs, while they may be the medium-sized banks in the overall banking sector, are found the most revenue efficient. Finally, this chapter also found that the rank correlation of conventional PCBs based on Revenue Efficiency fluctuates from year to year.

The following section, Chapter-4, used a pooled estimation model to measure the profitability of 1st, 2nd and 3rd Gen PCBs and to assess the enigmatic market structure-performance and efficient market structure hypotheses of all the local commercial banks in Bangladesh. During the period from 2001 to 2012, the interactive term of GEN1NPLRAT that represents 1st Gen PCBs’ Non Performing Loan (NPL) Ratio, revealed that 1st Gen PCBs are not only revenue inefficient but also less profitable than average due to higher NPL ratio ceteris paribus. Results of the restricted model showed that 1st Gen PCBs dragged the profit to fall by 3 times compared with 2nd and 3rd Gen PCBs. Besides that, the results of the regression analysis confirm the retention of the Efficient Structure (ESH) hypothesis and the rejection of the Structure Conduct Performance (SCP) hypothesis. This chapter uses the direct measure of efficiency obtained from Chapter-3 and shows a very strongly positive relationship between profitability and efficiency. This means that the more efficient banks are the most profitable ones. The plausible causes of deterioration of 1st Gen Private Commercial Banks’ (PCBs) efficiency and profit performance are empirically explored and critically discussed in the next section.

6.2.2 Findings on Banking Corporate Governance

This section is based on 20 semi-structured interview responses which empirically explore and elaborately explain the plausible reasons of Revenue Efficiency and Profitability gaps among 1st, 2nd and 3rd Gen PCBs in the light of banking CG and ownership structure. The
quantitative findings of Chapter-3 and Chapter-4 exhibit the poor performance of 1st Gen PCBs which the respondents agree upon and admit that the composition of the Board of Directors (BoDs) have direct link with the performance of banks in Bangladesh.

Unlike 2nd and 3rd Gen PCBs, from incorporation until today, the Board of 1st Gen PCBs have Family Dominance where the presence of sponsor directors, their extended family members and proxies are observed. As 1st Gen PCBs are long established in the industry and constituted with highly influential and connected people in the society; they hold symbiotic relationship among themselves, are politically patronised and have control over the Central Bank. Some of these 1st Gen PCBs’ Board of Directors (BoDs) take the advantage of these unique connections and sanction loans to their favoured parties, politicians and bureaucrats in lieu of insufficient collateral, with the intention of wilful default that causes an increase of NPL and lowers profitability.

Furthermore, 1st Gen PCBs have Long-standing NPLs that accumulated due to the effect of denationalisation and lack of banking expertise where the majority have already been written off but still hold a substantial portion. These have twofold effect - increasing Revenue Inefficiency in one side and lowering Profitability on the other side. Also, most of the employees of 1st Gen PCBs were hired from State Owned Commercial Banks and hold a bureaucratic and less flexible mentality which is still retained. The newly appointed are posted and promoted not based on their merit but because of their relationships and connection with the BoDs. Due to this excessive and inappropriate manpower mix, particularly at the upper level of management and Featherbedding of Employees, the overhead expenses increase, the overall productivity decreases and revenue efficiency deteriorates. Furthermore, these PCBs are not concerned about their poor performance as the size of each 1st Gen PCBs in terms of assets, number of employees, remittance earning and branch networking are almost thrice of a 2nd or a 3rd Gen PCBs. This makes them relaxed and feels invulnerable from the potential Threat of Takeover.

Additionally, the chapter also addresses the prevailing situation in the banking industry, with particular emphasis on the causes that hinder proper implementation of the Bangladesh Enterprise Institute’s (2004) CG codes. Echoing with several researchers194, published
newspaper articles and combining the interview responses, *Power and/or Political Influence* from a few influential directors and politically affiliated persons is found to be the prime cause of disruption, which interferes in the day-to-day operational and strategic decisions. As a consequence of their excessive interference and corrupt mindset, internal malpractice occurs and disclosures of vital elements are concealed intentionally, creating a huge *Lack of Transparency in Financial Reporting*. Also, symbiotic relationship exits among themselves that opens up the scope for *Insider Trading* as they hold ample price sensitive information to create anarchy in the capital market. Due to the *Lack of Auditors’ Independence* and poor audit fees, external auditors compromise their ethics, overlook the manipulation of accounts and provide favourable reports in exchange for some benefits, allowing *Large Scale Institutional Corruption*.

Besides these, the implementation of the Code of Corporate Governance (CCG) is impeded due to the *Inadequate Role of the Independent Directors* as most of them are mere proxies of the influential BoDs. Even enlightened shareholders do not raise their voices in the Annual General Meetings (AGM) and general shareholders individually are impotent to take actions against these politically patronized and wealthy BoDs as they manipulate the *Effectiveness of the AGM* by hiring AGM Manage Parties. As there is an absence of *Effective Legal and Regulatory Provisions and Their Enforcement* in the banking sector due to inadequate legislation, lengthy legal action, weak law and biased judicial procedure; it encourages the wrongdoers to continue their poor practices. Moreover, the enforcement of CCG impeded due to the lack of competent workforce and enough legal power as the *Surveillance by the Central Bank and Other Watchdogs* are not courageous enough to handle the pressure from the political parties and influential BoDs.

To deal with the problem, a collective effort in respect of attitude, actions, accountability and sense of responsibility of all stakeholders are needed to implement the culture of practicing CG where *Lack of Motivation to Abide with Compliance* is present. *Low Board Remuneration and Management Compensation* also hinders CCG implementation because most of the BoDs are better off by violating CCG as they can secure higher incentives through gulping up a portion from clients from their sanctioned loans, whereas executives’ believe that their salary

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194 Provided in Chapter 5.
structure does not compensate the workload and merit, encouraging them to take bribes. Regular Training is needed to be provided to the strategic thinkers to build awareness and to provide knowledge of implementing the CCG properly for the overall benefit by developing mutual competences.

As 2nd and 3rd Gen PCBs emerged after the incorporation of the Bank Company Act, 1991, the difference in time and the experiences gathered from 1st Gen PCBs and State Owned Commercial Banks helped them to achieve a superior performance. Moreover, they are formed under strict banking supervision with business conglomerate as BoD and dynamic employees. However, under the same regulatory framework at present, having a significant gap in revenue efficiency and profitability is a serious concern. To survive in the long run in an increasingly competitive industry, 1st Gen PCBs need to work seriously to improve their performance.

6.3 Research Contributions on Empirical Knowledge

In recent years, evaluation of banking performance is a relevant research topic and extensive literature has been well established to explore the sources of performance gaps in developed and underdeveloped countries. However, research on transitional countries banking sectors is limited compared with the developed countries. Little research has been conducted on the banking sector of Bangladesh; thus, this empirical research is an addition to the extant literature. Besides that, this study illustrates and contributes to the existing knowledgebase in Four major aspects.

Firstly, the main contribution of this thesis is to identify the Efficiency and Profitability gap of 1st Gen PCBs with 2nd and 3rd Gen PCBs. Having regressed a complete panel dataset of 23 conventional PCBs, this research proves for the first time that 1st Gen PCBs are less efficient and less profitable than 2nd and 3rd Gen PCBs.

Secondly, it creates a bridge among the extant single-issue-specific and standalone CCG research pieces by not only measuring the performance gap but also identifying the variables those caused the gap. From the interviews, it also appeared for the first time that family
dominance is the main cause for 1st Gen PCBs’ poor performance besides featherbedding of employees, effect of denationalisation and long-standing NPLs and no threat of takeover.

**Thirdly**, to date, none of the previous studies give a holistic view by investigating the complete set of Bangladeshi conventional PCBs for efficiency and profit performance in conjunction with the CG codes. Some of them have incorporated different mandatory and regulatory CG provisions, but they did not distinguish between financial and non-financial institutions that need to deal separately due to the difference in practices of codes. This study contributes to the literature on bank’s CG by providing evidence of Bangladeshi conventional PCBs, where the majority of CG research focuses on non-financial firms.

**Fourthly**, the depth of banking data in previous research was limited. Here, the comprehensive data set for 12 years from 2001 to 2012 is a unique period to capture the far-reaching effect of changes and ensures homogeneity of data to yield consistent results. It allows PCBs the necessary time frame for a thorough analysis of the impact of market structure, regulatory reforms and ownership influence. It shows clearly that all generations of PCBs are not equally efficient and profitable, despite operating under the same regulatory framework. From the strategic perspective, the main insight of the thesis is that in Bangladesh, conventional PCBs’ efficiency and profitability is conditional on the impact of ownership characteristics that makes banking CG and operation very different from bank to bank, generation to generation.

### 6.4 Research Contribution on Methodological Stance

Social science researchers need to widen their visualization and view the world through different philosophical and methodological lens rather than binding themselves within one paradigm and/or research method. Thus, research problems/objectives need to be addressed from diverse angles and adopts the methodology/research process that suits the best and is the

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195 Traditionally, research in accounting and finance is predominantly by positivistic where the researchers examine the effect of a variable on some outcome variables or used some mathematical modelling or equation to prove or disprove hypotheses. However, over the last four decades, the financial disciplines have provided a new intellectual arena to view the world in interpretivist philosophical aspects (Ryan et al., 2002).
essence of ‘Pragmatism’ philosophy\textsuperscript{196}. It employs all potential research approaches and investigates both quantitative and qualitative data while solving a research problem and to provide the best understanding of an empirical phenomenon.

From the methodological perspective this thesis has two distinct contributions. \textit{Firstly}, considering the need of the research problem, the present study aligns itself with the pragmatic position\textsuperscript{197} and uses both types of data to investigate commercial banks’ efficiency and profitability; and to understand the relationship between performance and governance\textsuperscript{198}. Therefore, a mixed method\textsuperscript{199} study has been designed for this research where regression models are run on the quantitative data to identify the gap among generations followed up by qualitative semi-structured interviews with stakeholders to provide better explanation of the influence of CG on banks’ performance.

\textit{Secondly}, this study assumes that the banking sector is comprehensible only imperfectly or probabilistically as it deals with regulators and regulations. Because the sector comprises different social and environmental factors where people are the major players, any conclusion will be inconclusive. Therefore, research findings using social and other related theories will only predicts the reality whereas the efficiency and profitability gaps are the consequences of actions by different social actors that is reflected on bank’s performance in reality. For this reason, the selection of interviewees is crucial because it is not a mere expert opinion or a superficial discussion on the CG issues with a handful of respondents. Rather, the responses of the in-depth interviews are resource intensive and the quality of qualitative analysis is

\textsuperscript{196} Pragmatism holds the view that “the most important determinant of the epistemology, ontology and axiology [that one] adopts is the research question(s)- any one [positivist/interpretivist] may be more appropriate than the other for answering particular questions” (Saunders et al., 2009, p.109)

\textsuperscript{197} Powell(2001, p.884) explained, “pragmatism, on the other hand, rejects positivism, on grounds that no theory can satisfy its demand…; and rejects anti-positivism, because virtually any theory would satisfy them. As such, the pragmatist proposes to reorient the assessment of theories around a third criteria: the theory’s capacity to solve human problems”.

\textsuperscript{198} The research objective of the first section (Chapter 3 and 4) of this research demands an objective observation where quantification is necessary to measure commercial banks’ efficiency and profitability; otherwise, the performance gap might not been identified. Whereas, the later section of the thesis (Chapter 5) needs a subjective interpretation on the found performance gaps among banking generations and provide a better explanation of the influence of corporate governance on banks’ performance.

\textsuperscript{199} Pansiri(2005) assisted by suggesting that “both qualitative and quantitative data collection techniques are used at the same time and analysis of both types of data is done simultaneously, while sequential implies that the researcher conducts either the qualitative phase of a study then a separate quantitative phase or vice-versa with a view to use the later technique to assist in explaining and interpreting the findings of the former ”(pp. 201-202).
entirely dependent on responses of the BoDs, the top most officials of the banks and the regulatory bodies which can also be used for referencing and for further research.

6.5 Contributions to Policy

In a developing country like Bangladesh, bribery is common in the system, the legal system suffers from fragility, society is dominated by wealthy and influential people; incorporation of the Code of Corporate Governance (CCG) will face resistance from beneficiary interest groups. In a situation like this, having a first-class CG code will not guarantee that the performance of banks, particularly the 1st Gen PCBs, will improve. Rather, an overall change of people’s mindset and culture is needed where an improved version of CG codes will be adopted and followed enthusiastically, particularly, by the BoDs, Management and Regulators without any power or political interference. Furthermore, regular monitoring of compliance, reviewing their effectiveness, understanding the possible scope of improvement and adopting an effective recovery mechanism will also bring benefit for all generations of banks as well as for the overall economy. In this regard, some recommendations emerge from this thesis are follows:

Redefine the CG Codes – There are sufficient codes, guidelines and circulars available for PCBs but they are not implemented properly, which creates a gap between the desired standard and the reality. To bridge the gap, the banking CCG needs to be amended in a flexible, adaptable and innovative way to fit the emerging needs of the banks and affordability of the stakeholders to implement it. These rules and governance documents are not only to be made but also require regular reviewing and monitoring of their implementations.

Respondents also urged that the effectiveness of the Code will be achieved when banks will realise the importance of the CCG and adopt it voluntarily. Therefore, along with some sort of regulatory pressure, rigorous and continuous communication to the concerned parties is needed to make them understand the beneficial sides of following the code. It is imperative that both electronic and printed version the revised CCG is made available to communicate among the relevant parties in a comprehensive and well planned manner where the regulator (BB, SEC etc.) needs to play a significant role.
Strict Rules for BoDs and More Power of Independent Directors – Among Bangladeshi PCBs, Board power supersedes any other authority matrix, where influential BoDs play the ultimate roles for promoting and implementing good governance. In the prevailing laws, there are many requirements to be a BoD; however, in reality, those remain on paper only. Stringent rules are needed for the BoDs to prevent them from corruption and monitor closely how far those requirements are implemented.

Similarly, in reality regarding the Independent Director is somewhat different though they are introduced to bring checks and balances in the Board and to add value by providing technical knowledge and experience. As observed among the PCBs, the independent directors are mere proxies of influential BODs or someone patronized by political parties or bureaucrats with power. The right persons with proper knowledge should be selected. Also, conducive environment is needed where independent directors can perform their roles effectively and free from compulsion and bias.

Also, to ensure good governance, a proper incentive package of the BoDs is also needed. If the compensation and remuneration packages of the BoDs do not compensate enough for their time then they will lack motivation and also may be inclined towards wrongdoings that lead towards poor performance. To motivate and to ensure good CG, the existing remuneration and compensation package of the BoDs should be restructured so that they become stronger to fight against non-compliance.

Strengthen the Law on Non-Compliance and Form Special Surveillance Teams – In banks, commonly, compliance is followed in the operational level mainly whereas the concern for the top management and the BoDs remains vague. Though PCBs are subjected to the direct monitoring of the Bangladesh Bank, in practice, the board level compliances are decided in the Board Meetings, while non-compliance does not bring much harm. Special tribunals, free from political or social biasness, can be formed to enforce bank-related compliance, while ensuring some exemplary punishment for any kind of non-compliance.

There are many incidents of dishonesty and corruption in PCBs from the top to the bottom the line of management which are not reported. Only a few of them get newspaper coverage,
while the regulators and watchdogs take delayed actions on few of those. To prevent fraudulent activities of PCBs, sometimes the Central Bank appoints an observer in the BoDs, but these observers have often appeared ineffective. A Special Surveillance Team of the Central Bank is expected to be effective in future, empowering them to combat against banking non-compliance.

**Overcome the issues of ‘Family Legacy’ and ‘Too Big to Fail’** – In the banking sector of Bangladesh, a system is needed to be developed where sponsor/chartered directors will retire after serving for a length of years. According to the respondents, for the Gen 1 banks particularly, it should be totally stopped to continue the family legacy within the boardroom where the children and/or nominated candidates of the sponsor/chartered directors become the BoD regardless of proper competencies. Rather, their places should be gradually taken up by the young and dynamic entrepreneurs who are competent for the position, adequately qualified and considered to be comparatively open minded. Also, the example of Sri Lankan Code of Corporate Governance can be considered where the board as a whole should be annually assessed to ascertain whether the combined knowledge and experience of the members matches the strategic demands of the Banks.

Respondents also urged that regular appraisal of the board will also ensure that banks are not engaged into excessive risky ventures and is ever ‘too big to fail’; otherwise, taxpayer funds would need to be injected to rescue a big bank’s collapse and to stabilize the entire financial system. The Icelandic banking crisis is so far the prime example where relatively small countries with large banks and international operations are vulnerable to the ‘too big to save’ problem.

However, in Bangladesh, big banks are generally holding companies which conduct banking and certain other financial activities and have substantial liabilities to other banks through the payment system and other financial links. The complexity of the nature of works and size of these banks made them not only ‘too big to fail’ but also ‘too complex to fail’ as complexity and size are positively correlated. Furthermore, Gen 1 banks are the biggest in size where interviewees stated that they are likely to have a very strong influence on regulators, supervisors and legislatures where regulatory capture may be the result of explicit lobbying efforts of politicians and financial support in elections. Less deliberately, regulators and
supervisors have a tendency to develop shared objectives and values with those being regulated and supervised; thus, have lesser chance of a big bank’s failure in the near future.

**Presence of Institutional Investors and Threat of Take-Over** – Although a huge quantity of banking shares is held by different institutions and investment companies in Bangladesh; however, few numbers of representative are seen from those respective institutions among the BoDs. In such situations, knowledgeable and experienced institutional representatives in the BoDs could play effective roles by enforcing and ensuring best CG practices. According to the respondents, their presence in the board will create a pressure on banks to perform well and may protect from incurring additional non-performing loans through risky investments and nepotism.

Besides, the interviewees also urged the need for developing the provisions for banks’ takeover as there is no mechanism of bank’s takeover yet in Bangladesh and failing banks have to be resolved under general corporate insolvency law. The overall process is thorough, complex and time consuming to be ratified by the regulators which requires immediate action now to be executed in future, if needed. It is expected that once the threat of take-over is in place, banks will perform the voluntary CCG in a compulsory manner.

**Compulsory Training and Awareness Building Programme** – Most of the PCBs run their own Training Academy for bankers. However, they are in need of modernization. In order to ensure good CG, tailor-made training for related employees and for BoDs should introduce and made mandatory. Such training should be revitalized on regular basis while continuous awareness building workshops may be initiated to form the culture of abiding with CCG. In addition, the interviewees also suggested that specific training provisions for the senior and middle level managers to able them to operate the latest technology and to aware about the global needs on the issues relating to good governance.

For these, the Government, regulatory and professional bodies should come forward to support such programmes by creating a network amongst the regulators, academics and professionals to identify the need; design the course; and develop the infrastructure to train and build awareness among employees and the BoDs. Also, setting up complaint box or corruption reporting centre can be effective to bring accountability and transparency. Often
non-compliance is continuous in nature and becomes practice. Although some quarters of employees or departments are aware of such bad practice or non-compliance, it remains unchallenged as there is no institutional complaint system. Hence, it would be beneficial for PCBs if they are required to introduce such Complain or Corruption Reporting Box.

Banking Codes of Corporate Governance and Guidelines are available but those codes alone cannot work where culture and people’s mindset are crucial elements to perceive changes. Both internal and external stakeholders need to change their mindset to welcome such practices and campaign nationwide for governance compliance. Interviewees also believe that pursuing ethical behaviour is compulsory to ensure good governance where ethical practices can be encouraged by reward system. They suggested that the culture of good corporate governance can be established through organizing regular campaigns and can foster encouragement by recognition at bank and individual levels.

Finally, it is widely known Absolute Power Corrupts Absolutely. So, no solution will be optimal if there is a dearth of ethical and knowledgeable people in the banking sector. All that is needed is to have the vision to utilize all these existing opportunities in an effective way. Furthermore, the nationwide endemic corruption needs to be handled strongly to ensure the implementation of the CCG.

6.6 Limitations of the Study

Like other research, this research has also some limitations. Primarily, not all the banks in Bangladesh are selected and the research is conducted only on the local conventional Private Commercial Banks (PCBs) due to the difference is operating rules and regulations. However, these local PCBs hold the majority of the market share.

Secondly, the variables related to ownership factors and management are chosen to measure the efficiency and profitability of the banks; as a result comparisons beyond the selected variables can not be analyzed. Some other variables could enhance the robustness of the findings, which gives a scope for future research to extend the understanding further.
Thirdly, in Chapter-3, the results obtained from bootstrap DEA can not be generalized and is applicable only in the Bangladeshi banking sector. Further, the DEA suffers from the self-identifiers and near-self-identifiers problem, while imposing constraints (like quality controls and environment variables) on the model and firms often self-identified as 100% efficient.200

Fourthly, in Chapter-4, as competition is a dynamic process, the use of a dynamic profit equation in the context of panel data framework may have given different results. However, using dynamic estimator is complicated, beyond the limit of this study and it is assumed that the difference of the results of dynamic and static profit equation is small.

Fifthly, in Chapter-5, the empirical research is based on semi-structured interviews of the selected group of interviewees where the analysis relied to a great extent on the researcher’s perspective and judgment which may create ambiguity. However, to safeguard the analysis from such uncertainty, the findings are verified against other available documents such as newspapers and previous studies on Bangladesh.

Finally, the empirical findings of this thesis are country specific and are not necessarily generalizable to other countries. However, the transitional and developing countries which are also promoting banking CCG can benefit from the findings and the approach of this thesis.

6.7 Potential Research Areas for Future Development

No research on CG is ever complete. The general importance of banking CG has been established and knowledge on different issues is still required as the banking industry is dynamic. Keeping an eye on the limitations and implications of the present study, the following are some recommendations for further research in the area of banking CG in Bangladesh.

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200 Because, no other firms or linear combination of firms are comparable in so many dimensions. When there are a small number of observations relative to the number of inputs, outputs and other constraints, it is difficult for a large proportion of the observations to match in all dimensions (Bauer, et al., 1998).
Firstly, this study is concentrated only on 1st, 2nd and 3rd Gen conventional PCBs CG and ownership structure for the period of 2001 to 2012. It would be interesting to carry a longitudinal study using the same variables on the 4th Gen conventional PCBs and as well as the Islamic Banks and State Owned Commercial Banks (SOCBs) over a longer period of time. The results may reveal a different scenario, while it is alleged that SOCBs are the worst performers. Also, from the qualitative analysis this thesis unfolds the fact that concentration of family ownership exists among Gen 1 PCBs. It would be interesting to measure the percentage of concentration on each bank through quantitative analysis and to analyze those effects through further qualitative analysis.

Secondly, the study intentionally looked at two performance indicators - Revenue Efficiency and Profitability of 1st, 2nd and 3rd Gen conventional PCBs using selected variables to identify gaps, it deliberately left other performance indicators. Hence, in future, employee productivity, cost efficiency, risk management etc can be measured to determine if there exists a further performance gap among generations. Moreover, this research has used the total amount of NPL to calculate the NPL ratio; however, the risk-weighted assets, funding ratio, liquidity coverage ratio etc could be used in future research to investigate the cause of below-average profit performance of Gen 1 banks.

Thirdly, a criticism of the findings of Chapter 4 is the failure to recognise the role of risk in bank performance and the endogeneity issue that makes the risk premium a choice variable for Gen 1 banks. The findings of Chapter 5 identify the role of family domination in the corporate governance of the Gen 1 banks. The benefits of leverage and soft loans to favoured borrowers are greater than the returns to the dominant shareholders. As a result, Gen 1 banks sacrifice performance (ROA) for the benefit of acquiring soft loans to family or favoured borrowers. The lower ROA of the Gen 1 banks is not just the result of a high NPL ratio but also an under-priced risk. In effect, this means that the risk premium that supports the net interest margins (NIM) of Gen 1 banks is deliberately set lower than those of the Gen 2 and 3 banks. The recognition of the endogenous nature of risk does not affect the estimation procedure as ROA is the dependent variable in estimation and this in turn can be decomposed into NIM and net returns from non-interest earnings. Therefore, ROA encompasses the risk premium. However, the dummy variable that identifies Gen 1 banks captures more than just
differences in risk preference of the different banks. Identifying the weakness of Gen 1 ROA because of under-priced risk against other factors is a subject for future research.

**Fourthly,** for future research, it is important to draw attention and to find out appropriate solution how to change the mindset of the people and the culture of resistance with the aim of establishing a friendly work environment, an ethical board, a proper auditing system, successful AGMs, and an effective incorporation of CCG.

**Finally,** the spectrum of corporate governance is wide-ranging. It covers not only the board issues but also the unpredictability of markets, competition among banks and complexity of services. All these required continued research and development of the regulatory structure which ensures investors’ protection whilst simultaneously encouraging innovation.
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Appendices
### Appendix - 1: Names of the Scheduled Banks

#### Scheduled Banks Operating in Bangladesh

<table>
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<tr>
<th>A. State Owned Commercial Banks (SOCBs)</th>
<th>i) 1st Generation Conventional PCBs</th>
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<tbody>
<tr>
<td>1. Agrani Bank Limited.</td>
<td>1. AB Bank Ltd.</td>
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<tr>
<td>3. Rupali Bank Limited.</td>
<td>3. The City Bank Ltd</td>
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<td></td>
<td>5. Pubali Bank Ltd.</td>
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<td></td>
<td>6. Uttara Bank Ltd.</td>
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<tr>
<td>B. Specialized Bank(SDBs) / Development Financial Institutions (DFIs)</td>
<td>ii) 2nd Generation Conventional PCBs</td>
</tr>
<tr>
<td>1. Bangladesh Krishi Bank.</td>
<td>1. IFIC Bank Ltd.</td>
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<tr>
<td>2. Rajshahi Krishi Unnayan Bank.</td>
<td>2. Eastern Bank Ltd.</td>
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<td>3. Bank of Small Industries and Commerce Bangladesh Ltd.</td>
<td>3. NCC Bank Ltd.</td>
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<td>5. Dhaka Bank Ltd.</td>
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<td>6. Dutch Bangla Bank Ltd.</td>
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<td>7. Bangladesh Commerce Bank Ltd.</td>
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<td>C. Private Commercial Banks (PCBs)</td>
<td>iii) 3rd Generation Conventional PCBs</td>
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<td></td>
<td>1. Southeast Bank Ltd.</td>
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<td>2. Mercantile Bank Ltd.</td>
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<td>3. Standard Bank Ltd</td>
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<td>4. One Bank Ltd.</td>
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<td>5. Mutual Trust Bank Ltd.</td>
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<td>6. Premier Bank Ltd.</td>
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<td>7. Bank Asia Ltd.</td>
</tr>
<tr>
<td></td>
<td>8. Trust Bank Ltd.</td>
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<tr>
<td></td>
<td>9. Jamuna Bank Ltd.</td>
</tr>
<tr>
<td></td>
<td>10. BRAC Bank Ltd.</td>
</tr>
<tr>
<td></td>
<td>i) 1st Generation Islami Shariah based PCBs</td>
</tr>
<tr>
<td></td>
<td>1. Islami Bank Bangladesh Ltd</td>
</tr>
<tr>
<td></td>
<td>2. ICB Islamic Bank Ltd</td>
</tr>
<tr>
<td></td>
<td>ii) 2nd Generation Islami Shariah based PCBs</td>
</tr>
<tr>
<td></td>
<td>1. Al-Arafah Islami Bank Ltd</td>
</tr>
<tr>
<td></td>
<td>2. Social Islami Bank Ltd</td>
</tr>
<tr>
<td></td>
<td>iii) 3rd Generation Islami Shariah based PCBs</td>
</tr>
<tr>
<td></td>
<td>1. EXIM Bank Ltd</td>
</tr>
<tr>
<td></td>
<td>2. First Security Islami Bank Ltd</td>
</tr>
<tr>
<td></td>
<td>3. Shahajalal Islami Bank Ltd</td>
</tr>
<tr>
<td>D) Foreign Commercial Banks (FCBs)</td>
<td>Source: Bangladesh Bank Website, 2012 (<a href="http://www.bangladesh-bank.org">www.bangladesh-bank.org</a>)</td>
</tr>
<tr>
<td>1. Standard Chartered Bank</td>
<td></td>
</tr>
<tr>
<td>2. State Bank of India</td>
<td></td>
</tr>
<tr>
<td>3. Habib Bank Ltd.</td>
<td></td>
</tr>
<tr>
<td>4. Citi Bank, N.A.</td>
<td></td>
</tr>
<tr>
<td>5. Commercial Bank of Ceylon Ltd.</td>
<td></td>
</tr>
<tr>
<td>6. National Bank of Pakistan</td>
<td></td>
</tr>
<tr>
<td>7. Woori Bank</td>
<td></td>
</tr>
<tr>
<td>8. The Hong Kong &amp; Shanghai Banking Corporation Ltd.</td>
<td></td>
</tr>
<tr>
<td>9. Bank Al-Falah Ltd</td>
<td></td>
</tr>
</tbody>
</table>
Appendix - 2: State Owned Commercial Banks Reform Programme

Under the reform program, SCBs have raised their capital to 10 percent on average, (excluding the worst SCB).

The four SCBs were corporatized into LLCs owned by a government holding company in 2007. The corporatization brought the SCBs under BB’s regulatory authority, coupled with a notional accounting increase of Taka 87.9 billion in goodwill/capital, equivalent to the SCBs’ accumulated losses. The SCBs are committed to use pre-tax —amortizations‖ to replace this notional capital increase over 10 years, and the 2008 —amortizations‖ have been made. This procedure reduces reported earnings from the SCBs.

In 2007, the government began a restructuring of three of the SCBs to operate along more commercial lines, which was monitored by BB and supported by the World Bank. CEOs/MDs and four General Managers (Accounting, Audit, IT and HR) were selected competitively and remunerated at private sector levels based on performance. Annual, monitorable goals were set for cash recovery of NPLs, limits on new NPLs, operations, computerization, profitability, increased net worth, and disclosure. These goals were almost wholly achieved in 2008 and mostly seem on target for 2009. The average capital of these banks is now 10 percent. Voluntary retirement schemes are being formulated to reduce staff but will require approval of the Ministry of Finance. The banks have also been engaged in long-term planning, which will involve a careful consideration of the profitability of individual branches.

Rupali Bank, the fourth SCB was targeted for privatization even before 2007, but the privatization did not succeed leaving the bank’s position unresolved. The bank was an LLC before 2007 with a small share of equity held in listed shares. Its major activities were suspended for over two years awaiting the privatization, which fell through in 2008. In the meantime, the bank’s operations and financial condition deteriorated significantly. The bank was added to the restructuring program, but its management was not changed as was done in the other SCBs. Although its performance improved somewhat, it generally failed to meet its targets. In addition, the bank’s finances could further deteriorate owing to its unsecured exposures to state-owned enterprises.

Despite the gains, SCBs’ finances remain weak and ad hoc government demands put an additional stress on profitability. For instance, the government pressured banks to open low return L/Cs for petroleum, fertilizer, and food during the oil/food price run-up. Government’s moral suasion and targets for various types of lending decrease profitability—potentially more so than for PCBs. In addition, the SCBs, like all banks, suffer lower returns due to recent ceilings on lending rates. Required assurances for SCBs not to engage in excessive, non-profitable lending are not yet in place.

Appendix - 3: Elements of Good Corporate Governance

<table>
<thead>
<tr>
<th>Elements of Good Corporate Governance</th>
<th>Control environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good board practices</td>
<td>Control environment</td>
</tr>
<tr>
<td>• Clearly defined roles and authorities</td>
<td>• Independent audit committee established</td>
</tr>
<tr>
<td>• Duties and responsibilities of directors understood</td>
<td>• Risk-management framework present</td>
</tr>
<tr>
<td>• Board is well-structured</td>
<td>• Internal control procedures</td>
</tr>
<tr>
<td>• Appropriate composition and mix of skills</td>
<td>• Internal audit function</td>
</tr>
<tr>
<td>• Appropriate board procedures</td>
<td>• Independent external auditor conducts audits</td>
</tr>
<tr>
<td>• Director remuneration in line with best practice</td>
<td>• Management information systems established</td>
</tr>
<tr>
<td>• Board self-evaluation and training conducted</td>
<td>• Compliance function established</td>
</tr>
<tr>
<td>Transparent disclosure</td>
<td>Well-defined shareholder rights</td>
</tr>
<tr>
<td>• Financial information disclosed</td>
<td>• Minority shareholder rights are formalized</td>
</tr>
<tr>
<td>• Non-financial information disclosed</td>
<td>• Well-organized general assembly conducted</td>
</tr>
<tr>
<td>• Financials prepared according to IFRS</td>
<td>• Policy on related-party transactions</td>
</tr>
<tr>
<td>• High-quality annual report published</td>
<td>• Policy on extraordinary transactions</td>
</tr>
<tr>
<td>• Web-based disclosure</td>
<td>• Clearly defined and explicit dividend policy</td>
</tr>
</tbody>
</table>

Board commitment

• The board discusses corporate governance issues and has created corporate governance committee
  • The company has a corporate governance Champion
  • A corporate governance improvement plan has been created
  • Appropriate resources are committed
• Policies and procedures have been formalized and distributed to relevant staff
• A corporate governance code has been developed
• The company is publicly recognized as a corporate governance leader

Source: Introduction to Corporate Governance, Corporate Governance Board Leadership Training Resources Kit, (2008), Global Corporate Governance Forum (GCGF), International Finance Corporation (IFC) and BEI (2004)
## Appendix - 4: Procedure to Obtain a Bank License

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Status of the new commercial bank</td>
<td>Must be a public limited company incorporated in Bangladesh.</td>
</tr>
<tr>
<td>2</td>
<td>Paid up capital requirement bank to be established</td>
<td>The paid up capital of new commercial bank shall not be less than Taka 400.00 Crore as required under Bank Company Act 1991. The share capital will be formed with ordinary shares only.</td>
</tr>
<tr>
<td>3</td>
<td>3. Mode of payment:</td>
<td>For a banking company incorporated in Bangladesh, the capital contribution made by the sponsors and subscribers of the proposed bank shall be in a liquid, unencumbered form (such as cash or approved securities), held in a bank account that has been verified by Bangladesh Bank, and under a Bangladesh Bank lien.</td>
</tr>
<tr>
<td>4</td>
<td>Sponsors and share capital contribution</td>
<td>Initial minimum capital Taka 400.00 crore shall be provided by sponsors of the proposed bank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.1 The bank shall issue public shares within three (3) years from the date of commencement of the banking business. Public issues shall be at least equal to sponsors' share amount.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.2 The minimum shareholding stake of each sponsor shall be Taka 1.00 crore and the maximum shall be 10% of the proposed bank’s total share capital. This ceiling of 10% applies to an individual, company or family member, either personally, jointly or both. “Family” is defined herewith to include spouse, father, mother, son, daughter, brother, sister of the individual or anyone dependent on that individual.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.3 The ceiling of 10% may be relaxed in the case of a bank set up as a joint venture with a foreign financial institution or banking company.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.4 Sponsors holding 5% or more shares shall have to sign a capital maintenance agreement (CMA) stating that they would, jointly and severally inject additional capital if the bank ever fell below any minimum capital requirement. In case of failure to inject such capital within the stipulated time, the responsibility would fall on individuals within the sponsors group to bear the entire burden of the required injection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.5 The sponsors' shares shall not be transferred within a period of three (3) years from the commencement of the business, without permission from Bangladesh Bank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.6 Sponsors' contribution to the equity capital of the proposed bank will be required to be out of net worth declared to the Tax authorities in form IT10B; contribution out of borrowings from bank or non-bank financial institution shall not be acceptable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.7 If an individual or any member of his/her family is or had been a loan defaulter with a bank/financial institution at any time during the past five years shall not be eligible to apply as a sponsor of the proposed bank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.8 An individual awaiting verdict of any undisposed lawsuit in any court/tribunal against his/her loan default status shall not be eligible to apply as a sponsor of the proposed bank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.9 A tax assessee penalized or awaiting court/tribunal verdict on any suit for offence under section 21 of Income Tax Ordinance, 1984 shall not be eligible to apply as a sponsor of the proposed bank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.10 A tax assessee penalized or awaiting court/tribunal verdict on any suit for offence under section 93 of Income Tax Ordinance, 1984 shall not be eligible to apply as a sponsor of the proposed bank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.11 A tax assessee who has not submitted overdue tax-return for the current year or who has undisposed tax prosecution reopened under section 21 of Income Tax Ordinance, 1984 shall not be eligible to apply as a sponsor of the proposed bank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.12 Any assessee having unpaid liability for any undisputed customs duty, VAT, supplementary duty, excise duty or is awaiting verdict on any prosecution under Customs Act, 1969; VAT Act, 1991; Excise &amp; Salt Act, 1944 in any court/tribunal shall not be eligible to be a sponsor of the proposed bank.</td>
</tr>
<tr>
<td>5</td>
<td>Fit and Proper Test for Sponsors/Directors</td>
<td>5.1 Competence, integrity and qualifications of the Sponsors of the proposed bank becoming the first Directors shall be evaluated. The evaluation process shall include background checks on whether previous activities, including regulatory or judicial judgments, profession, raise doubts concerning their competence, sound judgment, or integrity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.2 The Sponsors/Directors shall qualify the Fit and Proper Test criteria applicable for the Bank Directors in Bangladesh.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.3 His/her inclusion in the Board of Directors shall not contravene any law for the time being in force in Bangladesh and in the country of his/her present permanent domicile. He/she has not evaded any legal proceedings of any country for any criminal offences or crime against humanity except for offences of minor traffic violations etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.4 Bangladesh Bank shall evaluate proposed sponsors as to expertise and integrity (fit and proper test), and any potential for conflicts of interest. The fit and proper criteria include: (i) skills and experience in relevant financial operations commensurate with the intended activities of the bank; and (ii) no record of criminal activities or adverse regulatory judgments that make person unfit to uphold important position in a bank.</td>
</tr>
<tr>
<td>6</td>
<td>Management of the proposed bank</td>
<td>6.1 A Director or Advisor to any banking company other than the proposed bank shall not be a Director of the proposed bank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.2 The Member of Board of Directors shall be restricted to 13 (Thirteen).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.3 Maximum number of directors from a family shall be restricted to two in case of the total...</td>
</tr>
</tbody>
</table>
shareholding of that family exceeds 5% and one director if the total shareholding is up to 5%.
6.4 The Chief Executive Officer (CEO) of the proposed bank shall have at least 15 (fifteen) years of experience in the banking profession.

<table>
<thead>
<tr>
<th>Operation of the proposed bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 The ratio of urban and rural bank branch has to be 1:1 or as per instruction issued by Bangladesh Bank from time to time.</td>
</tr>
<tr>
<td>7.2 New Bank has to ensure finance at least 5% of its total lending into agricultural sector or as per instruction issued by Bangladesh Bank from time to time.</td>
</tr>
<tr>
<td>7.3 Proposed bank should take part in Corporate Social Responsibility (CSR) activity. The new bank should spend 10% or more of its previous year's net income to CSR.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required documents/ information/ analysis to be submitted to Bangladesh Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>The application for approval to establish a new banking company shall be submitted to Bangladesh Bank with all the accompanying documents and information required, in the formats given in Annex I to Annex IV. Bangladesh Bank shall only consider applications that include the following:</td>
</tr>
<tr>
<td>8.1 A bank draft in the amount of Taka 10 (Ten) lakh in favour of Bangladesh Bank, attached to the Letter of Application, that serves as a nonrefundable application processing fee;</td>
</tr>
<tr>
<td>8.2 Name and address of the Applicant;</td>
</tr>
<tr>
<td>8.3 Name, address, telephone number of the contact person;</td>
</tr>
<tr>
<td>8.4 Feasibility Report on the proposed banking company, including an analysis of Bangladesh's macroeconomic environment, financial system, as well as a business plan for the proposed bank, financial projections and sensitivity analyses;</td>
</tr>
<tr>
<td>8.5 Biographical Reports and proof of citizenship for each promoter/director, CEO/MD and Heads of Operation, Credit, Finance, Risk Management, Internal Control and IT of the proposed bank;</td>
</tr>
<tr>
<td>8.6 Proposed compensation package and other terms of contract of the CEO;</td>
</tr>
<tr>
<td>8.7 Minutes of the shareholders (sponsors) meeting;</td>
</tr>
<tr>
<td>8.8 Written agreement by the shareholders to organize the banking company;</td>
</tr>
<tr>
<td>8.9 Sponsors have to submit a business plan where management strategy of following sector should be elaborately defined;</td>
</tr>
<tr>
<td>8.9.1 Risk factors relating to assets of proposed bank.</td>
</tr>
<tr>
<td>8.9.2 Strategy for reaching unbanked area specially disadvantaged locality/ group.</td>
</tr>
<tr>
<td>8.9.3 A strategy to provide financial services to enhance Bangladesh's competitiveness by reducing trade related banking fees/charges.</td>
</tr>
<tr>
<td>8.9.4 A strategy to provide banking services which could promote export diversification as well as to provide financial services for non-traditional export sectors and small &amp; medium entrepreneurs.</td>
</tr>
<tr>
<td>8.9.5 New bank should bring new/modern technology (e.g. mobile banking, internet banking) for providing better service to customers.</td>
</tr>
<tr>
<td>8.10 Draft Memorandum and Articles of Association;</td>
</tr>
<tr>
<td>8.11 For a corporate promoter; Board Resolution, Articles of Incorporation and By-laws, list of directors and officers, list of shareholdings, audited financial statements for the latest two years, certified copies of the Memorandum and Articles of Association;</td>
</tr>
<tr>
<td>8.12 Joint Venture agreement, in case of foreign equity participation.</td>
</tr>
<tr>
<td>8.13 In addition, the sponsors shall:</td>
</tr>
<tr>
<td>(a) having received a Letter of Intent from Bangladesh Bank, the company shall apply to Bangladesh Bank for a formal license for commencement of banking business under Section 31 of the Bank Company Act, 1991, and for a license to open a place of business under Section 32 of said Act in the manner prescribed there under;</td>
</tr>
<tr>
<td>(b) register the proposed company with the Registrar of Joint Stock Companies under the Companies Act, 1994, as a public limited Company, and;</td>
</tr>
<tr>
<td>(c) obtain a Certificate of Incorporation subject to the approval by Bangladesh Bank of the draft Memorandum and Articles of Association;</td>
</tr>
<tr>
<td>(d) After obtaining the license from Bangladesh Bank, the company shall apply to Bangladesh Bank for its scheduling under Article 37 of the Bangladesh Bank Order, 1972.</td>
</tr>
</tbody>
</table>

Source: Bangladesh Bank Website, 2012 (www.bangladesh-bank.org)
### Appendix - 5: Appointment of Board Directors

<table>
<thead>
<tr>
<th>General</th>
<th>From the Shareholders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td><strong>Fit and Proper Test</strong>:- The person must have management/business or professional experience for at least 10 (ten) years; has not been convicted in any criminal offence or involved in any fraud/forgery, financial crime or other illegal activities; has not been subject to any adverse findings in any legal proceedings, has not been convicted in regard to contravention of rules, regulations or disciplines of the regulatory authorities relating to financial sector; has not been involved with a company/firm whose registration/license has been revoked or cancelled or which has gone into liquidation; loans taken by him/her or allied concern from any bank or financial institution have not become defaulted; has not been adjudicated a bankrupt by a court; and must be loyal to the decisions of the board of directors.</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>A person will have to sign the consent letter under <strong>section 93 of the Companies Act, 1994</strong> to declare that (s)he is not disqualified to become a bank director in accordance with the above mentioned fit and proper test.</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>If the person is elected then the signed declaration shall have to be forwarded to Bangladesh Bank by the Chairman of the board of directors. The above-mentioned restrictions for qualifications of bank directors shall be in addition to any related laws/regulations for the time being in force.</td>
</tr>
</tbody>
</table>

**Source:** Bangladesh Bank Website, 2012 (www.bangladesh-bank.org)
## Appendix - 6: BODs Ownership, Composition, Terms and Qualification

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>No of Directors</td>
<td>- The maximum number of the Directors of the Board of banks and Financial Institutions (FIs) would be 13 and 11 respectively.</td>
</tr>
</tbody>
</table>
| 2. | Tenure                 | - Tenure of a Director of a bank would be 3 years extendable to another one term i.e. a Director can continue his/her office for six years at a stretch.  
- A recess of one term is required after completion of six years as a Director. For FIs the tenure of a Director is 3 years and is renewable. |
| 3. | Family Ownership       | - Not more than 10% of the shares of a bank will be held by the members of a family.                                                                                                                     
- On the other hand, maximum limit of holding shares of an FI by a single person/family/institution is 20 percent for domestic shareholders and 25 percent for joint venture. |
| 4. | Family Directorship    | - Not more than two (2) member of a family will become Director of a bank  
- In case of holding of more than 5% share of the Bank by that family and one (1) member in case of holding of up to 5% share.                        |
| 5. | Voting Right           | - Maximum voting right of any shareholder is restricted to 5% of total voting rights of all shareholders of the bank.                                                                                     |
| 6. | Requirements           | - To be appointed a Director of a Bank or FI one requires to pass the 'fit and proper test' criteria.                                                                                                     
- S/he has to hold qualifying amount of shares  
- Not to be a minor or undercharged insolvent or mentally unsound with no record of criminal conviction or adverse judicial comment in any civil or criminal proceeding, no record of penalization by any authority for regulatory breach  
- No loan default.  
- No employee/executive, except CEO, would be appointed as the Director of any Bank/FI.                                           |
| 7. | Experience             | - The Director of a Bank requires having at least ten years of business or professional experience.                                                                                                     |

**Source:** Bangladesh Bank Website, 2012 (www.bangladesh-bank.org)
## Appendix - 7: Responsibilities of the Board

<table>
<thead>
<tr>
<th>No</th>
<th>Activities</th>
<th>Explanation</th>
<th>Circular No</th>
</tr>
</thead>
</table>
| a. | Work-planning and strategic management | (i) The board shall determine the objectives and goals and chalk out strategies and work-plans on annual basis relating to structural change and reorganization for enhancement of institutional efficiency and other relevant policy matters whereas analyze/monitor the development of implementation of the work-plans at quarterly.  
(ii) The board shall have its analytical review incorporated in the Annual Report as regard the success/failure in achieving the business and other targets as set out in its annual work-plan and shall apprise the shareholders of its opinions/recommendations on future plans and strategies. It shall set the Key Performance Indicators (KPIs) for the CEO and other senior executives and have it evaluated at times. | BRPD Circular No. 09 dated September 17 1996 |
| b. | Lending and risk management | (i) The policies, strategies, procedures etc. in respect of appraisal of loan/investment proposal, sanction, disbursement, recovery, rescheduling and write-off shall be made with the board's approval in accordance with the existing laws, rules and regulations. The board shall specifically distribute the power of sanction of loan/investment and such distribution should desirably be made among the CEO and his subordinate executives as much as possible. No director, however, shall interfere, directly or indirectly, into the process of loan approval.  
(ii) The board shall frame policies for risk management and get them complied with and shall monitor quarterly. | BRPD Circular No. 09 dated September 17 1996 |
| c. | Internal control of management | (i) The board shall be vigilant on the internal control system to attain and maintain satisfactory qualitative standard of its loan/investment portfolio by quarterly submitting reports to its audit committee regarding compliance of recommendations made in internal and external audit reports and the Bangladesh Bank inspection reports.  
(ii) Banks are also advised to set up complaint Cell in their Zonal Offices for prompt settlement of the complaints received. | BRPD Circular letter no-11, dated 26 July,2011 |
| d. | Human resources management and development | (i) Policies relating to recruitment, promotion, transfer, disciplinary and punitive measures, human resources development etc. and service rules shall be framed and approved by the board. The chairman or the directors shall in no way involve themselves or interfere into or influence over any administrative affairs including recruitment, promotion, transfer and disciplinary measures as executed under the set service rules. No member of the board of directors shall be included in the selection committees for recruitment and promotion to different levels. Recruitment and promotion to the immediate two tiers below the CEO shall, however, rest upon the board. Such recruitment and promotion shall have to be carried out complying with the service rules i.e., policies for recruitment and promotion.  
(ii) The board shall focus its special attention to the development of skills of bank's staff in different fields of its business activities including prudent appraisal of loan/investment proposals, and to the adoption of modern electronic and information technologies and the introduction of effective Management Information System (MIS) by incorporating in annual work plan. | BRPD Circular No. 09 dated September 17 1996 |
| e. | Financial management | (i) Annual budget and the statutory financial statements shall be prepared with the approval of the board quarterly and will review/monitor the positions of bank's income, expenditure, liquidity, non-performing asset, capital base and adequacy, maintenance of loan loss provision and steps taken for recovery of defaulted loans including legal measures.  
(ii) The board shall frame the policies and procedures for bank's purchase and procurement activities and shall accordingly approve the distribution of power for making such expenditures. The maximum possible delegation of such power shall rest on the CEO and his subordinates. The decision on matters relating to infrastructure development and purchase of land, building, vehicles etc. for the purpose of bank's business shall be adopted with the approval of the board. | BRPD Circular No. 09 dated September 17 1996 |
| f. | Formation of supporting committees | For decision on urgent matters an executive committee, whatever name called, may be formed with the directors. There shall be no committee or sub-committee of the board other than the executive committee and the audit committee. No alternate director shall be included in these committees. | BRPD Circular No. 09 dated September 17, 1996 |
| g. | Appointment of CEO | The board shall appoint a competent CEO for the bank with the approval of the Bangladesh Bank. | BRPD Circular No. 09 dated September 17, 1996 |

Source: Bangladesh Bank Website, 2012 (www.bangladesh-bank.org)
Appendix - 8: Restriction on Lending to Directors of Private Banks

The following instructions on the above subject have been issued rescinding the previous one in this regard with the authority vested under Section 45 of Bank Companies Act, 1991 in public interest and for the interest of the depositors with immediate effect: -

<table>
<thead>
<tr>
<th>Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Any loan facility or guarantee or security provided to a Director of a bank or to his relatives must be sanctioned by the Board of</td>
</tr>
<tr>
<td>Directors of the bank and has to be specifically mentioned in the Balance sheet of the bank. However the total amount of the loan facilities</td>
</tr>
<tr>
<td>extendable to a Director or to his relatives should not exceed 50% of the paid-up value of the shares of that bank held in Director's own</td>
</tr>
<tr>
<td>name.</td>
</tr>
<tr>
<td>2. If the total amount of loan facilities already extended to a Director or to his relatives exceeds 50% of the paid-up value of the shares</td>
</tr>
<tr>
<td>of the bank held in Director's own name, the amount in excess should be repaid within the time approved by Bangladesh Bank. Under no</td>
</tr>
<tr>
<td>circumstances, renewal or extension of time of the loan facilities in excess of that 50% can be made.</td>
</tr>
<tr>
<td>3. No such loan wherein the borrower is exempted fully or partially from bearing the loss including Mudaraba or Musharaka systems of loan</td>
</tr>
<tr>
<td>can be extended to any Director or any relatives of him.</td>
</tr>
<tr>
<td>4. Subject to compliance of the conditions mentioned in paragraph No.1 above, loan facilities in excess of Tk.10 lacs for funded loan and</td>
</tr>
<tr>
<td>Tk.50 lacs (funded and non-funded) in favor of any Director or his relatives or proprietorship or partnership firms and private or public</td>
</tr>
<tr>
<td>limited companies wherein those persons have interests, can be extended subject to obtaining no-objection from Bangladesh Bank.</td>
</tr>
<tr>
<td>5. If any Director of a bank without being apparently involved in any industrial/commercial organization, conducts or directs accounts of</td>
</tr>
<tr>
<td>private or public limited companies wherein those persons have interests, can be extended subject to obtaining no-objection from Bangladesh Bank.</td>
</tr>
<tr>
<td>6. Bank loan of any public limited company will be treated as liability of a Director of the bank in proportion of the amount (percentage)</td>
</tr>
<tr>
<td>of shares of that company held by him.</td>
</tr>
<tr>
<td>7. If any Director extends guarantee against any loan for any specific amount, his liability will remain limited up to that specific amount.</td>
</tr>
<tr>
<td>8. In case of extending loan facilities in favor of the organization wherein the Director has interest, all kinds of legal formalities have to be properly executed as per norms.</td>
</tr>
<tr>
<td>9. Respective rules and regulations of Bank Companies Act, 1991 regarding loan facilities in general and other instructions of Bangladesh Bank should be followed as usual.</td>
</tr>
<tr>
<td>10. For the purpose of extending loan facilities, the explanation as given under Sub-section 27(2) of Bank Companies Act, 1991 will be applicable to define the term 'Director', i.e., it will include his/her spouse, father, mother, son, daughter, brother, sister and all his dependants.</td>
</tr>
<tr>
<td>11. If any loans availed in the names of the Directors or organizations wherein they have interests, turn to defaulted ones, legal action has to be initiated instantly and inter alia the Directors have to be served with the notice under Section 17 of Bank Companies Act, 1991.</td>
</tr>
<tr>
<td>12. The quarterly statement of liabilities of the Directors and Ex-Directors of the bank as defined in the latest amendment of Bank Companies Act, 1991, will have to be submitted to Bangladesh Bank in the format as enclosed with the BRPD Circular Letter No. 8 dated 19 June, 1997.</td>
</tr>
<tr>
<td>13. Any change/cancellation/return of security, collateral security, guarantee etc, provided against the loan of any Director or Ex-Director of a bank will require prior permission from Bangladesh Bank.</td>
</tr>
<tr>
<td>14. Any change of the conditions of any loans of any Director or Ex-Director of a bank will require prior permission from Bangladesh Bank. Copies of sanction-letters of all loans of the Director or Ex-Director have to be submitted within September 30, 1999 to Banking Regulation and policy Department. In future, copies of the sanction-letters will have to be submitted to the said Department within 1(one) week from the date of sanction of the loan with the no-objection from Bangladesh Bank but before the disbursement of the loan.</td>
</tr>
<tr>
<td>15. The above rule will also be applicable in case of those loans extended in favor of any organizations wherein any Director/ex-Director of the bank has interest or he/she was once proprietor, partner, director or guarantor thereof; i.e., any change of the security, collateral security, guarantee provided against the loans of those organizations or of the conditions of sanction will require prior permission from Bangladesh Bank. Copies of sanction-letters of such loan-accounts will have to be submitted to Banking Regulation and policy Department within October 15, 1999.</td>
</tr>
<tr>
<td>16. No remission facilities (including A/C blocking) to any loan accounts wherein bank's Director or Ex-Director has interest can be allowed without prior permission from Bangladesh Bank. However, in case of the Ex-Directors who are at present not holding any share of the bank including the Govt.-nominated Directors, the issue of waiver of interest on loans availed before they were Directors of the bank or after they ceased to be the Directors, with the permission of the Board of Directors of the bank will not require prior permission from Bangladesh Bank.</td>
</tr>
<tr>
<td>17. If re-scheduling is required in case of loans extended before the issuance of BRPD Circular No. 07 dated 5.8.99 in favor of Director or any organization wherein he has interest, time of repayment in case of term loan can be extended for maximum 03(three) years and in case of working capital latest up to 31st December, 2001. The proposal of rescheduling has to be approved by the Board of Directors of the bank and will come into effect after obtaining no-objection from Bangladesh Bank. If the history of past repayment of loan accounts of the Director or wherein he have interests, is good and at the same time repayment is not being possible for reasons beyond control and temporary inconvenience, only those accounts will be considered for rescheduling as per above procedure.</td>
</tr>
</tbody>
</table>

Source: Bangladesh Bank Website, 2012 (www.bangladesh-bank.org)
Appendix - 9: Appointment of the MD/CEO

<table>
<thead>
<tr>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>- To be appointed as chief executive of a banking company, an individual must possess at least 15 years of banking experience with at least 2 years in the level next below the chief executive.</td>
</tr>
<tr>
<td>- Must meet the other stipulations mentioned above for Directors, except qualifying shares.</td>
</tr>
<tr>
<td>- The minimum experience of the CEO in the case of FI is 12 years and experience of 2 years in the post of next below the CEO is not required.</td>
</tr>
<tr>
<td>- Maximum age limit of CEO of Banks is 65 years.</td>
</tr>
</tbody>
</table>

Source: Bangladesh Bank Website, 2012 (www.bangladesh-bank.org)

Appendix - 10: Responsibilities of the MD/CEO

<table>
<thead>
<tr>
<th>No</th>
<th>Activities</th>
<th>Explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Achieving targets</td>
<td>In terms of the financial, business and administrative authorities the CEO shall remain accountable for achieving the given targets by means of business plan, efficient implementation and prudent administrative and financial management.</td>
</tr>
<tr>
<td>B</td>
<td>Ensure compliance in discharging routine functions</td>
<td>The CEO shall ensure compliance of the Bank Companies Act, 1991 and/or other relevant laws and regulations in discharge of routine functions of the bank.</td>
</tr>
<tr>
<td>C</td>
<td>Provide disclosure to the board regarding memo</td>
<td>The CEO shall include information on violation of any law, rules, regulation including Bank Company Act, 1991 while presenting memos before the Board or the committee formed by the board.</td>
</tr>
<tr>
<td>D</td>
<td>Report Bangladesh bank regarding violation of laws</td>
<td>CEO will provide all sorts of information to Bangladesh Bank about the violation of Banking Companies Act, 1991 and/or any violation of Laws, rules and regulations.</td>
</tr>
<tr>
<td>E</td>
<td>Recruitment and selection of employees</td>
<td>The recruitment and promotion of all staff of the bank except those in the two tiers below him shall rest on the CEO. He shall act in such cases in accordance with the approved service rules on the basis of the human resources policy and sanctioned strength of employees as approved by the board. The board or the chairman of any committee of the board or any director shall not get involved or interfere into such affairs. The authority relating to transfer of and disciplinary measures against the staff, except those at one tier below the CEO, shall rest on him, which he shall apply in accordance with the approved service rules. Besides, under the purview of the human resources policy as approved by the board, he shall nominate officers for training etc.</td>
</tr>
</tbody>
</table>

Source: Bangladesh Bank Website, 2012 (www.bangladesh-bank.org)
Appendix - 11: Constitution and Responsibility of Audit Committee

Role of the Audit Committee

- Audit Committee of the Board of a bank can play an effective role in providing a bridge between the board and management, shareholders, depositors and stake-holders and help in ensuring efficient, safe and sound banking practices.

- Role of the audit committee is important in evolving an effective procedure for financial reporting disclosure, developing a suitable internal control system and maintaining liaison with internal and external auditors to minimize various business risks. Moreover, new business opportunities and increased competition due to globalization of markets, increased use of electronics and information technology, increased complexity of transactions, accounting standards and regulatory requirements are contributing to essentiality and expansion of the role of audit committee.

- The Audit Committee of Board of Directors will assist the Board in fulfilling its oversight responsibilities including implementation of the objectives, strategies and overall business plans set by the Board for effective functioning of the bank.

- The Committee will review the financial reporting process, the system of internal control and management of financial risks, the audit process, and the bank's process for monitoring compliance with laws and regulations and its own code of business conduct.

The audit committee will perform:

1. Internal Control
   1.1. Evaluate whether management is setting the appropriate compliance culture by communicating the importance of internal control and the management of risk and ensuring that all employees have understanding of their roles and responsibilities;
   1.2. Review the arrangements made by the management for building a suitable Management Information System (MIS) including computerization system and its applications;
   1.3. Consider whether internal control strategies recommended by internal and external auditors are implemented by management;
   1.4. Review the existing risk management procedures for ensuring an effective internal check and control system;
   1.5. Review the corrective measures taken by the management as regards the reports relating to fraud-forgery, deficiencies in internal control or other similar issues detected by internal and external auditors and inspectors of the regulatory authority and inform the board on a regular basis.

2. Financial Reporting
   2.1. Review the annual financial statements and determine whether they are complete and consistent with the accounting standards set by the regulatory authority;
   2.2. Meet with management and the external auditors to review the financial statements before their finalization.

3. Internal Audit
   3.1. Review the activities and organizational structure of the internal audit function and ensure that no unjustified restrictions or limitations are made;
   3.2. Review the efficiency and effectiveness of internal audit function;
   3.3. Review that findings and recommendations made by the internal auditors for removing the irregularities detected and also running the affairs of the bank are duly considered by the management.

4. External Audit
   4.1. Review the auditing performance of the external auditors and their audit reports;
   4.2. Review that findings and recommendations made by the external auditors for removing the irregularities detected and also running the affairs of the bank are duly considered by the management;
   4.3. Make recommendations to the board regarding the appointment of the external auditors.
   4.4. Compliance with existing laws and Regulations

Source: Bangladesh Bank Website, 2012 (www.bangladesh-bank.org)
### Appendix - 12: Additional Disclosure

<table>
<thead>
<tr>
<th>Disclosure Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Banks/FIs are required to prepare their financial statements comprising of balance sheet, profit and loss account, cash flow statement, statement of changes in equity, liquidity statement and other explanatory notes in accordance with International Accounting Standard (IAS).</td>
</tr>
<tr>
<td>- Copies of financial statements should be preserved in each of the bank branches, so that the customers of the bank may readily use those on request.</td>
</tr>
<tr>
<td>- Balance sheet should be affixed in a visible place of each bank branch.</td>
</tr>
<tr>
<td>- The financial statements should be published in widely circulated one Bangla and one English daily newspaper within one week of submission of the statements to Bangladesh Bank so that the stakeholders of the bank including its depositors, shareholders and regulatory bodies can get information about the bank easily.</td>
</tr>
<tr>
<td>- These should also be disclosed in the bank's website.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Lending to the Director of own bank/FI is restricted up to 50 percent of the paid-up capital of such Director.</td>
</tr>
<tr>
<td>- Banks are not allowed to appoint Consultants for routine works that can be performed by the regular staff.</td>
</tr>
<tr>
<td>- The Consultants should have specific terms of references (ToR).</td>
</tr>
<tr>
<td>- No past Chairman, Director, Adviser, Chief Executive would be appointed as the Consultant of the same bank.</td>
</tr>
<tr>
<td>- No Consultant or Advisor shall participate in decision making process or exercise power regarding the financial, administrative or operational and routine affairs of the bank.</td>
</tr>
<tr>
<td>- With the view to save the interest of the Depositors, Banks are to appoint two Directors from the depositors who will be in addition to 13 Directors from the shareholders.</td>
</tr>
<tr>
<td>- Issuance of comprehensive guideline on maintenance of risk based capital in accordance with the Basel II is under process which would strengthen long term sustainability of banks.</td>
</tr>
</tbody>
</table>

**Source:** Bangladesh Bank Website, 2012 (www.bangladesh-bank.org)
## Appendix - 13: List of Studies using DEA on the Banking Sector

<table>
<thead>
<tr>
<th>No</th>
<th>Author</th>
<th>Inputs</th>
<th>Outputs</th>
<th>Methods</th>
<th>Sample &amp; Country</th>
</tr>
</thead>
</table>
| 1  | Al-Faraj TN, Alidi AS and Bu-Bshait KA (1993) | - No. of employees.  
- % Employees with college degree  
- Average no. of years of experience  
- Location index  
- Highest authority rank index (%)  
- Index expenditure on decoration (%)  
- Index average monthly salaries (%)  
- Index other operational expenses (%)  
| - Avg monthly net profit  
- Avg monthly b/o current a/c  
- Avg monthly b/o savings a/c  
- Avg monthly b/o other a/c  
- Avg monthly value of mortgages  
- Index for loans (%)  
- No. of current accounts  
| DEA | - 15 banks in Saudi Arabia |
- No. of transactions  
- Potential market  
- Sales representatives  
- Internal automatic facilities  
- No. of branch in surrounding area  
*Cost efficiency  
- Direct labour costs  
- Total technology facilities  
| - Liability sales  
- Loans and mortgages  
- Insurances and securities  
- Number of cards  
| DEA and multi-variate statistical analysis | - 580 bank branches from commercial banks in UK |
| 3  | Athanassopoulos, A. (1997) | *Production approach  
- No. of employees  
- No. ATMs and teller machines  
- No of computers terminals  
*Intermediation approach  
- Non-interest costs  
- Interest costs  
| - No. of deposit accounts  
- No. of credit transaction  
- No. of debit transactions  
- No. of loan applications evaluate  
- No. trans involve commissions  
- Non-interest income  
- Volume of loans  
- Time deposit accounts  
- Savings deposit accounts  
- Current deposit accounts  
| DEA and regression analysis | - 68 branches from commercial banks in Greece |
| 4  | Drake L and Howcroft B (1994) | - No. of interview rooms  
- No. of ATMs  
- Square meters of branch space  
- Management grades  
- Clerical grades  
- Stationery costs  
| - Till transactions  
- Lending products  
- Deposit products  
- Automated transfers  
- Clearing items  
- Ancillary business  
- Insurance business  
| DEA and correlation | - 190 bank branches from a UK clearing bank |
| 5  | Giokas, D (1991) | - No. person-hours worked  
- Square meters of utilized branch space  
- Operating costs (ex labour costs)  
| - Wght no. deposit transactions  
- Wght no. credit transactions  
- Wght no. foreign receipts trans  
- Total weighted no. of transactions correlation  
| DEA, loglinear function & correlation DEA | - 1988 data on 17 bank from Greece |
| 6  | Ncube, M (2009) | - No. of full time employees  
- Fixed Asset  
- Deposits and Currant A/c  
| - Loan Issued  
- Deposits and Currant A/c  
| DEA | - 2000 to 2005 data on 8 South African banks |
| 7  | Oral, M., Kettani, 0. and Yolalan R (1992) | *Productivity assessment  
- No. of personnel  
- No. of on-line terminals  
- No. of commercial accounts  
- No. of saving accounts  
- No. of checking accounts  
- No. of credit applications  
| - Amount of standard time spent on all kinds of transactions  
| DEA and statistical test | - 44 bank branches from a Turkish Bank |
|------------------------------------------------------|-----------------------------|---------------------------------|---------------------------------|-----------------------------|-------------------|-----------------------------|
| *Profitability assessment*                           | - Personnel costs           | - No. tellers                   | - No. full-time equivalent tellers | - No. hrs worked by clerical personnel | - No. hours worked by personnel | - No. hours worked by personnel |
|                                                     | - Administrative expenses   | - No. ledgers and accounting officers | - No. full-time platform personnel | - No. hrs worked by managerial personnel | - No. of windows operated | - Costs of supplies |
|                                                     | - Non-interest income       | - No. typing staff              | - No. full-time manager personnel | - No. computer terminal hours used | - No. of computers | - Square meters of branch floor space |
|                                                     | - Depreciation              | - No. supervision personnel     | - Square feet of office space    | - Square meters of office space | - No. of computer terminals | - No. of computer terminals |
|                                                     | - Interests paid on deposits| - No. credit staff              | - Operating cost (excluding personnel and No. new accounts rent) | - No. personnel accounts | - No. new accounts opened | - No. trans aggregated in 7 areas |
|                                                     |                              |                                |                                  | - No. savings accounts         | - No. special services (eg., card) | - No. of ‘easiest’ transactions |
|                                                     |                              |                                |                                  | - No. business accounts        | - Miscellany (eg., insurance trans) | - No. of ‘medium-easy’ trans |
|                                                     |                              |                                |                                  | - No. credit application accounts |                                      | - No. of ‘medium-difficult’ trans |
|                                                     |                              |                                |                                  |                              |                                      | - No. of ‘most difficult’ trans |
|                                                     | - Interest earned on loans  | - No. counter transactions      | - No. deposits, withdrawals and checks cashed | - Service quality index       | - No. checking and saving a/c trans | - FDH and DEA |
|                                                     | - Non-interest expenses   | - No. counter sales             | - No. bond, bank & traveler checks transactions |                                | - No. automatic teller machine trans | - DEA |
|                                                     |                              | - No. security transactions     | - No. night deposits             |                                | - No. international transactions | - 20 Turkish bank |
|                                                     |                              | - No. deposit sales             | - No. mortgage and consumer loans transactions |                                | - No. brokerage activities | - 2013 data on 251 branches of a Canadian bank |
|                                                     |                              | - No. commercial loan sales     |                                |                                | - No. credit operations of pvt bank | - 1993 data on 291 branches of a Canadian bank |
|                                                     |                              | - No. personal loan sales       |                                |                                | - No. new accounts opened        | - 33 bank from the US |
|                                                     |                              | - No. term accounts             |                                |                                | - No. special services (eg., card) | - 1994 data on 26 bank from Cyprus |
|                                                     |                              | - No. commercial loan accounts  |                                |                                | - Miscellany (eg., insurance trans) | - 1987 data on 773 & 804 bank branches of a public bank and 911 bank branches in Belgium |
|                                                     |                              | - No. personal loan accounts    |                                |                                |                                      | - 20 bank branches from a Greek bank |
## Appendix - 14: Studies using Different Hypothesis on Banks

<table>
<thead>
<tr>
<th>No</th>
<th>Authors and Articles</th>
<th>Hypothesis Tested and The Method</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Berger, Allen N., Astrid A. Dick, Lawrence G. Goldberg and Lawrence J. White. (2007). “Competition from Large, Multimarket Firms and the Performance of Small, Single-Market Firms: Evidence from the Banking Industry.”</td>
<td>Under the Efficiency Hypothesis (ESH), this research is on bank size and performance includes studies of cost and revenue performance, as well as the abilities of banks of different sizes to provide retail services in which both large and small banks compete, such as loans to small businesses and deposits.</td>
<td>Technological progress significantly improved the performance of large, multimarket banks relative to small, single-market banks. Greater presence of large, multimarket banks exerted more competitive pressure and had more deleterious effects on the performance of small, single-market banks. The more intense competition from large, multimarket banks manifested in decreased revenues for small, single-market banks (e.g., lower fees or rates on loans and deposits) and/or increased expenses (e.g., higher rates on deposits, additional expenses on advertising).</td>
</tr>
<tr>
<td>2</td>
<td>Bhatti G.A. and Hussain H. (2010). “Evidence on Structure Conduct Performance Hypothesis in Pakistani Commercial Banks”.</td>
<td>Examined the relationship between market structure and performance (SCP, ESH) in the banking sector of Pakistan. The effect of changes in the market structure on profitability is based on the SCP and ESH considering 20 commercial banks in Pakistan of 9 years from 1996-2004. 3 measures of bank’s performance are utilized: ROA, return on common equity (ROCE) and ROE. They have used CR to measure SCP hypothesis and market share to measure ESH. The control variables are - bank size, market size, liquidity measure, market risk and growth.</td>
<td>The results of market share which is used for ESH explain a negative relationship with profitability and do not support the ESH. The findings suggest that market concentration determines the profitability in Pakistani commercial banks. Hence, there is a negative relationship between competition and profitability. The leading banks are still enjoying the state of monopoly. But, the market trend shows that this state will not continue for a longer period as private commercial banks have started to compete with the existing top commercial banks. Using regression analysis, they found a positive relationship of CR with profitability.</td>
</tr>
<tr>
<td>3</td>
<td>Chirwa E.W.T (2001) “Market structure, liberalization and performance in the Malawian banking industry”</td>
<td>This study examines the effect of financial sector reforms on market structure using the SCP and ESH, financial intermediation, savings mobilization and commercial bank profitability in the Malawian banking industry. The evidence in this study shows that some signs of financial repression still exist, although some positive developments have taken place.</td>
<td>The study finds a significant relationship between monopoly power and commercial bank profitability, but rejects the efficient market hypothesis. The results show that financial liberalization has significantly increased financial depth and savings mobilization, increased credit to the manufacturing sector, and reduced the monopoly power. However, real interest rates have fallen, intermediation margins have increased, credit to public sector has increased and that to private sector has fallen.</td>
</tr>
<tr>
<td>4</td>
<td>Coccorese, P. and Pellecchia, A. (2010) “Testing the ‘Quiet Life’ Hypothesis in the Italian Banking Industry”</td>
<td>Tests QLH using data on the Italian banking industry for the period 1992–2007 applying a two-step procedure. First, estimate bank-level cost efficiency scores and Lerner indices. Then, use the estimated market power measures, as well as a vector of control variables, to explain cost efficiency.</td>
<td>The empirical evidence supports QLH, although the impact of market power on efficiency is not particularly remarkable in magnitude. By QLH, firms with higher market power are less efficient due to slack management behaviour. During the period, a huge process of consolidation has taken place that could have strengthened banks’ market power by lowering the level of cost efficiency.</td>
</tr>
<tr>
<td>5</td>
<td>Doyran, M A. (2012) “The Impact Of Market Structure On Financial Institution Performance”</td>
<td>Investigates firm-specific, industry-specific and macroeconomic determinants of financial institution performance. It reviews the market structures (SCP, ESH, and RMP) and firm characteristics affect the overall firm profitability by using the industrial organization literature. Construct a panel of year-end, firm-level data for a sample of insured and regulated savings and loan associations in 2000-2010.</td>
<td>With the exception of leverage, liquidity risk and market share (relative market power), all firm-specific determinants have significant associations with bank profitability. Neither market power of individual firms nor concentration, however, affects profitability as anticipated by the traditional market structure hypothesis. Support is found for managerial efficiency but also credit riskiness of the banks, public authorities should focus on identification and implementation of policies leading to strengthened risk management.</td>
</tr>
<tr>
<td><strong>References</strong></td>
<td><strong>Title</strong></td>
<td><strong>Study</strong></td>
<td></td>
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<td>---------------</td>
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<td></td>
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<tr>
<td>6. Goddard, John, Phil Molyneux and John O.S. Wilson. (2004)</td>
<td>“Dynamics of Growth and Profitability in Banking.”</td>
<td>Empirical research concerning the dynamics of company profitability is based on an account of the determinants of profit that is an alternative to the essentially static SCP paradigm; however, although the relevant micro theory identifies SCP relationships applicable when markets are in equilibrium, there is no certainty that a profit figure observed at any point in time represents an equilibrium value. The hypotheses tested in the persistence of profit literature are that entry and exit are sufficiently free to eliminate any abnormal profit quickly, and that all firms’ profit rates tend to converge to the same long-run average value. The alternative is that some firms possess special knowledge or other advantages enabling them to prevent imitation or block entry. If so abnormal profit may tend to persist from year to year and differences in average profit rates may be sustained indefinitely.</td>
<td></td>
</tr>
<tr>
<td>7. Koetter, M., Kolari, J.W. and Spierdijk, L (2008)</td>
<td>“Efficient Competition? Testing the ‘quiet life’ of U.S. banks with adjusted Lerner indices”</td>
<td>Obtain both QLH and ESH measures simultaneously using one structural model to avoid inherent endogeneity concerns. The study derive efficiency-adjusted Lerner indices on the U.S. bank and their relative ability to minimize costs and maximize profit from 1986-2006. Based on a variety of regression model and analyses of competition results are obtained. This empirical approach enables to consider the possibility that banks fail to fully exploit output pricing opportunities due to market power. In this regard, while the QLH posit a positive relationship between competition and efficiency, recent information theories propose that an inverse relationship is possible. The efficiency measures found that margins increased due to banks' efforts to improve both cost and profit efficiency. Despite deteriorating competition, therefore, the study rejects the QLH for U.S. banks.</td>
<td></td>
</tr>
<tr>
<td>8. Mensi, S. and Zouari, A (2011)</td>
<td>“Banking Industry, Market Structure and Efficiency: The Revisited Model to Intermediary Hypotheses”</td>
<td>This study proposed a new conception of the SCP/ESH relationship. Alongside standard hypotheses, two intermediary hypotheses, named modified ESH and hybrid SCP hypothesis. The models are estimated using a RE estimating procedure on Tunisian banks from 1990-2005. The results about the variable efficiency cannot reject the ESH. Besides, it does not show any support of the classic SCP hypothesis and intermediary hypotheses. This suggests that during the period, the Tunisian banks adopt a sufficient competitive behaviour which boosts performance not through market power exercise, rather through efficient activity.</td>
<td></td>
</tr>
<tr>
<td>9. Mirzaei, A., Liu, G and Moore, T (2011)</td>
<td>“Does Market Structure Matter on Banks’ Profitability and Stability? Emerging versus Advanced Economies”</td>
<td>Investigate the effects of market power and bank-environment activities on profitability and stability (risk and returns) for a total of 1929 banks in 40 emerging and advanced economies from 1999-2008. The model incorporates the SCP and RMP hypotheses to assess the extent to which bank’s performance is attributed to non-competitive market conditions and pricing behaviour. The key findings are - greater market power leads to higher bank performance being biased toward the RMP hypothesis in advanced economies; more concentrated banking systems in advanced economies are more vulnerable to financial instability; neither of the hypotheses seems to be supported for the returns in the emerging banking sector; and higher interest rate spreads increase profitability and stability for both types of economies, however, for emerging banks this seems to be one of the key elements to increase their profitability raising concerns on economies.</td>
<td></td>
</tr>
<tr>
<td>10. Nabieu, G.A.A. (2013)</td>
<td>“The Structure, Conduct and Performance of Commercial Banks in Ghana”</td>
<td>The empirical study uses 2 measures of concentration to represent market structure (SCP) and a market share (ESH) to capture the effect on bank performance. 2 accounting measures - ROA and ROE used to represent banks' performance. Variables were collected from nineteen commercial banks of Ghana from 2007 -2012. The results indicated that market concentration and market share significantly determines profitability in Ghana, signifying the strong acceptance of the SCP hypothesis. Consequently, the research suggests the need for improvement in bank capitalization, bank size, service product innovation and effective liquidity management for the Ghanaian banking industry.</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Compiled by the Author from Different Articles

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Appendix - 15: SCP Framework for Banking Sector

Basic Conditions
- Uncertainty
- Asymmetric Information
- Transaction Cost

Supply
- Service
- Inputs/Technology
- Principle Agent Relationship
- Production Externalities

Demand
- Price Elasticity
- Switching Cost
- Loyalty
- Substitutes
- Risk Aversion
- Network Externalities

Market Structure
- Market Segmentation
- Extent of Market
- Cost Structure
- Product Differentiation
- Diversification
- Barrier to Entry and Exit

Conduct
- Price Competition
- Network and Quality Competition
- Advertising
- Price Discrimination
- Expense-preference behaviour and risk avoidance
- Collusion
- Predation
- Mergers
- Information gathering
- Innovations

Performance
- Productive and Allocative Efficiency
- Progress
- Full Employment

Public Policy
- Protective Regulation
- Prudential Regulation
- Competition Policy

Source: Neuberger (1997)
Appendix - 16: Detailed Results of the Regressions

Chapter 3

MEAN - all

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>bootdea</td>
<td>276</td>
<td>1.119569</td>
<td>.1825992</td>
<td>2.109</td>
<td>1.248</td>
</tr>
<tr>
<td>equity</td>
<td>276</td>
<td>11484.7</td>
<td>.198494</td>
<td>2.348</td>
<td>.298</td>
</tr>
<tr>
<td>branch</td>
<td>276</td>
<td>70.13487</td>
<td>77.398</td>
<td>1</td>
<td>419</td>
</tr>
<tr>
<td>tta</td>
<td>276</td>
<td>105.1849</td>
<td>136.765</td>
<td>0</td>
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</tr>
<tr>
<td>oea</td>
<td>276</td>
<td>11445.43</td>
<td>9905.737</td>
<td>25.1</td>
<td>.28</td>
</tr>
<tr>
<td>llp</td>
<td>276</td>
<td>107576.4</td>
<td>127549.6</td>
<td>0</td>
<td>84439.9</td>
</tr>
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MEAN - bootdea branch

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<tr>
<td>sum (Mann-Whitney)</td>
<td>96</td>
<td>113396.3</td>
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</tbody>
</table>
Two
H0: \( \text{bdeainv}(\text{gen3}==0) = \text{bdeainv}(\text{gen3}==1) \)

adjustment for ties

-------------

Two
ranksum \( \text{bdeainv} \), by(\text{gen3})

unadjusted variance   398880.00

-------------

adjusted variance     317579.81
adjustment for ties

-------------

Two
ranksum \( \text{deainv} \), by(\text{gen1})

adjusted variance
adjustment for ties

-------------

\[ \begin{align*}
\text{Prob} > |z| &= 0.0062 \\
\text{Prob} > |z| &= 0.0000 \\
\text{Prob} > |z| &= 0.0000 \\
\end{align*} \]

\[ \begin{align*}
\text{Variable} & \quad \text{Obs} \quad \text{Mean} \quad \text{Std} \\
\text{bdeainv} & \quad 204 \quad 0.8804706 \quad 0.0916997 \\
\text{deainv} & \quad 204 \quad 0.9349902 \quad 0.0983053
\end{align*} \]

\[ \begin{align*}
\text{gen2} & \quad \text{obs} \quad \text{rank sum} \quad \text{expected} \\
\text{ci} & \quad 108 \quad 42.59722 \quad 17.2 \\
\text{ci1} & \quad 108 \quad 15791.5 \quad 14958 \\
\text{ci2} & \quad 108 \quad 23843.5 \quad 23843.5
\end{align*} \]

-----

**Two-sample Wilcoxon rank-sum (Mann-Whitney) test**

**Difference in Distribution - GEN 1 vs GEN 2 & 3**

**ranksum \( \text{bdeainv} \), by(\text{gen1})**

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

\[ \text{gen1} \quad \text{obs} \quad \text{rank sum} \quad \text{expected} \\
0 & \quad 204 \quad 30816.5 \quad 28254 \\
1 & \quad 72 \quad 6936.5 \quad 6972
\]

combined

\[ \begin{align*}
\text{adj} \quad \text{variation} & \quad 339048.00 \\
\text{adjustment for les} & \quad 35.32
\end{align*} \]

adjustment variation 339012.68

\[ \begin{align*}
\text{H0: bdeainv(gen1==0) = bdeainv(gen1==1)} \\
\text{z} & \quad 4.401 \\
\text{Prob} > |z| & \quad 0.0000
\end{align*} \]

**ranksum \( \text{deainv} \), by(\text{gen1})**

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

\[ \text{gen1} \quad \text{obs} \quad \text{rank sum} \quad \text{expected} \\
0 & \quad 204 \quad 31287.5 \quad 28254 \\
1 & \quad 72 \quad 6936.5 \quad 6972
\]

combined

\[ \begin{align*}
\text{adj} \quad \text{variation} & \quad 339048.00 \\
\text{adjustment for les} & \quad -21468.19
\end{align*} \]

adjustment variation 317579.81

\[ \begin{align*}
\text{H0: deainv(gen1==0) = deainv(gen1==1)} \\
\text{z} & \quad 5.363 \\
\text{Prob} > |z| & \quad 0.0000
\end{align*} \]

**Difference in Distribution - GEN 2 vs GEN 1 & 3**

**ranksum \( \text{bdeainv} \), by(\text{gen2})**

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

\[ \text{gen2} \quad \text{obs} \quad \text{rank sum} \quad \text{expected} \\
0 & \quad 180 \quad 23201 \quad 24930 \\
1 & \quad 96 \quad 15025 \quad 13296
\]

combined

\[ \begin{align*}
\text{adj} \quad \text{variation} & \quad 398880.00 \\
\text{adjustment for les} & \quad -41.55
\end{align*} \]

adjustment variation 398383.45

\[ \begin{align*}
\text{H0: bdeainv(gen2==0) = bdeainv(gen2==1)} \\
\text{z} & \quad -2.738 \\
\text{Prob} > |z| & \quad 0.0062
\end{align*} \]

**ranksum \( \text{deainv} \), by(\text{gen3})**

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

\[ \text{gen3} \quad \text{obs} \quad \text{rank sum} \quad \text{expected} \\
0 & \quad 168 \quad 22434.5 \quad 23268 \\
1 & \quad 108 \quad 15791.5 \quad 14958
\]

combined

\[ \begin{align*}
\text{adj} \quad \text{variation} & \quad 418824.00 \\
\text{adjustment for les} & \quad -43.3
\end{align*} \]

adjustment variation 418780.37

\[ \begin{align*}
\text{H0: bdeainv(gen3==0) = bdeainv(gen3==1)} \\
\text{z} & \quad -1.288 \\
\text{Prob} > |z| & \quad 0.1877
\end{align*} \]

**Difference in Distribution - GEN 2 vs GEN 3**

**ranksum \( \text{bdeainv} \), by(\text{gen2})**

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

\[ \text{gen2} \quad \text{obs} \quad \text{rank sum} \quad \text{expected} \\
0 & \quad 168 \quad 22434.5 \quad 23268 \\
1 & \quad 108 \quad 15791.5 \quad 14958
\]

combined

\[ \begin{align*}
\text{adj} \quad \text{variation} & \quad 418824.00 \\
\text{adjustment for les} & \quad -43.3
\end{align*} \]

adjustment variation 418780.37

\[ \begin{align*}
\text{H0: bdeainv(gen3==0) = bdeainv(gen3==1)} \\
\text{z} & \quad -1.288 \\
\text{Prob} > |z| & \quad 0.1877
\end{align*} \]
Mean estimation 
Number of obs = 6

. mean bdeainv if gen1==1 & year ==2007
Mean estimation 
Number of obs = 6

. mean bdeainv if gen1==1 & year ==2005
Mean estimation 
Number of obs = 6

Two-sample Wilcoxon rank-sum (Mann-Whitney) test 
gen2 | obs rank sum expected
0 | 108 10703 11070
1 | 96 10207 9840

combined | 204 20910 20910
unadjusted variance 177120.00
adjustment for ties .26.79
adjusted variance 177093.21
Ho: bdeainv(gen2==0) = bdeainv(gen2==1)
z = -1.305
Prob > |z| = 0.1920

Mean for Gen 1 from 2001 to 2012 of Bootstrap DEA (bdeainv)
Ho: deainv(gen2==0) = adjusted variance 159790.18
Ho: bdeainv(gen2==0) = bdeainv(gen2==1)
adjusted variance 177093.21
adjustment for ties -9.26

combined | 204 20910 20910
unadjusted variance 177120.00
adjustment for ties -17329.82
adjusted variance 159790.18
Ho: deainv(gen2==0) = deainv(gen2==1)
z = -1.305
Prob > |z| = 0.1920

Mean estimation 
Number of obs = 6

. mean bdeainv if gen1==1 & year ==2002
Mean estimation 
Number of obs = 6

. mean bdeainv if gen1==1 & year ==2003
Mean estimation 
Number of obs = 6

. mean bdeainv if gen1==1 & year ==2004
Mean estimation 
Number of obs = 6

. mean bdeainv if gen1==1 & year ==2005
Mean estimation 
Number of obs = 6

. mean bdeainv if gen1==1 & year ==2006
Mean estimation 
Number of obs = 6

. mean bdeainv if gen1==1 & year ==2007
Mean estimation 
Number of obs = 6

. mean bdeainv if gen1==1 & year ==2008
Mean estimation 
Number of obs = 6

|x`gls binef lta ci branch ltipart gen1, panels(heteroskedastic) corr(independent)
Cross-sectional time-series FGLS regression
Coefficients: generalized least squares
Panels: heteroskedastic
Correlation: no autocorrelation
Estimated covariances = 23 Number of obs = 276
Estimated autocorrelations = 0 Number of groups = 23
Estimated coefficients = 6 Time periods = 12
Wald chi2(5) = 145.17
Prob > chi2 = 0.0000

|x`gls binef lta ci branch npl gen1, panels(heteroskedastic) corr(independent)
Cross-sectional time-series FGLS regression
Coefficients: generalized least squares
Panels: homoskedastic
Correlation: no autocorrelation
Estimated covariances = 1 Number of obs = 276
Estimated autocorrelations = 0 Number of groups = 23
Estimated coefficients = 7 Time periods = 12
Wald chi2(6) = 94.08
Log likelihood = 264.7096 Prob > chi2 = 0.0000

|x`gls binef lta ci branch npnl gen1,panels(id) corr(independent)
Cross-sectional time-series FGLS regression
Coefficients: generalized least squares
Panels: homoskedastic
Correlation: no autocorrelation
Estimated covariances = 1 Number of obs = 276
Estimated autocorrelations = 0 Number of groups = 23
Estimated coefficients = 6 Time periods = 12
Wald chi2(5) = 92.97
Log likelihood = 264.2942 Prob > chi2 = 0.0000

|x`gls binef lta ci branch npnl gen1, panels(id) corr(independent)
Cross-sectional time-series FGLS regression
Coefficients: generalized least squares
Panels: homoskedastic
Correlation: no autocorrelation
Estimated covariances = 1 Number of obs = 276
Estimated autocorrelations = 0 Number of groups = 23
Estimated coefficients = 7 Time periods = 12
Wald chi2(6) = 81.63
Log likelihood = 259.9855 Prob > chi2 = 0.0000

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Mean estimation

\[ \text{mean \ bdeainv if gen3==1 & year ==2006} \]

Mean est

\[ \text{mean \ bdeainv if gen3==1 & year ==2005} \]

Mean estimation                     Number of obs    =       9

\[ \text{mean \ bdeainv if gen3==1 & year ==2004} \]

\[ \text{mean \ bdeainv if gen3} \]

Mean estimation                     Number of obs    =       8

\[ \text{mean \ bdeainv if gen2==1 & year ==2012} \]

\[ \text{mean \ bdeainv if gen2==1 & year ==2010} \]

\[ \text{mean \ bdeainv if gen2==1 & year ==2009} \]

Estimated covariances      =        23          Time periods       =        11
Estimated coefficients     =         7          Time periods       =        11
Estimated autocorrelations =         0          Number of groups   =        23
Estimated coefficients     =         7          Time periods       =        11
Wald ch2(5) = 108.81
Prob > ch2 = 0.0000

\[ \text{xtgls \ brief \ ta1 \ c1 \ branch \ gen1 \ lprat, \ panels(heteroskedastic) \ corr(independent)} \]

Cross-sectional time-series FGLS regression
Coefficients: generalized least squares
Panels: heteroskedastic
Correlation: no autocorrelation
Estimated covariances = 23 Number of obs = 253
Estimated autocorrelations = 0 Number of groups = 23
Estimated coefficients = 7 Time periods = 11
Wald ch2(6) = 95.95
Prob > ch2 = 0.0000

\[ \text{xtgls \ brief \ ta1 \ c1 \ branch \ nprat \ eq mult \ gen1, \ panels(heteroskedastic) \ corr(independent)} \]

Cross-sectional time-series FGLS regression
Coefficients: generalized least squares
Panels: heteroskedastic
Correlation: no autocorrelation
Estimated covariances = 23 Number of obs = 253
Estimated autocorrelations = 0 Number of groups = 23
Estimated coefficients = 7 Time periods = 11
Wald ch2(6) = 108.64
Prob > ch2 = 0.0000

\[ \text{xtgls \ brief \ ta1 \ c1 \ branch \ lprat \ eq mult \ gen1, \ panels(heteroskedastic) \ corr(independent)} \]

Cross-sectional time-series FGLS regression
Coefficients: generalized least squares
Panels: heteroskedastic
Correlation: no autocorrelation
Estimated covariances = 23 Number of obs = 253
Estimated autocorrelations = 0 Number of groups = 23
Estimated coefficients = 7 Time periods = 11
Wald ch2(6) = 109.46
Prob > ch2 = 0.0000

\[ \text{xtgls \ brief \ ta1 \ c1 \ branch \ nprat \ eq mult \ gen1, \ panels(heteroskedastic) \ corr(independent)} \]

Cross-sectional time-series FGLS regression
Coefficients: generalized least squares
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Correlation: no autocorrelation
Estimated covariances = 23 Number of obs = 253
Estimated autocorrelations = 0 Number of groups = 23
Estimated coefficients = 7 Time periods = 11
Wald ch2(6) = 109.46
Prob > ch2 = 0.0000
. mean binef if gen2==1 & year ==2008
Mean estimation                          Number of obs    =       8
Mean estimation                          Number of obs    =       8

. mean binef if gen1==1 & year ==2012
Mean estimation                          Number of obs    =       6
Mean estimation                          Number of obs    =       6

. mean binef if gen1==1 & year ==2010
Mean estimation                          Number of obs    =       6

. mean binef if gen1==1 & year ==2009
Mean estimation                          Number of obs    =       6

.spearman bdeainv2004 bdeainv2003
Test of Ho: bdeainv2004 and bdeainv2003 are independent
Spearman's rho =       0.6364

.spearman bdeainv2003 bdeainv2002
Test of Ho: bdeainv2003 and bdeainv2002 are independent
Spearman's rho =       0.5761

.spearman bdeainv2002 bdeainv2001
Test of Ho: bdeainv2001 and bdeainv2002 are independent
Spearman's rho =       0.4091

.spearman bdeainv2001 bdeainv2000
Test of Ho: bdeainv2000 and bdeainv2001 are independent
Spearman's rho =       0.4427

._xlgsl binef if gen==1 branch nplrat gen1, panels(heteroskedastic)
Cross-sectional time-series FGLS regression
Coefficients: generalized least squares
Panels: heteroskedastic
Correlation: no autocorrelation
Estimated covariances = 23 Number of obs = 253
Estimated autocorrelations = 0 Number of groups = 23
Estimated coefficients = 7 Time periods = 11
Wald chi2(6) = 95.25
Prob > chi2 = 0.0000

.binef Coef. Std. Err. z P>|z|  [95% Conf. Interval]
|-----------------|----------|--------|------|-----------------
| nplrat | 0.050325  | 0.00894 | 5.66  | 0.000         | 0.032957  | 0.067693 |
| branch | 0.000287  | 0.00004 | 7.53  | 0.000         | 0.000249  | 0.000325 |
| gen1  | 0.4629965 | 1.23106 | 0.37  | 0.711         | -1.01916  | 1.94515  |
| cons  | 0.4629965 | 1.23106 | 0.37  | 0.711         | -1.01916  | 1.94515  |

.spearman bdeainv2001 bdeainv2002
Number of obs = 23
Spearman's rho = 0.4427
Test of Ho: bdeainv2001 and bdeainv2002 are independent
Prob > |t| = 0.0344
.spearman bdeainv2002 bdeainv2003
Number of obs = 23
Spearman's rho = 0.6038
Test of Ho: bdeainv2002 and bdeainv2003 are independent
Prob > |t| = 0.0023
.spearman bdeainv2003 bdeainv2004
Number of obs = 23
Spearman's rho = 0.4091
Test of Ho: bdeainv2003 and bdeainv2004 are independent
Prob > |t| = 0.0526
.spearman bdeainv2004 bdeainv2005
Number of obs = 23
Spearman's rho = 0.6834
Test of Ho: bdeainv2004 and bdeainv2005 are independent
Prob > |t| = 0.0011
.spearman bdeainv2005 bdeainv2006
Number of obs = 23
Spearman's rho = 0.5761
Test of Ho: bdeainv2005 and bdeainv2006 are independent
Prob > |t| = 0.0040
.spearman bdeainv2006 bdeainv2007
Number of obs = 23
Spearman's rho = 0.4704
Test of Ho: bdeainv2006 and bdeainv2007 are independent
Prob > |t| = 0.0235
.spearman bdeainv2007 bdeainv2008
Number of obs = 23
Spearman's rho = 0.3755
Test of Ho: bdeainv2007 and bdeainv2008 are independent

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Mean estimation                     Number of obs    =       9
--------------------------------------
| Mean Std. Err.  [95% Conf. Interval]
| binef |   .186375   .0353053   1028913 2698587
| binef |   .076875   .0165728   .0369855 1160635
| binef |   .153375   .0406413   .0572737 2494763
| binef |   .0954444  .0218302   .0451039  .145785
| binef |   .0735556  .0207954   .0256013  .1215098
| binef |   .1387778  .0460292   .0326342  .2449213
| binef |   .1727778  .0294108   .1049564  .2405992
| binef |   .2063333  .0504268   .1049564  .2405992
| binef |   .153375   .0406413   .0572737  .2494763
| binef |   .076875   .0165728   .0376865  .1160635
| binef |   .186375   .0353053   .1028913 .2698587
--------------------------------------

Mean estimation                     Number of obs    =       9
| Mean Std. Err.  [95% Conf. Interval]
| binef |   .0954444  .0218302   .0451039  .145785
| binef |   .076875   .0165728   .0369855 1160635
| binef |   .153375   .0406413   .0572737 2494763
| binef |   .0954444  .0218302   .0451039  .145785
| binef |   .076875   .0165728   .0369855 1160635
| binef |   .153375   .0406413   .0572737 2494763
| binef |   .0954444  .0218302   .0451039  .145785
| binef |   .076875   .0165728   .0369855 1160635
| binef |   .153375   .0406413   .0572737 2494763

Mean for Gen 3 from 2001 to 2012 of Bootstrap DEA (binef) - Inefficiency
| Mean Std. Err.  [95% Conf. Interval]
| binef | .0886667  .0235808   .0342892 1430442
| binef | .0886667  .0235808   .0342892 1430442
| binef | .0886667  .0235808   .0342892 1430442
| binef | .0886667  .0235808   .0342892 1430442
| binef | .0886667  .0235808   .0342892 1430442
| binef | .0886667  .0235808   .0342892 1430442
| binef | .0886667  .0235808   .0342892 1430442
| binef | .0886667  .0235808   .0342892 1430442
| binef | .0886667  .0235808   .0342892 1430442

Spearman's rho =       0.4674
Test of Ho: bdeainv2001 and bdeainv2005 are independent
Prob > |t| =       0.3190
. spearman bdeainv2001 bdeainv2005
Number of obs =      23
Spearman's rho =       0.4723
Test of Ho: bdeainv2011 and bdeainv2012 are independent
Prob > |t| =       0.0229
. spearman bdeainv2011 bdeainv2012
Number of obs =      23
Spearman's rho =       0.2174
Test of Ho: bdeainv2001 and bdeainv2004 are independent
Prob > |t| =       0.3190
. spearman bdeainv2001 bdeainv2004
Number of obs =      23
Spearman's rho =       0.3310
Test of Ho: bdeainv2008 and bdeainv2009 are independent
Prob > |t| =       0.027
. spearman bdeainv2008 bdeainv2009
Number of obs =      23
Spearman's rho =       0.2569
Test of Ho: bdeainv2010 and bdeainv2011 are independent
Prob > |t| =       0.0267
. spearman bdeainv2010 bdeainv2011
Number of obs =      23
Spearman's rho =       0.4615
Test of Ho: bdeainv2009 and bdeainv2010 are independent
Prob > |t| =       0.0267
. spearman bdeainv2009 bdeainv2010
Number of obs =      23
Spearman's rho =       0.2174
Test of Ho: bdeainv2001 and bdeainv2004 are independent
Prob > |t| =       0.3190
. spearman bdeainv2001 bdeainv2004
Number of obs =      23
Spearman's rho =       0.3310
Test of Ho: bdeainv2008 and bdeainv2009 are independent
Prob > |t| =       0.027
. spearman bdeainv2008 bdeainv2009
Number of obs =      23
Spearman's rho =       0.2569
Test of Ho: bdeainv2010 and bdeainv2011 are independent
Prob > |t| =       0.0267
. spearman bdeainv2010 bdeainv2011
Number of obs =      23
Spearman's rho =       0.4615
Test of Ho: bdeainv2009 and bdeainv2010 are independent
Prob > |t| =       0.0267
. spearman bdeainv2009 bdeainv2010
Number of obs =      23
Spearman's rho =       0.2174
Test of Ho: bdeainv2001 and bdeainv2004 are independent
Prob > |t| =       0.3190
. spearman bdeainv2001 bdeainv2004
Number of obs =      23
Spearman's rho =       0.3310
Test of Ho: bdeainv2008 and bdeainv2009 are independent
Prob > |t| =       0.027
. spearman bdeainv2008 bdeainv2009
Number of obs =      23
Spearman's rho =       0.2569
Test of Ho: bdeainv2010 and bdeainv2011 are independent
Prob > |t| =       0.0267
. spearman bdeainv2010 bdeainv2011
Number of obs =      23
Chapter 4

Random F test that all $u_i = 0$: $F(33, 359) = 1.02$  Prob > F = 0.4359

Fixed F test that all $u_i = 0$: $F(33, 359) = 1.92$  Prob > F = 0.0022

---

R Fixed F test that all $u_i = 0$: $F(33, 359) = 1.92$  Prob > F = 0.0022

---

Overall = 0.0619  max = 12
Avg = 11.94118

...
**Mean estimation**                     Number of obs    =     132

* ho: roa(gen1==0) = roa(gen1==1)

Adjusted variance    1241653.79

**Two Breusch and Pagan Lagrangian multiplier test for random effects**

Breusch and Pagan Lagrangian multiplier test for random effects

Rho: roa[bank,t] = Xb + u[bank,t] (fraction of variance due to u_i)

Test:   Var(u_i) = 0

Rho |          0   (fraction of variance due to u_i)

Inf |   .0331898   .1016736

0 |      276     62187.5       56442
1 |   132     26198.5     26994

---

Panels: heteroskedastic
Correlation: no autocorrelation
Estimated covariances = 34 Number of obs = 406
Estimated autocorrelations = 0 Number of groups = 34
Estimated coefficients = 8 Obs per group: min = 10

avg = 11.94118

max = 12

Wald ch2(7) = 245.98

Prob > ch2 = 0.0000

---

Panels: heteroskedastic
Correlation: no autocorrelation
Estimated covariances = 34 Number of obs = 406
Estimated autocorrelations = 0 Number of groups = 34
Estimated coefficients = 8 Obs per group: min = 10

avg = 11.94118

max = 12

Wald ch2(7) = 245.98

Prob > ch2 = 0.0000

---

Panels: heteroskedastic
Correlation: no autocorrelation
Estimated covariances = 34 Number of obs = 406
Estimated autocorrelations = 0 Number of groups = 34
Estimated coefficients = 8 Obs per group: min = 10

avg = 11.94118

max = 12

Wald ch2(7) = 245.98

Prob > ch2 = 0.0000
xtgls roa nplrat larat eqta hhi rint xint eff gen1 panels(heteroskedastic) comp(independent)
Cross-sectional time-series FGLS regression
Coefficients:  generalized least squares
Panels:  heteroskedastic
Correlation:  no autocorrelation

Estimated covariances = 34 Number of obs = 406
Estimated autocorrelations = 0 Number of groups = 34
Estimated coefficients = 9 Obs per group: min = 10
avg = 11.94118
max = 12
Wald ch2(8) = 235.67
Prob > ch2 = 0.0000

--------------------
rae | Coef. Std. Err. z P>|z| [95% Conf. Interval]
--------------------
nplrat | -13.1636  4.088658  -3.22  0.001  -21.7173 -5.149981
larat | -12.31755  6.530325  -1.91  0.059  -25.11676 48.16469
eqta | -60.90985  11.89497  -5.12  0.000  -84.21143 -37.57027
hhi | -0.059239  0.108269  -0.57  0.568  -0.167493 0.058923
rint | 3.673959  75.56398  0.48  0.634  0.072726 71.16473
xint | 5.321205  96.21431  0.53  0.597  0.345349 10.49627
eff | 19.31668  4.399728  4.39  0.000  10.69371 27.94016
gen1 | -4.153481  1.652674  -2.49  0.013  -7.45146  -0.859501
_cons | -55.19462  11.93747  -4.62  0.000  -87.59163 -31.79761
--------------------
xgls roa nplrat larat eqta hhi rint xint eff gen1, panels(heteroskedastic) comp(independent)
Cross-sectional time-series FGLS regression
Coefficients:  generalized least squares
Panels:  heteroskedastic
Correlation:  no autocorrelation

Estimated covariances = 34 Number of obs = 406
Estimated autocorrelations = 0 Number of groups = 34
Estimated coefficients = 9 Obs per group: min = 10
avg = 11.94118
max = 12
Wald ch2(8) = 235.67
Prob > ch2 = 0.0000

--------------------
rae | Coef. Std. Err. z P>|z| [95% Conf. Interval]
--------------------
nplrat | -2.486015  4.482079  -0.54  0.593  -3.635486 -1.605644
larat | -1.021332  3.971465  -0.27  0.786  -1.80034 2.748685
eqta | 11.34514  12.93674  0.87  0.384  8.089566 13.88079
hhi | -0.002122  0.00685  -0.03  0.979  -0.006349 0.007796
rint | 22.18268  4.855536  4.77  0.000  13.05085 31.30732
xint | 149.45891  70.35856  2.02  0.043  0.043583 292.8292
eff | 1.658324  30.02892  0.05  0.959  0.006814 13.34853
gen1 | -0.053879  0.11481  -0.47  0.639  -27.98008 27.71444
_cons | -2.406951  94.47448  -0.05  0.955  -14.25881 11.55285
--------------------
xgls roa nplrat larat eqta hhi rint xint eff gen1 panels(heteroskedastic) comp(independent)
Cross-sectional time-series FGLS regression
Coefficients:  generalized least squares
Panels:  heteroskedastic
Correlation:  no autocorrelation

Estimated covariances = 34 Number of obs = 406
Estimated autocorrelations = 0 Number of groups = 34
Estimated coefficients = 9 Obs per group: min = 10
avg = 11.94118
max = 12
Wald ch2(8) = 74.83
Prob > ch2 = 0.0000

--------------------
rae | Coef. Std. Err. z P>|z| [95% Conf. Interval]
--------------------
nplrat | -7.407287  4.193876  -1.71  0.086  -15.63595 8.213783
larat | -15.83767  7.319943  -2.16  0.030  -30.17666 -1.466855
eqta | -53.00687  13.32272  -3.98  0.000  -80.71193 -26.89482
hhi | -0.031823  0.121157  -2.74  0.006  -0.569292 -0.004938
rint | 3.668472  85.55317  0.08  0.934  1.987383 5.342182
xint | 2.313754  0.9490658  2.44  0.015  0.453619 4.173888
eff | 21.91718  4.588986  4.77  0.000  12.90333 30.93102
gen1 | 36.65363  16.31205  2.25  0.025  9.826958 4.890377
_cons | -22.36851  13.51308  -1.66  0.098  -48.85166 14.11833
--------------------
xgls roa nplrat larat eqta hhi rint xint eff gen1, panels(heteroskedastic) comp(independent)
Cross-sectional time-series FGLS regression
Coefficients:  generalized least squares
Panels:  heteroskedastic
Correlation:  no autocorrelation

Estimated covariances = 34 Number of obs = 406
Estimated autocorrelations = 0 Number of groups = 34
Estimated coefficients = 9 Obs per group: min = 10
avg = 11.94118
max = 12
Wald ch2(8) = 229.55
Prob > ch2 = 0.0000

--------------------
rae | Coef. Std. Err. z P>|z| [95% Conf. Interval]
--------------------
nplrat | -1.530503  4.324427  -0.35  0.724  -2.738075 -0.682911
larat | -0.560328  3.854883  -0.40  0.686  -0.987107 0.866448
eqta | 10.52901  1.268567  8.21  0.000  8.01482 13.03493
hhi | -0.002143  0.00656  -0.32  0.748  -0.003408 -0.000057
rint | 3.24305  0.455417  7.14  0.000  2.34635 8.150145
Log likelihood = -13.21405
Estimated autocorrelations = 0
Number of groups = 6
Estimated covariances = 1
Number of obs = 40
Panels: heteroskedastic
Coefficients: generalized least squares
corr(independent)

Cross-sectional time-series FGLS regression
Coefficients: generalized least squares
corr(independent)

<table>
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<th>-13.21405</th>
<th>0.000</th>
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<tr>
<td>rho</td>
<td>1.000</td>
<td></td>
<td>1.000</td>
<td></td>
</tr>
</tbody>
</table>

F test that all u_i=0: (33, 364) = 1.41 Prob > F = 0.0724

Fixed-effects (within) regression
Number of obs = 406
Group variable: bank
Number of groups = 34
R-sq: within = 0.1928 Obs per group: min = 10
between = 0.6352 avg = 11.9
overall = 0.4334 max = 12

F(36,364) = 10.87 Prob > F = 0.0000

Group variable: bank
Number of groups = 34
R-sq: within = 0.0299 Obs per group: min = 10
between = 0.1127 avg = 11.9
overall = 0.0429 max = 12

F(36,364) = 1.41 Prob > F = 0.1933
Estimated coefficients = 10   Obs per group: min = 10
Estimated covariances = 34   Number of obs = 406
Panels: heteroskedastic
Coefficients: generalized least squares

| Coef. Std. Err. t P>|t|    | [95% Conf. Interval] |
|-----------------|-----------------|-------------------|
| ciratio | 2.071691 | 0.647693 | 3.20 | 0.001 | 0.799917 | 3.433864 |
| llprat | -21.79035 | 2.63957 | -8.22 | 0.000 | -28.8998 | -16.5717 |
| nplrat | 1.346057 | 1.6069 | 0.85 | 0.393 | 0.619988 | 3.084176 |
| ciratio | 4.506435 | 1.1005 | 4.11 | 0.000 | 2.380732 | 6.63214 |
| gen1 | 4.19841 | 2.11283 | 1.99 | 0.048 | 0.044292 | 0.35261 |
| lnopexp | 1.16961 | 0.43579 | 2.68 | 0.008 | 0.23267 | 2.10662 |
| overall = 0.6333   Obers per group: min = 12
between = 0.4634   avg = 12.0
overall = 0.5833   max = 12
F(3,359) = 7.46 |
con(u_j, Xb) = 0.1069   Prob > F = 0.0000

ra
| Coef. Std. Err. t P>|t|    | [95% Conf. Interval] |
|-----------------|-----------------|-------------------|
| ciratio | 2.071691 | 0.647693 | 3.20 | 0.001 | 0.799917 | 3.433864 |
| llprat | -21.79035 | 2.63957 | -8.22 | 0.000 | -28.8998 | -16.5717 |
| nplrat | 1.346057 | 1.6069 | 0.85 | 0.393 | 0.619988 | 3.084176 |
| ciratio | 4.506435 | 1.1005 | 4.11 | 0.000 | 2.380732 | 6.63214 |
| gen1 | 4.19841 | 2.11283 | 1.99 | 0.048 | 0.044292 | 0.35261 |
| lnopexp | 1.16961 | 0.43579 | 2.68 | 0.008 | 0.23267 | 2.10662 |

-321-
Coefficients:  generalized least squares

Estimated coefficients =         9          Obs per group: min =        10
Estimated autocorrelations =         0          Number of groups   =        34
Estimated covariances      =        34          Correlation:   no autocorrelation

(standard errors in parentheses)

|          | Coef. | Std. Err. |     t    |     P>|t|  |     95% Conf. Interval |
|----------|-------|-----------|---------|--------|-----------------------|
| ciratio_gen1 |   .0005015 |   .0003457 |     1.45  |  0.147 |          |
| ciratio_gen2 |   .0002452 |   .0003347 |     0.73  |  0.464 |          |

Correlation:   no autocorrelation

Cross-sectional time-series FGLS regression

Estimated coefficients =        11          Obs per group: min =        10

(standard errors in parentheses)

|          | Coef. | Std. Err. |     t    |     P>|t|  |     95% Conf. Interval |
|----------|-------|-----------|---------|--------|-----------------------|
| ciratio_gen1 |   .0004915 |   .0003457 |     1.45  |  0.147 |          |
Estimated coefficients: generalized least squares

 hazard risk linear effect has branch office or nest bank fixed effects (within) regression

| Variable | Coef. | Std. Err. | t-Statistic | P>|t| |
|----------|-------|-----------|-------------|-----|
| race     | -1.4446899 | 0.0025639 | -1.21996   | 0.216 |
| age      | 1.6757395 | 0.5924943 | 1.52784    | 0.129 |
| Max      | 5.0637924 | 1.9260085 | 2.64568    | 0.008 |
| Min      | 0.0194344 | 0.0021101 | 0.0138021  | 0.9503759 |
| av      | 12.0325229 | 2.7270305 | 7.013321   | 0.00000 |
| 95% CI    | 0.0194344 | 0.0021101 | 0.0138021  | 0.9503759 |
| 95% CI    | 12.0325229 | 2.7270305 | 7.013321   | 0.00000 |

F test that all u_i=0: F(33, 364) = 4.90 Prob > F = 0.0000

xtreg roa llprat larat eqta tlta tdta branch ohefrat nirevrat hhi inf, fe

| Variable | Coef. | Std. Err. | t-Statistic | P>|t| |
|----------|-------|-----------|-------------|-----|
| race     | -1.4446899 | 0.0025639 | -1.21996   | 0.216 |
| age      | 1.6757395 | 0.5924943 | 1.52784    | 0.129 |
| Max      | 5.0637924 | 1.9260085 | 2.64568    | 0.008 |
| Min      | 0.0194344 | 0.0021101 | 0.0138021  | 0.9503759 |
| av      | 12.0325229 | 2.7270305 | 7.013321   | 0.00000 |
| 95% CI    | 0.0194344 | 0.0021101 | 0.0138021  | 0.9503759 |
| 95% CI    | 12.0325229 | 2.7270305 | 7.013321   | 0.00000 |

F test that all u_i=0: F(33, 364) = 4.90 Prob > F = 0.0000
xtgls cr3 larat hhi, cratio cratio_gen1 gen1 eff, panels(heteroskedastic) corr(independent)

Cross-sectional time-series FGLS regression
Coefficients: generalized least squares

Panels: heteroskedastic
Correlation: no autocorrelation
Estimated covariances = 34 Number of obs = 406
Estimated coefficients = 6 Obs per group: min = 10
avg = 11.94118
max = 24.50
Wald chi2(6) = 68.16
Prob > chi2 = 0.0000

---

rco | Coef. Std. Err. z P>|z| [95% Conf. Interval]
---|-------|-------------------|--------|-----------------|-----------------|
larat | 0.0281285 | 0.0037493 | 7.24 | 0.000 | 0.0207 | 0.0356 |
branch | 0.0005559 | 0.0012984 | 0.43 | 0.666 | -0.0021 | 0.0032 |
---

xtgls cr3 larat hhi, cratio cratio_gen1 gen1 eff, panels(heteroskedastic) corr(independent)

Cross-sectional time-series FGLS regression
Coefficients: generalized least squares

Panels: heteroskedastic
Correlation: no autocorrelation
Estimated covariances = 34 Number of obs = 406
Estimated coefficients = 6 Obs per group: min = 10
avg = 11.94118
max = 24.50
Wald chi2(6) = 68.16
Prob > chi2 = 0.0000

---

rco | Coef. Std. Err. z P>|z| [95% Conf. Interval]
---|-------|-------------------|--------|-----------------|-----------------|
larat | 0.0281285 | 0.0037493 | 7.24 | 0.000 | 0.0207 | 0.0356 |
branch | 0.0005559 | 0.0012984 | 0.43 | 0.666 | -0.0021 | 0.0032 |
---
\begin{verbatim}
R-sq: within = 0.1046  Obs per group: min = 10
between = 0.1707  avg = 11.9
overall = 0.0052  max = 12
\texttt{corr(u_i, X)} = 0.7497  Prob > F = 0.0000
\texttt{F(10,362) = 4.23}
\texttt{corr(u_i, X)} = 0 (assumed)  Prob > ch2 = 0.0000

\texttt{coefficients (fraction of variance due to u_i)}
\[\text{F test that all } u_i=0:  F(33, 330) = 4.15  \text{ Prob > F = 0.0000}
\]
\texttt{xreg roa nitrat liprat eqta tita tota branch ohefrat hhi offnep}.
\texttt{indep ohefrat inddep ondep inf grdep rinf}
\texttt{note: ohefrat omitted because of collinearity}
\texttt{Fixed-effects (within) regression}  Number of obs = 408
\texttt{Group variable: bank  Number of groups = 34
\texttt{R-sq: within = 0.0612  Obs per group: min = 12
\texttt{between = 0.0826  avg = 12.0
\texttt{overall = 0.0989  max = 12
\texttt{Random effects u_i ~ Gaussian Wald chi2(31) = 879.74
\texttt{corr(u_i, X)} = 0 (assumed)  Prob > ch2 = 0.0000
\texttt{corr(u_i, X)} = 0 (assumed)  Prob > ch2 = 0.0000
\end{verbatim}
Cross-sectional time-series FGLS regression

Coefficients: generalized least squares
Panels: homoscedastic

Correlation: no autocorrelation
Estimated covariances = 1 Number of obs = 406
Estimated autocorrelations = 0 Number of groups = 34
Estimated coefficients = 19 Obs per group: min = 10
avg = 11.94118
max = 12
Wald chi2(20) = 65.92
Log likelihood = -2148.82 Prob > chi2 = 0.0000

|         | Coef. | Std. Err. | z P>|z| [95% Conf. Interval] |
|---------|-------|-----------|--------|------------------------|
| rho     | 0.0372 | 0.0475    | 0.78   | 0.434                  |

xtgls rho nprl ftrap larat eqta lnopexp eff, panels(id) corr(independent)
Panel variable: bank                            Number of groups = 34
Log likelihood = -721.1083 Prob > chi2 = 0.0000

|         | Coef. | Std. Err. | z P>|z| [95% Conf. Interval] |
|---------|-------|-----------|--------|------------------------|
| rho     | 0.0314 | 0.0477    | 0.66   | 0.511                  |

xtgls rho nprl ftrap larat eqta lnopexp eff, panels(id) corr(indep)
Panel variable: bank                            Number of groups = 34
Log likelihood = -721.1083 Prob > chi2 = 0.0000

|         | Coef. | Std. Err. | z P>|z| [95% Conf. Interval] |
|---------|-------|-----------|--------|------------------------|
| rho     | 0.0324 | 0.0476    | 0.68   | 0.494                  |

xtgls rho nprl ftrap larat eqta lnopexp eff, panels(id) corr(indep)
Panel variable: bank                            Number of groups = 34
Log likelihood = -721.1083 Prob > chi2 = 0.0000

|         | Coef. | Std. Err. | z P>|z| [95% Conf. Interval] |
|---------|-------|-----------|--------|------------------------|
| rho     | 0.0324 | 0.0476    | 0.68   | 0.494                  |

xtgls rho nprl ftrap larat eqta lnopexp eff, panels(id) corr(indep)
Panel variable: bank                            Number of groups = 34
Log likelihood = -721.1083 Prob > chi2 = 0.0000

|         | Coef. | Std. Err. | z P>|z| [95% Conf. Interval] |
|---------|-------|-----------|--------|------------------------|
| rho     | 0.0324 | 0.0476    | 0.68   | 0.494                  |
### Log likelihood

<table>
<thead>
<tr>
<th>Log likelihood</th>
<th>-210.2525</th>
<th>Prob &gt; chi2</th>
<th>0.0000</th>
</tr>
</thead>
</table>

### Coeff. Std. Err. z P>|z| [%95% Conf. Interval]

| | Coef. | Std. Err. | z | P>|z| | [95% Conf. Interval] |
|---|---|---|---|---|---|
| nplrat | -32.22254 | 27.27074 | -1.42 | 0.165 | -67.76844 | 12.32368 |
| lnast | 209.94112 | 101.97744 | 2.06 | 0.039 | 20.26527 | 406.6172 |
| larat | 14.63234 | 41.23406 | 0.35 | 0.723 | -66.97377 | 95.86286 |
| eqa | -8.61325 | 52.20587 | -0.18 | 0.838 | -190.0939 | 32.26736 |
| nplrat | 2.135085 | 0.6434451 | 3.32 | 0.001 | 0.869689 | 3.40048 |
| rint | 6.09855 | 51.51836 | 0.12 | 0.905 | 25.37032 | 106.0133 |
| cpl | -33.7569 | 110.4326 | -0.30 | 0.766 | -54.2009 | -115.313 |
| rast | 0.209262 | 0.008295 | 3.59 | 0.000 | 0.003144 | 0.004579 |
| corr(u_i, Xb) | 0.097695 | 0.03772 | 2.62 | 0.009 | 0.056757 | 0.13873 |
| nirevrat | 1003.698 | 434.4196 | 2.31 | 0.021 | 252.4154 | 1855.345 |
| roa | -1.442669 | 3.027055 | 0.45 | 0.655 | -5.078328 | 9.94357 |
| rint | -2.729874 | 8.118525 | -0.32 | 0.747 | -18.19099 | 13.3304 |
| rint | 6.226357 | 51.53186 | 0.12 | 0.905 | 25.37032 | 106.0133 |
| rint | 0.2115891 | 608.90832 | -0.03 | 0.976 | 257.3703 | 106.0133 |
| rast | -0.002885 | 0.008515 | 3.54 | 0.000 | 0.001288 | 0.004483 |
| rast | -0.528763 | 15.05228 | -0.06 | 0.949 | -891.4519 | -166.0607 |
| rint | 38.0552 | 17.5937 | 2.16 | 0.030 | 3.602455 | 72.58959 |
| cons | 269.0277 | 156.6177 | 1.73 | 0.868 | -46.4864 | 556.5209 |

### F test that all u_i=0

<table>
<thead>
<tr>
<th>F(33, 359)</th>
<th>4.00</th>
<th>Prob &gt; F</th>
<th>0.0000</th>
</tr>
</thead>
</table>

### Coeff. Std. Err. z P>|z| [%95% Conf. Interval]

| | Coef. | Std. Err. | z | P>|z| | [95% Conf. Interval] |
|---|---|---|---|---|---|
| Group variable: bank | Number of groups = 34 |
| Number of obs | 408 |
| R-sq: within | 0.0674 |
| Obs per group: min = 12 |
| between | 0.4781 |
| avg = 12.0 |
| overall | 0.5972 |
| max = 12.0 |
| F(15,359) | 50.71 |
|*** Bivariate correlation: bank | Number of groups = 34 |

### Cross-sectional-time-series FGLS regression

| Coefficients generalized least squares Panels: homoskedastic Correlation: no autocorrelation Estimated covariances = 1 Number of obs = 406 Estimated autocorrelations = 0 Number of groups = 34 Estimated coefficients = 18 Obs per group: min = 10 avg = 11.9418 max = 12 Wald ch2(17) = 62.21 Log likelihood = -210.425 Prob > chi2 = 0.0000

### Coeff. Std. Err. z P>|z| [%95% Conf. Interval]

| | Coef. | Std. Err. | z | P>|z| | [95% Conf. Interval] |
|---|---|---|---|---|---|
| Group variable: bank | Number of groups = 34 |
| Number of obs | 408 |
| R-sq: within | 0.0674 |
| Obs per group: min = 12 |
| between | 0.4781 |
| avg = 12.0 |
| overall | 0.5972 |
| max = 12.0 |
| F(15,359) | 50.71 |

### F test that all u_i=0

| F(33, 359) | 4.00 | Prob > F | 0.0000 |

### Coeff. Std. Err. z P>|z| [%95% Conf. Interval]

| | Coef. | Std. Err. | z | P>|z| | [95% Conf. Interval] |
|---|---|---|---|---|---|
| Group variable: bank | Number of groups = 34 |
| Number of obs | 408 |
| R-sq: within | 0.0674 |
| Obs per group: min = 12 |
| between | 0.4781 |
| avg = 12.0 |
| overall | 0.5972 |
| max = 12.0 |
| F(15,359) | 50.71 |

### F test that all u_i=0

| F(33, 359) | 5.92 | Prob > F | 0.0000 |

### Coeff. Std. Err. z P>|z| [%95% Conf. Interval]

| | Coef. | Std. Err. | z | P>|z| | [95% Conf. Interval] |
|---|---|---|---|---|---|
| Group variable: bank | Number of groups = 34 |
| Number of obs | 408 |
| R-sq: within | 0.0674 |
| Obs per group: min = 12 |
| between | 0.4781 |
| avg = 12.0 |
| overall | 0.5972 |
| max = 12.0 |
| F(15,359) | 49.32 |

### F test that all u_i=0

| F(33, 359) | 5.92 | Prob > F | 0.0000 |

### Coeff. Std. Err. z P>|z| [%95% Conf. Interval]

| | Coef. | Std. Err. | z | P>|z| | [95% Conf. Interval] |
|---|---|---|---|---|---|
| Group variable: bank | Number of groups = 34 |
| Number of obs | 408 |
| R-sq: within | 0.0674 |
| Obs per group: min = 12 |
| between | 0.4781 |
| avg = 12.0 |
| overall | 0.5972 |
| max = 12.0 |
| F(15,359) | 49.32 |

### F test that all u_i=0

| F(33, 359) | 5.92 | Prob > F | 0.0000 |

### F test that all u_i=0

| F(33, 359) | 5.92 | Prob > F | 0.0000 |

### F test that all u_i=0
### Cross-sectional time-series FGLS regression

**Coefficients:**
- **Constant:** 12.41772
- **Variable:**
  - **lnast:** 1.11314
  - **lnopexp:** 0.570766
  - **ohefrat:** 0.69759
  - **rast:** 1.0845
  - **indep:** 0.0708

**Estimations:**
- **Number of obs:** 124
- **Panels:** 10
- **Number of groups:** 10
- **Number of groups:** 10

**Log likelihood:**
- **-2loglik:** 100.78

---

### Fixed-effects (within) regression

**Coefficients:**
- **Constant:** 12.41772
- **Variable:**
  - **lnast:** 1.11314
  - **lnopexp:** 0.570766
  - **ohefrat:** 0.69759
  - **rast:** 1.0845
  - **indep:** 0.0708

**Estimations:**
- **Number of obs:** 124
- **Panels:** 10
- **Number of groups:** 10
- **Number of groups:** 10

**Log likelihood:**
- **-2loglik:** 100.78

---

### Summary

**Model:** FGLS regression

**Dependent variable:** lnast

**Estimations:**
- **Number of obs:** 124
- **Panels:** 10
- **Number of groups:** 10

**Log likelihood:**
- **-2loglik:** 100.78
Estimated autocorrelations = 0
Number of groups = 34

Cross-sectional time-series FGLS regression

Coefficients: generalized least squares

Panels: homoskedastic

Correlation: no autocorrelation

Estimated covariances = 1
Number of obs = 406

Estimated autocovariances = 0
Number of groups = 34

Estimated coefficients = 13
Obs per group: min = 10

avg = 11.94181
max = 12
Wald ch2(12) = 52.06

Log likelihood = -2154.874
Prob > chi2 = 0.0000

| Var | Coef. | Std. Err. | z | P>|z| [95% Conf. Interval] |
|-----|-------|-----------|---|------|-----------------------|
|     |       |           |   |      |                       |
| nplrat | 1.497487 | 6.468199  | 1.091573 | 6.599493 |
| eff | 31.65832 | 17.61595  | 1.8072 | 2.867089 |
| lnrast | 34.60539 | 13.46831  | -0.42 | -0.63 | -32.51765 |

Fixed-effects (within) regression

Number of obs = 406
Group variable: bank
Number of groups = 34

R-sq: within = 0.6738
Obs per group: min = 12

between = 0.5104
avg = 12.0

overall = 0.6012
max = 12

F(11,363) = 68.15
Prob > F = 0.0000

Estimation results for F(33, 363) = 6.23
Prob > F = 0.0000

Test that all u_i=0

F-test: 0.0000
Prob > F = 0.0000

Estimation results for F(33, 363) = 6.23
Prob > F = 0.0000

Test that all u_i=0

F-test: 0.0000
Prob > F = 0.0000
### xtreg roa nplrat llprat eqta tdta lnrast1 lnopexp ohefrat nirevrat cr4 inf rint, fe
corr(u_i, Xb) = 0.1210                         Prob > F           =    0.0000

| Coef. | Std. Err. | t    | P>|t| | [95% Conf. Interval] |
|--------|------------|------|------|----------------------|
| roa    | 0.870059   | 0.232 | 3.40 | 0.001     | 0.0001136     .0004231 |
| nplrat | 27.41528    | 3.092 | 8.90 | 0.000     | 17.43398     19.39658 |
| llprat | 63.15245    | 4.460 | 14.24| 0.000     | 54.28366     72.02124 |
| eqta   | 0.58   | 0.087 | 6.80 | 0.000     | 0.4174945     0.7461351 |
| tdta   | 0.036   | 0.009 | 3.84 | 0.000     | 0.0181735     0.0536875 |
| _cons  | 100.6025   | 8.652 | 11.72| 0.000     | 83.44919     117.75562 |
| lnrast1| 1.20   | 0.232 | 5.22 | 0.000     | 0.7545685     1.6474320 |
| lnopexp| 0.5390874  | 0.036 | 15.05| 0.000     | 0.4702965     0.6078783 |
| ohefrat| 1.77   | 0.232 | 7.66 | 0.000     | 1.3156758     2.2287844 |
| nirevrat| 0.11   | 0.027 | 4.03 | 0.000     | 0.0633574     0.1587345 |
| cr4    | 0.4478524  | 0.036 | 12.46| 0.000     | 0.4115238     0.4841810 |
| inf    | 0.004635   | 0.000 | 12.18| 0.000     | 0.004635     0.004635 |
| rint   | 0.1210     | 0.000 | 10.00| 0.000     | 0.1210       0.1210 |
| _cons  | 10.00255   | 0.809 | 12.46| 0.000     | 8.403675     11.60143 |

### Fixed-effects (within) regression

| Coef. | Std. Err. | t    | P>|t| | [95% Conf. Interval] |
|--------|------------|------|------|----------------------|
| roa    | 0.870059   | 0.232 | 3.40 | 0.001     | 0.0001136     .0004231 |
| nplrat | 27.41528    | 3.092 | 8.90 | 0.000     | 17.43398     19.39658 |
| llprat | 63.15245    | 4.460 | 14.24| 0.000     | 54.28366     72.02124 |
| eqta   | 0.58   | 0.087 | 6.80 | 0.000     | 0.4174945     0.7461351 |
| tdta   | 0.036   | 0.009 | 3.84 | 0.000     | 0.0181735     0.0536875 |
| _cons  | 100.6025   | 8.652 | 11.72| 0.000     | 83.44919     117.75562 |
| lnrast1| 1.20   | 0.232 | 5.22 | 0.000     | 0.7545685     1.6474320 |
| lnopexp| 0.5390874  | 0.036 | 15.05| 0.000     | 0.4702965     0.6078783 |
| ohefrat| 1.77   | 0.232 | 7.66 | 0.000     | 1.3156758     2.2287844 |
| nirevrat| 0.11   | 0.027 | 4.03 | 0.000     | 0.0633574     0.1587345 |
| cr4    | 0.4478524  | 0.036 | 12.46| 0.000     | 0.4115238     0.4841810 |
| inf    | 0.004635   | 0.000 | 12.18| 0.000     | 0.004635     0.004635 |
| rint   | 0.1210     | 0.000 | 10.00| 0.000     | 0.1210       0.1210 |
| _cons  | 10.00255   | 0.809 | 12.46| 0.000     | 8.403675     11.60143 |

### F test that all u_i=0

| Coef. | Std. Err. | t    | P>|t| | [95% Conf. Interval] |
|--------|------------|------|------|----------------------|
| roa    | 0.870059   | 0.232 | 3.40 | 0.001     | 0.0001136     .0004231 |
| nplrat | 27.41528    | 3.092 | 8.90 | 0.000     | 17.43398     19.39658 |
| llprat | 63.15245    | 4.460 | 14.24| 0.000     | 54.28366     72.02124 |
| eqta   | 0.58   | 0.087 | 6.80 | 0.000     | 0.4174945     0.7461351 |
| tdta   | 0.036   | 0.009 | 3.84 | 0.000     | 0.0181735     0.0536875 |
| _cons  | 100.6025   | 8.652 | 11.72| 0.000     | 83.44919     117.75562 |
| lnrast1| 1.20   | 0.232 | 5.22 | 0.000     | 0.7545685     1.6474320 |
| lnopexp| 0.5390874  | 0.036 | 15.05| 0.000     | 0.4702965     0.6078783 |
| ohefrat| 1.77   | 0.232 | 7.66 | 0.000     | 1.3156758     2.2287844 |
| nirevrat| 0.11   | 0.027 | 4.03 | 0.000     | 0.0633574     0.1587345 |
| cr4    | 0.4478524  | 0.036 | 12.46| 0.000     | 0.4115238     0.4841810 |
| inf    | 0.004635   | 0.000 | 12.18| 0.000     | 0.004635     0.004635 |
| rint   | 0.1210     | 0.000 | 10.00| 0.000     | 0.1210       0.1210 |
| _cons  | 10.00255   | 0.809 | 12.46| 0.000     | 8.403675     11.60143 |
### xtreg command output

#### Fixed-effects (within) regression

- **Number of obs:** 408
- **Number of groups:** 34

#### Results for `xtreg roa nplrat llprat eqta tdta lnrast lnopexp ohefrat nirevrat cr4 cpi inf rint, fe`:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>Std. Err.</th>
<th>t-Value</th>
<th>Prob &gt; t</th>
</tr>
</thead>
<tbody>
<tr>
<td>roa</td>
<td>2.821633</td>
<td>.460655</td>
<td>6.137</td>
<td>0.000</td>
</tr>
<tr>
<td>nplrat</td>
<td>.2242631</td>
<td>.0954654</td>
<td>2.358</td>
<td>0.019</td>
</tr>
<tr>
<td>llprat</td>
<td>.646107</td>
<td>.2640798</td>
<td>2.462</td>
<td>0.014</td>
</tr>
<tr>
<td>eqta</td>
<td>2.200113</td>
<td>.2096422</td>
<td>10.015</td>
<td>0.000</td>
</tr>
<tr>
<td>tdta</td>
<td>1.250336</td>
<td>.3636962</td>
<td>3.443</td>
<td>0.001</td>
</tr>
<tr>
<td>lnrast</td>
<td>1.969573</td>
<td>.5704478</td>
<td>3.477</td>
<td>0.000</td>
</tr>
<tr>
<td>lnopexp</td>
<td>1.230324</td>
<td>.5489798</td>
<td>4.401</td>
<td>0.000</td>
</tr>
<tr>
<td>ohefrat</td>
<td>-21.21711</td>
<td>2.612618</td>
<td>-8.110</td>
<td>0.000</td>
</tr>
<tr>
<td>nirevrat</td>
<td>-2.166519</td>
<td>1.453191</td>
<td>-1.451</td>
<td>0.149</td>
</tr>
<tr>
<td>cr4</td>
<td>2.598474</td>
<td>.26794</td>
<td>9.770</td>
<td>0.000</td>
</tr>
<tr>
<td>cpi</td>
<td>2.858662</td>
<td>1.475434</td>
<td>1.909</td>
<td>0.056</td>
</tr>
<tr>
<td>inf</td>
<td>2.908668</td>
<td>1.114021</td>
<td>2.605</td>
<td>0.009</td>
</tr>
<tr>
<td>rint</td>
<td>2.398735</td>
<td>1.894743</td>
<td>1.270</td>
<td>0.205</td>
</tr>
</tbody>
</table>

#### Wald Test

- **Wald chi2(10) = 64.99**
- **Prob > chi2 = 0.000**

#### Other Statistics

- **F(11, 363) = 6.39**
- **Prob > F = 0.000**

### gllamm command output

#### Model results for `gllamm roa nplrat llprat eqta tdta lnrast lnopexp ohefrat nirevrat cr4 cpi inf rint, family(normal)`:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>Std. Err.</th>
<th>t-Value</th>
<th>Prob &gt; t</th>
</tr>
</thead>
<tbody>
<tr>
<td>roa</td>
<td>2.821633</td>
<td>.460655</td>
<td>6.137</td>
<td>0.000</td>
</tr>
<tr>
<td>nplrat</td>
<td>.2242631</td>
<td>.0954654</td>
<td>2.358</td>
<td>0.019</td>
</tr>
<tr>
<td>llprat</td>
<td>.646107</td>
<td>.2640798</td>
<td>2.462</td>
<td>0.014</td>
</tr>
<tr>
<td>eqta</td>
<td>2.200113</td>
<td>.2096422</td>
<td>10.015</td>
<td>0.000</td>
</tr>
<tr>
<td>tdta</td>
<td>1.250336</td>
<td>.3636962</td>
<td>3.443</td>
<td>0.001</td>
</tr>
<tr>
<td>lnrast</td>
<td>1.969573</td>
<td>.5704478</td>
<td>3.477</td>
<td>0.000</td>
</tr>
<tr>
<td>lnopexp</td>
<td>1.230324</td>
<td>.5489798</td>
<td>4.401</td>
<td>0.000</td>
</tr>
<tr>
<td>ohefrat</td>
<td>-21.21711</td>
<td>2.612618</td>
<td>-8.110</td>
<td>0.000</td>
</tr>
<tr>
<td>nirevrat</td>
<td>-2.166519</td>
<td>1.453191</td>
<td>-1.451</td>
<td>0.149</td>
</tr>
<tr>
<td>cr4</td>
<td>2.598474</td>
<td>.26794</td>
<td>9.770</td>
<td>0.000</td>
</tr>
<tr>
<td>cpi</td>
<td>2.858662</td>
<td>1.475434</td>
<td>1.909</td>
<td>0.056</td>
</tr>
<tr>
<td>inf</td>
<td>2.908668</td>
<td>1.114021</td>
<td>2.605</td>
<td>0.009</td>
</tr>
<tr>
<td>rint</td>
<td>2.398735</td>
<td>1.894743</td>
<td>1.270</td>
<td>0.205</td>
</tr>
</tbody>
</table>

#### Wald Test

- **Wald chi2(10) = 64.99**
- **Prob > chi2 = 0.000**

#### Other Statistics

- **F(11, 363) = 6.39**
- **Prob > F = 0.000**
### xtreg

**xtgls eff nplrat llprat eqta tdta ohefrat hhi rint rast ownrsp, panels(iid) corr(independent)**

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Std. Err.</th>
<th>t-Value</th>
<th>Prob &gt;</th>
<th>Conf. Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>ohefrat</td>
<td>0.0185467</td>
<td>0.6191914</td>
<td>0.03</td>
<td>0.976</td>
</tr>
<tr>
<td>nplrat</td>
<td>1.946021</td>
<td>0.5813639</td>
<td>3.35</td>
<td>0.001</td>
</tr>
<tr>
<td>ownrsp</td>
<td>0.936073</td>
<td>0.1304998</td>
<td>7.17</td>
<td>0.000</td>
</tr>
<tr>
<td>rint</td>
<td>0.2697565</td>
<td>0.096233</td>
<td>2.80</td>
<td>0.005</td>
</tr>
<tr>
<td>rast</td>
<td>0.4217946</td>
<td>0.147308</td>
<td>2.80</td>
<td>0.005</td>
</tr>
<tr>
<td>eqta</td>
<td>0.007978</td>
<td>0.005352</td>
<td>0.15</td>
<td>0.879</td>
</tr>
<tr>
<td>hhi</td>
<td>0.0576949</td>
<td>0.0096337</td>
<td>0.05</td>
<td>0.96</td>
</tr>
<tr>
<td>ttest</td>
<td>0.4217946</td>
<td>0.147308</td>
<td>2.80</td>
<td>0.005</td>
</tr>
</tbody>
</table>

**F test that all u_i = 0**

<table>
<thead>
<tr>
<th>F(10,364)</th>
<th>Prob &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>75.86</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**overall = 0.6021**  
**max = 12**

**Prob > | F(10,364) | 0.000**

**Overall F test**

<table>
<thead>
<tr>
<th>F(10,364)</th>
<th>Prob &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.86</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**overall = 0.6030**  
**max = 12**

**Prob > | F(10,364) | 0.000**

---

**xtreg roa nplrat lpirat eqta tda hhi rint eff, panels(iid) corr(independent)**

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Std. Err.</th>
<th>t-Value</th>
<th>Prob &gt;</th>
<th>Conf. Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>ohefrat</td>
<td>0.116387</td>
<td>1.74</td>
<td>0.08</td>
<td>0.927</td>
</tr>
<tr>
<td>nplrat</td>
<td>3.878177</td>
<td>0.857405</td>
<td>4.54</td>
<td>0.000</td>
</tr>
<tr>
<td>eqta</td>
<td>0.009813</td>
<td>0.001036</td>
<td>9.50</td>
<td>0.000</td>
</tr>
<tr>
<td>hhi</td>
<td>-0.326183</td>
<td>0.174122</td>
<td>1.87</td>
<td>0.06</td>
</tr>
<tr>
<td>ttest</td>
<td>0.1371595</td>
<td>0.0342168</td>
<td>-4.01</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**F test that all u_i = 0**

<table>
<thead>
<tr>
<th>F(10,364)</th>
<th>Prob &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.86</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**overall = 0.6030**  
**max = 12**

**Prob > | F(10,364) | 0.000**

---

**xtreg roa nplrat lpirat eqta tda hhi rint eff, panels(iid) corr(independent)**

<table>
<thead>
<tr>
<th>Coefficient</th>
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<tr>
<td>ohefrat</td>
<td>0.0131022</td>
<td>4.67</td>
<td>0.00</td>
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</tr>
<tr>
<td>nplrat</td>
<td>2.112117</td>
<td>0.329053</td>
<td>6.44</td>
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<tr>
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<td>0.001036</td>
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**F test that all u_i = 0**

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<th>F(10,364)</th>
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<td>15.86</td>
<td>0.000</td>
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**overall = 0.6030**  
**max = 12**

**Prob > | F(10,364) | 0.000**

---

**xtgls eff nplrat llprat eqta tdta ohefrat hhi rint rast ownrsp, panels(iid) corr(independent)**

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**overall = 0.6030**  
**max = 12**

**Prob > | F(10,364) | 0.000**

---

**xtgls eff nplrat llprat eqta tdta ohefrat hhi rint rast ownrsp, panels(iid) corr(independent)**

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**overall = 0.6030**  
**max = 12**

**Prob > | F(10,364) | 0.000**
Correlation: no autocorrelation
Panels: homoskedastic

xtgls roa llprat eqta ohefra
------------------------------------------------------------------------------
Estimated autocorrelations =         0          Number of groups   =
------------------------------------------------------------------------------
xtgls roa llprat eqta tdta ohefrat hhi rint rast ownrsp eff, panels(iid) corr(independent)
------------------------------------------------------------------------------
Log likelihood             =
Coefficients:  generalized least squares

| Variable | Coef.  | Std. Err. | z     | P>|z|    | [95% Conf. Interval]   |
|----------|--------|-----------|-------|--------|------------------------|
| ohefrat  | 2.487345 | .7996547  | 3.11  | 0.002  | .920051     4.05464   |
| lnrast   | 2.263788 | .1220027  | 1.04  | 0.305  | .321775     4.205537  |
| nplrat   | 2.263788 | .1220027  | 1.04  | 0.305  | .321775     4.205537  |
| avg      | 11.94181 | .2079026  | 57.14 | 0.000  | 11.53563    12.348   |

xtgls roa llprat eqta ohefrat hhi rint rast ownrsp eff, panels(iid) corr(ind) (continued)

xtgls roa llprat eqta tdta ohefrat hhi rint rast ownrsp eff, panels(iid) corr(ind) (continued)

xtgls roa llprat eqta tdta ohefrat hhi rint rast ownrsp eff, panels(iid) corr(ind) (continued)

Hauser fixed, sigma

Note: the rank of the differenced variance matrix (8) does not equal the number of coefficients being tested (10); be sure you are confident in your model.

xtgls roa llprat eqta tdta ohefrat hhi rint rast ownrsp eff, panels(iid) corr(ind) (continued)
Coefficients: generalized least squares
Panels: homoskedastic
Correlation: no autocorrelation
Estimated covariances = 1
Number of obs = 406
Estimated correlations = 0
Number of groups = 34
Estimated coefficients = 10

Wald chi2(9) = 10.7
Prob > chi2 = 0.1468
max = 12
Wald chi2(9) = 12.9
Prob > chi2 = 0.0949

cols = 34
766
115x76
Estimated coefficients = 10
Obs per group: min = 10
avg = 11.94118
max = 12
Wald chi2(9) = 47.32
Log likelihood = 2196.984
Prob > chi2 = 0.0000

coe | St. Err. z P>|z| [95% Conf. Interval]
---+------------------------------------------------------------------
   roa | 0.1752 1.2521 1.097 0.216 -0.0704 0.3979
   npl | 0.1402 1.0549 0.954 0.341 -0.0464 0.3267
   eff | 0.0904 1.0861 0.971 0.337 -0.0763 0.2571
   hhi | 0.0805 1.0861 0.981 0.347 -0.0757 0.2366
   rast | 0.0000 1.0861 0.999 0.328 -0.0000 0.0000
   cr4 | 0.0248 1.0861 0.986 0.342 -0.0000 0.0495
   cr3 | 0.0285 1.0861 0.986 0.342 -0.0000 0.0655
   lndep | 0.1263 1.0861 0.936 0.352 -0.0000 0.2635
   int | 0.1670 1.0861 0.944 0.346 -0.0000 0.4429
   lnrast | 0.1752 1.2521 1.097 0.216 -0.0704 0.3979
   lntds | 0.2603 1.0861 0.979 0.337 -0.0963 0.5239
   lnlndep | 0.2603 1.0861 0.979 0.337 -0.0963 0.5239
   lnint | 0.359 1.0861 0.952 0.347 -0.0528 0.772
   _cons | 0.1402 1.0861 0.999 0.341 -0.0464 0.3267

note: nint omitted because of collinearity

---+------------------------------------------------------------------
   roa | 0.1752 1.2521 1.097 0.216 -0.0704 0.3979
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   _cons | 0.1402 1.0861 0.999 0.341 -0.0464 0.3267

note: nint omitted because of collinearity
Log likelihood = -692.5398  Prob > chi2 = 0.0000

| Coef. | Std. Err. | z     | P>|z| [95% Conf. Interval] |
|-------|-----------|------|--------|------------------------|
| roa   | -0.0117   | 0.03499 | -0.34 | 0.734 [-0.078 - 0.0258] |
| llprat| -0.0177   | 0.03259 | -0.53 | 0.595 [-0.0814 - 0.0566] |
| rast  | -0.018    | 0.03183 | -0.57 | 0.566 [-0.078 - 0.0318] |
| rint  | -0.0159   | 0.03145 | -0.50 | 0.618 [-0.0748 - 0.043] |
| sectionalcroprat | -0.00345 | 0.03091 | -0.11 | 0.913 [-0.0638 - 0.0569] |
| sectionaltlta | -0.00239 | 0.03215 | -0.07 | 0.942 [-0.0665 - 0.0612] |
| sectionalroa | -0.00346 | 0.03177 | -0.11 | 0.911 [-0.0635 - 0.0565] |
| rast | -0.0187 | 0.03186 | -0.59 | 0.555 [-0.078 - 0.0314] |
| rint | -0.0156 | 0.03176 | -0.50 | 0.618 [-0.0748 - 0.0429] |
| sectionalcroprat | -0.00344 | 0.03092 | -0.11 | 0.912 [-0.0639 - 0.0568] |
| sectionaltlta | -0.00239 | 0.03216 | -0.07 | 0.942 [-0.0664 - 0.0611] |
| sectionalroa | -0.00345 | 0.03176 | -0.11 | 0.912 [-0.0637 - 0.0567] |

Panel heteroskedasticity test (White): F(1, 170) = 15.39, Prob > F = 0.0000

Log likelihood = -696.1419  Prob > chi2 = 0.0000

| Coef. | Std. Err. | z     | P>|z| [95% Conf. Interval] |
|-------|-----------|------|--------|------------------------|
| roa   | -0.0119   | 0.0351 | -0.34 | 0.734 [-0.078 - 0.0257] |
| llprat| -0.0177   | 0.0326 | -0.53 | 0.594 [-0.0814 - 0.0567] |
| rast  | -0.018    | 0.0318 | -0.57 | 0.566 [-0.078 - 0.0318] |
| rint  | -0.0159   | 0.0314 | -0.50 | 0.618 [-0.0748 - 0.043] |
| sectionalcroprat | -0.00345 | 0.0309 | -0.11 | 0.913 [-0.0638 - 0.0569] |
| sectionaltlta | -0.00239 | 0.0321 | -0.07 | 0.942 [-0.0665 - 0.0612] |
| sectionalroa | -0.00346 | 0.0317 | -0.11 | 0.913 [-0.0635 - 0.0565] |
| rast | -0.0187 | 0.0319 | -0.59 | 0.555 [-0.078 - 0.0314] |
| rint | -0.0156 | 0.0318 | -0.50 | 0.618 [-0.0748 - 0.0429] |
| sectionalcroprat | -0.00344 | 0.0309 | -0.11 | 0.912 [-0.0639 - 0.0568] |
| sectionaltlta | -0.00239 | 0.0321 | -0.07 | 0.942 [-0.0664 - 0.0611] |
| sectionalroa | -0.00345 | 0.0317 | -0.11 | 0.912 [-0.0637 - 0.0567] |

Panel heteroskedasticity test (White): F(1, 170) = 15.39, Prob > F = 0.0000

Log likelihood = -696.1419  Prob > chi2 = 0.0000

| Coef. | Std. Err. | z     | P>|z| [95% Conf. Interval] |
|-------|-----------|------|--------|------------------------|
| roa   | -0.0119   | 0.0351 | -0.34 | 0.734 [-0.078 - 0.0257] |
| llprat| -0.0177   | 0.0326 | -0.53 | 0.594 [-0.0814 - 0.0567] |
| rast  | -0.018    | 0.0318 | -0.57 | 0.566 [-0.078 - 0.0318] |
| rint  | -0.0159   | 0.0314 | -0.50 | 0.618 [-0.0748 - 0.043] |
| sectionalcroprat | -0.00345 | 0.0309 | -0.11 | 0.913 [-0.0638 - 0.0569] |
| sectionaltlta | -0.00239 | 0.0321 | -0.07 | 0.942 [-0.0665 - 0.0612] |
| sectionalroa | -0.00346 | 0.0317 | -0.11 | 0.913 [-0.0635 - 0.0565] |
| rast | -0.0187 | 0.0319 | -0.59 | 0.555 [-0.078 - 0.0314] |
| rint | -0.0156 | 0.0318 | -0.50 | 0.618 [-0.0748 - 0.0429] |
| sectionalcroprat | -0.00344 | 0.0309 | -0.11 | 0.912 [-0.0639 - 0.0568] |
| sectionaltlta | -0.00239 | 0.0321 | -0.07 | 0.942 [-0.0664 - 0.0611] |
| sectionalroa | -0.00345 | 0.0317 | -0.11 | 0.912 [-0.0637 - 0.0567] |
**F-test** that all $u_j = 0$:

| F(33, 358) | 1.05 | $\text{Prob} > F = 0.3012$ |

---

**Random-effects GLS regression**

| Number of obse & 408 |

---

**Fixed-effects (within) regression**

| Number of obs & 408 |

---

**xtreg**

| 2.187536 & 1.566142 |
| 1.294923 & 0.277656 |
| -4.66 & 0.002 |
| -78.45553 & 89.81427 |
| 7.832555 & 8.390559 |
| -523922 & 0.579244 |
| 1.692885 & 0.342 |
| 26.38021 & 7.521084 |
| -1.692885 & -6.93 |
| -23.8892 & -73.36435 |
| 19.01857 & 19.01857 |
| 90.45208 & 90.45208 |
| 99.81427 & 99.81427 |
| 50.61118 & 50.61118 |
| 11.9426 & 11.9426 |
| 0.0087 & 0.0087 |
| 9.894445 & 9.894445 |
| $\text{Prob} > \chi^2 = 0.0000$ |
### Cross-sectional time-series FGLS regression

#### Estimated coefficients
- **lnrast**: Coef. 0.8608939, Std. Err. 0.1692678, T 5.09, P |t| 0.000, 95% Conf. Interval: 0.5291352 - 1.192653
- **nplrat**: Coef. 6.272049, Std. Err. 0.79, T 8.11, P |t| 0.000, 95% Conf. Interval: 5.707522 - 6.846626
- **roa**: Coef. 3.405065, Std. Err. 0.82, T 4.19, P |t| 0.000, 95% Conf. Interval: 2.762049 - 4.048081
- **eff**: Coef. 4.188824, Std. Err. 0.82, T 5.09, P |t| 0.000, 95% Conf. Interval: 3.550924 - 4.826724

#### Estimated covariances
- **sigma_e**: 51.412445
- **rho_fov**: 0.5808215
- **sigma_u**: 1.243013
- **sigma_e**: 1.047203

#### Panel: heteroskedastic

#### Cross-sectional time-series FGLS regression

#### Coefficients: generalized least squares

#### Panels: heteroskedastic

#### Correlation: no autocorrelation

#### Estimated covariances: 34
- **Number of obs**: 406
- **Estimated autocorrelations**: 0
- **Estimated coefficients**: 10
  - **Obs per group**: min 10, avg 11.94118, max 12
  - **Wald ch2**: 73.05
  - **Prob ch2**: 0.0000

### Fixed-effects (within) regression

#### Regression with AR(1) disturbances

#### Number of obs: 374
- **F test that all u_i=0**: F(33,330) = 3.81, P |t| 0.000, 95% Conf. Interval: [0.5932 - 1.7264]
- **No overall F**: 106.53

### Random-effects GLS regression

#### Regression with AR(1) disturbances

#### Number of obs: 374
- **F test that all u_i=0**: F(33,330) = 3.81, P |t| 0.000, 95% Conf. Interval: [0.5932 - 1.7264]
- **No overall F**: 106.53

### Panel: heteroskedastic

#### Regression with AR(1) disturbances

#### Number of obs: 374
- **F test that all u_i=0**: F(33,330) = 3.81, P |t| 0.000, 95% Conf. Interval: [0.5932 - 1.7264]
- **No overall F**: 106.53
FE (within) regression with AR(1) disturbances Number of obs = 374
Group variable: bank Number of groups = 34
R-sq: within = 0.7626 Obs per group: min = 11
between = 0.3787 avg = 11.0
overall = 0.5593 max = 11
F(10,330) = 106.03 Prob > F = 0.0000
corr(u_i, Xb) = 0.0965

corr(u_i, Xb) = 0.0025                         Prob > F           =    0.0000

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F test that all u_i=0: F(33,330) = 3.87 Prob > F = 0.0000
xtregar roa nplrat llprat eqta tdta lnrast lnopexpr ohefrat nirevrat cr4 inf, fe

rho_fov |  .58279466   (fraction of variance because of u_i)

rho_fov |  .58847582 (fraction of variance because of u_i)

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F test that all u_i=0: F(33,330) = 3.82 Prob > F = 0.0000
xtregar roa nplrat llprat eqta tdta lnrast lnopexpr ohefrat nirevrat cr4 inf, fe

rho_fov |  .57897497 (fraction of variance because of u_i)

rho_fov |  .58301034 (fraction of variance because of u_i)

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-----------
-----------

F test that all u_i=0: F(33,330) = 3.82 Prob > F = 0.0000
xtregar roa nplrat llprat eqta tdta lnrast lnopexpr ohefrat nirevrat cr4 inf, fe

rho_fov |  .57589797 (fraction of variance because of u_i)

rho_fov |  .58947582 (fraction of variance because of u_i)

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F test that all u_i=0: F(33,330) = 3.82 Prob > F = 0.0000
xtregar roa nplrat llprat eqta tdta lnrast lnopexpr ohefrat nirevrat cr4 inf, fe

rho_fov |  .58295075 (fraction of variance because of u_i)

rho_fov |  .57907497 (fraction of variance because of u_i)

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### Results

#### FE (within) regression with AR(1) disturbances

**Results:**

- Number of obs = 408

**Coefficients:**

- Constant = 8.780422
- rgdp = 0.8323
- tdta = 2.5633
- eqta = 5.1767
- inf = 0.0844
- cr4 = 6.1349

**Standard Errors:**

- Constant = 1.111773
- rgdp = 0.0036
- tdta = 0.0079
- eqta = 0.0008
- inf = 0.0367
- cr4 = 0.0095

**R-squared:**

- Overall = 0.5336
- Between = 0.2906
- Within = 0.7617

**Tests:**

- F-test that all u_i=0: F(33,330) = 4.13, Prob > F = 0.0000
- F-test that all u_i=0: F(33,330) = 3.82, Prob > F = 0.0000

---

#### Robustness Checks

**Results:**

- Constant = 8.649038
- rgdp = 0.8623
- tdta = 2.5490
- eqta = 5.0901
- inf = 0.0868
- cr4 = 6.0269

**Standard Errors:**

- Constant = 0.0039
- rgdp = 0.0077
- tdta = 0.0187
- eqta = 0.0197
- inf = 0.0429
- cr4 = 0.0126

**R-squared:**

- Overall = 0.5341
- Between = 0.2906
- Within = 0.7617

**Tests:**

- F-test that all u_i=0: F(33,330) = 4.14, Prob > F = 0.0000
- F-test that all u_i=0: F(33,330) = 3.83, Prob > F = 0.0000

---

#### Additional Results

**Rho AR1:**

- Value = 0.6037

**Sigma E:**

- Value = 1.0601

**Sigma U:**

- Value = 1.31

---

### Additional Notes

- These results are based on a fixed-effects regression model with robust standard errors.
- The model includes a variety of control variables and their standard errors are reported.
- The model is estimated using the xtregar command in Stata.
- The table includes coefficients, standard errors, t-values, and p-values for each variable.
- The model accounts for AR(1) disturbances and includes a fixed-effects specification.
Appendix - 17: Code of Corporate Governance by the BEI

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>I.</td>
<td>Mission of the Board of Directors</td>
</tr>
<tr>
<td><strong>Principle:</strong></td>
<td>The Board of Directors should lead and oversee strategy and policy of the company and provide direction to the management. Board actions should be in the best interests of the company and shareholders.</td>
</tr>
</tbody>
</table>

| II. | Duties of the Board |
| **Principles:** | The Board of Directors should define its role and job responsibilities. The following include the major responsibilities of the board: |
| A. | Serve the legitimate interests of the shareholders and/or owners and account to them fully. All directors represent all shareholders – diversity should not be misinterpreted as representing constituencies. Directors should ensure that the company communicates effectively with shareholders, potential shareholders, and other stakeholders. |
| B. | Any communication of material information should be made public rapidly or simultaneously to all shareholders and investors, so that all current and potential investors have an equal opportunity to act on such information. |
| C. | Ensure that the company complies with all relevant laws and regulations, including the current Code of Corporate Governance, and other codes of best business practice. |
| D. | Identify and monitor key risk areas and performance indicators of the enterprise. |
| E. | Review and monitor risk management systems and internal control mechanisms to enable decision making and maintain the accuracy of financial results. |
| **Guidelines:** | The Board of Directors should appoint the Managing Director/Chief Executive Officer and participate in the appointment of senior management. The board should establish performance criteria and evaluate the performance of the MD/CEO. The board should also ensure that there is a succession plan for senior management and the MD/CEO. |

| III. | Board Membership Criteria |
| **Principles:** | A. Each director should be well-qualified to carry out their duties. Each director should be able and prepared to devote sufficient time and effort to his or her duties as a director. |
| B. | Directors should each add value to the board and bring independent judgement to bear on their duties. |
| **Guidelines:** | C. To ensure a director has sufficient time to undertake his or her duties, an individual director should not hold directorships in more than 6 boards. |
| D. | Directors who have not attended at least 50% of the board meetings (without a leave of absence) during the last year should not be eligible for re-election to the board. |

| IV. | Nomination of New Board Members |
| **Principle:** | A. When nominating new directors, shareholders and the board should consider the mix of director characteristics, experiences, diverse perspectives and skills that is most appropriate for the organisation. |
| **Guidelines:** | B. A Nomination Committee of the Board is not required to carry out the nomination process, but may be one method to seek out and nominate qualified persons for directorships. A nomination committee, however, should not preclude shareholders from being active participants in the nomination process. |
| C. | Shareholders should have an opportunity to nominate board candidates before the Notice of the Annual Meeting. Sufficient time (at least 21 days) should be provided in a general notice to shareholders to allow them to organise their nomination of directors. |
| 1. | The board or nomination committee should release a list of required information that must be submitted with a director nomination. The required information should include qualifications, education, experience, current directorships, and any interests in the company. The required information can be used to compare director candidates. |
| 2. | An institution or institutional investor (government, provident fund, etc.) can be represented on numerous boards, far in excess to 6. However, a single individual (as nominee of the institution) should not hold more than 6 directorships, so that they have sufficient time to devote to their individual duties as director. |
| 3. | By enabling shareholder nomination of director candidates, directors can become more directly the representatives of shareholders. |

| V. | Training |
| **Principle:** | A. Companies should recognise that a directorship is a professional appointment and therefore they should provide opportunities and funds for training of individual directors and the development of the board. |
| **Guidelines:** | B. New and continuing directors would benefit from director training programmes that increase their skills and knowledge on directors’ liabilities, best board practices, and strategic planning. New directors should be required to attend a corporate governance orientation or training offered by a reputed institution or trainer. |
VI. Separation of Chairman and CEO
Principle:
The positions of Chairman of the Board and CEO should be filled by different individuals since their functions are necessarily separate. A strong, independent chairman provides the appropriate counterbalance and check to the power of the Managing Director/CEO.

VII. Board Composition
Principles:
A. To ensure a well-functioning and involved board, the size of the board should be large enough to include directors with diverse expertise and experience, but should not be too large to enable involvement by all directors. The board should periodically review its size and composition.
B. An important way for the board to provide active, unbiased, and diverse advice to senior management is to have a diverse group of directors, including executive directors, non-executive directors, and outside/independent directors.
Guidelines:
C. Internationally, successful corporate boards have membership of 7 to 15 directors.
D. Companies should articulate and implement a nomination programme to enable a majority of board members to be non-executive and independent directors.
2. Executive directors are those that concurrently hold a senior management position in the company. Nonexecutive directors are simply directors that do not currently hold a position with the organisation for which they serve on the board. Independent or outside directors are those who do not have employment, familial, financial, or other ties to the company.
E. Non-executive directors should be included in any committees and tasked with any decisions that might involve a conflict of interest.
F. The Board of Directors to reach a quorum, a majority of non-executive or independent directors must be present.
G. There should be mandatory retirement by rotation of 20% of the board of public companies; the vacancies to be filled at the AGM.
H. The term limit for directors of banks and other financial institutions should be a maximum of 12 years. This would apply equally to sponsor directors.

VIII. Board Compensation
Principle:
Board compensation should be sufficient to compensate directors for the time and effort required to complete their duties well. This is especially important to nurture professional directors.

IX. Board Agenda
Principles:
A. The agenda and materials for each board meeting should be provided to directors sufficiently in advance of the board meeting to allow them to prepare and provide substantial input and comments on agenda items.
B. The Board Agenda should be prepared by the Chairman of the Board, who should also determine the materials for the board meetings, and all board papers to be organised and circulated by the Company Secretary.
Guidelines:
C. The following information should be reported to, and placed before, the board:
1. Annual operating plans and budgets, together with updated long term plans.
2. Capital budgets, manpower, and overhead budgets.
3. Quarterly results for the company as a whole and its operating divisions or business segments.
4. Internal audit reports, including specific, material cases of theft and misconduct.
5. Show cause, demand, and prosecution notices received from revenue authorities which are materially important.
6. Fatal or serious accidents and any effluent or pollution problems.
7. Default in payment of interest or principal on any public deposit, secured creditor, or financial institution.
8. Directors that provide an extraor

X. Committees (Type, Structure, Responsibilities)
Principles:
A. Committees in which conflicts of interest are more likely to occur (i.e. Audit, Nomination, etc.) should be made up of a majority of non-executive directors, or at least should be headed by a non-executive director.
B. Companies with greater than Tk 30 crore (Tk 300 million) turnover should have an Audit Committee of the Board.
Guidelines:
C. Audit Committees: Though audit committee arrangements will vary according to the size and complexity of the company, the audit committee’s basic structure and responsibilities should include:
1. Structure/Membership. The audit committee should be composed of at least three members appointed by the board. The audit committee chairman must be, and the majority of members should be, nonexecutive directors; the chairman of the audit committee should have a professional qualification and recent and relevant financial experience.
The Chairman of the Board shall not be a member of the committee.
2. Meetings/Reporting. Meetings must be held quarterly; to monitor internal and external audits. The committee must prepare reports on all meetings for the board, and report annually to shareholders. The MD, CEO, or chairman of the board may be invited to attend committee meetings as and when required.
3. The responsibilities of the audit committee should be established in the Terms of Reference for the committee. They should include:
a. to review effectiveness of company’s internal risk controls and risk management systems;
b. to monitor the integrity of annual and interim financial statements of the company, the clarity of disclosure and the context in which statements are made;
c. to review and challenge where necessary the consistence of, and any changes to, accounting policies;
d. to approve the appointment and removal of the internal auditor, ensure adequate resources, appropriate access to information and independence so that internal audits can be effectively performed to high standards; review all internal audit reports and plans, and monitor management’s responsiveness; meet the internal auditor/head of internal audit at least once a year without management being present to discuss any issues arising from internal audits;
e. to assess the independence and objectivity of external auditors; assess annually their qualifications, expertise, resources and the effectiveness of the external audit; review and approve the annual audit plan; meet regularly with the external auditor, including at least once a year without management being present to discuss any issues arising from the external audit.
D. Other Board Committees: Companies could also consider forming other board committees as is deemed necessary. Other committees might include:
1. A Remuneration Committee that deals with the compensation to the Board of Directors.
2. A Nomination Committee that oversees the process for nomination to the board and to other committees.
E. All board committees should be given clear Terms of Reference including:
1. Structure
2. Role, responsibility and authority delegated to it by the board
3. Frequency, length and agenda of committee meetings
4. The above information on board committees should be made available by the company on request (and/or placed on the company’s website).
XI. Directors' Report
Principle:
A. The annual Directors' Report, usually included in the organisation's Annual Report, is an important document for communication between shareholders and the Board of Directors. It should be a strategic document that explains both past results, board decisions, and the future direction of the organisation. The guideline for inclusion of items in the Directors' Report should be materiality to the company's operations and results.

Guidelines:
B. The Directors' Report should include:
1. Explanation of results
2. Explain compliance and/or non-compliance with the Code of Corporate Governance
3. Explain deviations from IAS
4. Sales and market share for domestic and foreign markets
5. Generally, any exposure greater than 1% of net worth or 10% of profits should be considered material.
6. Disclosures may appear elsewhere in the Annual Report as deemed appropriate.
7. Current market value of the company (if listed)
8. Strategy and future prospects
9. Material risk factors and uncertainties which could affect the quality of earnings
10. Ownership structure including disclosure of shareholders owning more than 5% of shares
11. Details of loans to directors
12. Details of any investments, including shares, government bonds, and other securities
13. Directors' shareholding and any changes therein
14. Report on the relatives of directors as employees or members of the board and their shareholdings
15. Details of director compensation and remuneration (both direct and indirect)
16. Persons who have attended board meetings in the last year, including attendance of directors and any substitute directors.
17. Key results information for divisions or business segments
18. Report on the end use of funds raised from the public by issuing shares or debentures
19. Ongoing or likely legal actions against or by the company that could have a material impact
20. The total amount of political donations and charity donations made throughout the year. (Recipients need not be identified.)
21. Details of new material loans and creditors
22. Critical accounting policies used in preparation of the financial statements.
23. Disclosure of the basis of estimates used in financial reporting. The presentation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and reported amount of revenue and expenses during the reported period. For example, allowances for doubtful accounts, inventory obsolescence, intangible asset valuation and useful life, employees' benefit plans, contingencies, etc. The basis of such estimates should be disclosed for their proper evaluation by the users of the financial statements.

XII. Code of Conduct
Principle:
A. Boards should create a Code of Conduct for Directors detailing directors' roles, responsibilities, and duties.

Guidelines:
B. Every year, directors should review and agree to abide by this Code of Conduct.

C. The Code of Conduct should be included in the orientation for all new directors.

D. The board should also create Codes of Conduct for Management and Employees, which should be signed and agreed as a condition of the contract of employment.

XIII. Company Secretary/Compliance Officer
Principle:
A. Companies should employ a qualified Company Secretary or other qualified Compliance Officer to advise senior management and the board on their responsibilities and liability with regard to legal and regulatory requirements and compliance with the Code of Corporate Governance.

Guidelines:
B. The Company Secretary or Compliance Officer should provide advice both on issues of internal controls as well as requirements due to external entities.

C. The Company Secretary or Compliance Officer should keep an annual record of the company's compliance/non-compliance with the Code of Corporate Governance, and in the event of non-compliance an explanation should be sought from the board.

D. In the event that the board cannot justify the cost of a full time in-house Company Secretary, the functions may be performed by external advisors provided that these advisers are not also the auditor, company lawyer, or other adviser to the board.

XIV. Access to Senior Management, Outside/Professional Advice
Principles:
A. The board may seek out or invite those in senior management positions, employees, other non-directors or outside professionals to board meetings, as required, for access to any information deemed appropriate or necessary in order to effectively deliberate on decisions and perform its duties.

Guidelines:
B. The board can obtain, at the company's expense, outside legal or other professional advice on any matter deemed necessary for it to effectively perform its duties.

C. The MD/CEO shall be informed of all requests for information put to management.

XV. Evaluation of Board Performance
Principle:
A. The board should evaluate its own performance, both collectively and individually including the performance of the chairman, at least once a year, to 8 Qualified should be taken to mean one certified by a reputable institute of Chartered Secretaries or one having equivalent legal, financial, and business training, ensure it is operating effectively and adjust its constitution and policies accordingly.

Guidelines:
B. Boards may also consider using an independent outsider to conduct an external evaluation of the board and its performance, who shall make recommendations based on its evaluation.

Commentary
The provisions of the Code of Corporate Governance on Board Issues can begin to be implemented by their incorporation into a company’s Memorandum and Articles of Association, as well as any internal Board Charter. A Board Charter can be a useful document to incorporate the duties, rights and responsibilities of the board, as well as the Vision and Mission Statements. The board should annually create a work plan and strategy for its role in guiding the organisation. The plan, however, should include benchmarks to develop board capacity as well as specific goals in the context of the organisation’s activities. Questions have often been raised about how to change the composition of the board, since the board is elected by shareholders. Key to transforming the composition of the board is to provide choices to shareholders. In most organisations, a slate of board candidates is offered to shareholders which corresponds with the seats up.
for election. This traditional method of board election leaves the shareholders few choices. To begin to emphasise the importance of the shareholders’ decisions regarding the board, shareholders should be presented with multiple nominees for each board seat and shareholders themselves allowed to nominate candidates. In addition, the board must include non-executives and independent candidates as nominees to the board. In this way, the board can achieve the goal of a majority of non-executive directors.

International best practice now focuses on independent directors who are not current or former employees and who do not have significant financial, commercial, familial, or other ties to the company. The Code has not emphasised independent directors, but for the present recommends a majority of the board be non-executive directors. The requirement focuses on non-executive directors due to the perception that Bangladesh currently lacks a sufficient number of persons who are qualified and willing to serve as independent directors. However, this may change in the future, and later versions of the Code may reflect such a change.

All board members, whether executive, non-executive or independent, have an individual legal responsibility to act in the best interests of the shareholders and the company. To ensure that directors have sufficient information to carry out their duties properly, section XVII asserts the right of directors to call on management, non-directors, and outside professionals to advise and provide information deemed relevant to their role on the board. Other Codes of Corporate Governance also emphasise the right of employees to have access to the board to report complaints and wrongdoing; this access to the board can be facilitated by assigning one director, usually the Company Secretary, as the board contact for any employee. Individual boards may consider such a provision to improve access by concerned employees.

The Code puts the onus on the board itself to begin to define its roles more clearly and serve the interests of the shareholders. Stronger, more proactive boards will lead to organisations that have better long term strategic management and are able to better face the challenges of competitive markets.

ROLE OF SHAREHOLDERS

This section of the Code of Corporate Governance applies primarily to public companies; however many of the same principles of transparency and accountability are relevant to private companies that have minority shareholders. Public listed companies should comply with all legal and regulatory requirements; some, but not all, of those requirements are highlighted within this Code. Other provisions of the Code suggest that companies go beyond the legal requirements to further empower their shareholders.

Existing regulatory bodies also have a mandate to uphold the rights of shareholders, while shareholders themselves, in turn, have a responsibility to advocate good corporate governance practices in accordance with international best practice.

Legal provisions for shareholders rights are, for the most part, adequate in Bangladesh. However, most shareholders are not aware of their rights or how to exercise them. In addition, they often misunderstand their function as shareholders, focusing instead on the corollary benefits of share ownership (such as attending the AGM in a nice location) rather than the substance of company management. By becoming empowered and understanding their rights, shareholders themselves will force company boards to become more accountable for their actions and company performance.

As the main arena for communication between shareholders, management and the Board of Directors, the AGM is a very important element of corporate governance. AGMs should provide an opportunity for some discussion of substance and allow for the shareholders to assert their rights regarding the agenda items they are asked to approve. There are, of course, limits to the ability of a large meeting of diverse shareholders to provide specific feedback to the board, but the format of the meeting should establish the fact that the Board of Directors is accountable to the shareholders and that important items for shareholder consideration should be explained clearly.

At the present time, in Bangladesh, a major problem affecting relations between shareholders, boards, and management is the disruption and control of AGMs by a few, organised individuals. All shareholders have the right to question the Board of Directors regarding the board’s actions and responsibilities, but the current climate allows few shareholders to express their opinions. If, however, the majority of shareholders understand their rights and understand the key aspects of company strategy and performance, they can distinguish legitimate complaints and questions from those that are designed to disrupt; they can participate more fully in the AGM and can maintain the focus on company performance, transparency and board accountability. More educated shareholders will, with time, lead to a more viable, active capital market.

Probably the most important right of a shareholder is the right to vote for directors and on items put before general meetings. Voting rights and procedures should be clearly explained to shareholders so they may fully assert their rights in general meetings. Voting procedures that are difficult to follow or do not account for multiple shareholdings result in disenfranchisement of shareholders. Shareholders should be able to exercise their voting rights through a proxy if they cannot attend a general meeting themselves.

I. Shareholders’ Handbook

Principle: A. Educating and informing shareholders should be a basic requirement for listed companies.

Guidelines:
B. A primary concern in Bangladesh is that shareholders do not know or understand their rights and responsibilities. To address this problem, listed companies together with the Securities and Exchange Commission and/or stock exchanges should describe and explain those rights and responsibilities in a Shareholders’ Handbook that should be available to all shareholders with the notice for the AGM.
C. The Shareholders’ Handbook should also be accessible to shareholders by making it available on the websites of the SEC, stock exchanges, and individual company’s website and at the company’s offices.
D. See appendix for a sample outline of a Shareholders’ Handbook

II. General Meetings

Principles:
A. The general meetings, in particular the AGM, are the primary fora for communication between shareholders, management and the Board of Directors. Shareholders should be well-informed regarding general meetings and the meeting should be organised in a manner that allows for maximum shareholder participation, subject to reasonable limitations, and equitable treatment of shareholders.
B. The outcome and proceedings of general meetings should be recorded and be verifiable.
C. Shareholders have the right to receive information about company resolutions, decisions, and operations described in a manner that can be understood by a layperson. Companies should explain disclosures in detail and provide information about the effect of such.

Guidelines:
D. A notice to shareholders regarding the date, time and location of the Annual General Meeting should be given in sufficient time for it to be received by shareholders through a standard and reasonable means of communication at least 21 days before the meeting. The notice of the AGM should include information about the agenda items to be discussed, including a description of auditor. A ‘general meeting’ can refer to either an annual general meeting (AGM) or an extraordinary general meeting (EGM).
E. Note that the Code goes beyond what is provided in the Companies Act, to give shareholders more time to prepare for the AGM.
F. The information provided about the agenda items for any general meeting should be detailed enough to allow shareholders to make an informed decision. The agenda should be presented in the order items will be addressed in the meeting.

1. The AGM notice should inform shareholders of the register of directors’ interests in contracts or arrangements of the company and their right to inspect such a register.
2. An AGM should be scheduled so as not to conflict with major events which may hinder the participation of most shareholders and should be held in a convenient location in the vicinity of the company’s registered office.
3. Agenda of an AGM
   a. Approval of Minutes of the previous meeting
   b. Adoption of the Directors’ Report
   c. Adoption of the Auditors’ Report
   d. Approval of Dividends

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Financial reporting and disclosures provide the tools by which stakeholders can monitor and evaluate an organisation’s corporate governance practices. In Bangladesh, the first hurdle that must be overcome is to improve the quality and reputability of financial statements and disclosures. This process must be a joint undertaking of the regulators, self-regulatory organisations (primarily the Institute of Chartered Accountants of Bangladesh – ICAB), and organisations themselves. If companies begin to demand more from their own accounting personnel and their auditors, the quality of accounts and audits will improve. Simultaneously, the accounting profession must focus on ensuring compliance with audit standards, enforcing self-regulation, and increasing the number of qualified Chartered Accountants. These two movements can be further complimented by supporting actions on the part of regulators. Such a combination of reforms will create a virtuous circle of quality disclosures and increase demand from investors for more transparent financial statements. Accounting and auditing scandals around the world in recent years have shown how important this principle is to safeguard investor funds and ensure transparency. Without reform, the corporate sector in Bangladesh may be heading towards such disasters as we've seen in other regions, at the very least, the accounting and auditing profession will lose all credibility and prestige.

I. Accounting Standards

Principle:
A. Companies should ensure that their accounts conform with all Bangladesh Accounting Standards (BAS) as adopted by the Institute of Chartered Accountants of Bangladesh (ICAB) and the implementation time frame given by ICAB.

Guidelines:
B. Companies that are striving to conform to international standards should prepare and have their accounts audited to conform with full International Accounting Standards (IAS). A company that is working to comply with IAS should establish a timeline by which time compliance will be achieved.

C. Among the IASs that have been adopted by ICAB, those listed below are particularly important to ensure accurate and reliable financial reporting, but the level of compliance with them is low. Companies should comply with the following standards:

1. IAS 12 – Deferred Tax, etc.
2. IAS 18 – Revenue
3. IAS 21 – Effects of changes in foreign exchange rates
4. IAS 23 – Borrowing Costs
5. IAS 25 – Accounting for Investment
6. IAS 27 – Consolidated Financial Statements
7. IAS 30 – Disclosures in financial statements of banks
8. IAS 34 – Interim Financial Reporting

II. Preparation of Accounts

Principle:
A. Companies must employ qualified personnel with professional accounting qualifications to prepare financial statements and accounts.

Guidelines:
B. Listed companies with turnover of at least Tk. 20 crore (Tk. 200 million) must employ qualified personnel with professional accounting qualifications with at least five years of experience in preparation of accounts and/or a Chartered Accountant, Cost and Management Accountant, or one having at least a masters degree or MBA in Commerce or Finance.

C. The Balance Sheet, Profit and Loss Statement should be reviewed and signed off by the Chairman of the Board, MD/CEO11 and Chief Financial Officer (CFO) and the Chairman of the Audit Committee (if one exists) to certify that:

1. The accounts reflect a true and fair picture of the company,
2. The accounts conform with BAS or, if they do not, disclosure has been made of material differences, and
3. There are no post balance sheet events or off-balance sheet items, nondisclosure of which can affect the ability of the users of the financial statements to evaluate the company or make decisions.

4. Assets are safeguarded against unauthorised use by the employees and/ or management and/ or third parties.
5. Expenses incurred are for the purposes of the company’s business.
6. No material information has been omitted.
7. The Chairman of the Board, CEO and CFO should supply two additional statements:

1. That they are satisfied the company is a going concern.
2. On the effectiveness of the company’s internal control system and internal audit department. This should include any irregularities involving management or employees who have significant roles in the system of internal control. This statement should also be signed by the Chairman of the Audit Committee (if one exists).

III. External Auditor

Principles:
A. External auditors should be independent, well-qualified to carry out their duties, and free of conflicts of interest.
B. Auditors should be appointed by the shareholders. Shareholders should be provided an opportunity to nominate audit firms prior to the Notice for the AGM. Section 189 of The Companies Act, 1994 clearly states that the financial statements have to be authenticated by not less than two directors one of whom shall be the
managing director where there is one.
12 CFO is used to refer to the senior most financial officer of the company, regardless of the title.

Guidelines:
- A shareholder nominating an audit firm should be required to provide standardised information about the firm, so that nominated firms can be compared. The information should include: partners, staff, qualifications and experience; and the number, type, and identity of clients.

D. Audit firms or partners are to be rotated at least every three years.
E. Audit firms should not be engaged in accounting or non-audit consulting in enterprises in which they have been appointed as the statutory auditors. The exception is tax work, which may be undertaken by the statutory auditors of a firm. If, however, any non-audit work is performed by the statutory auditor, both audit and non-audit fees paid to the audit firm should be disclosed to shareholders.
F. Auditors should not hold shares in companies they audit. If auditors do hold shares in a company for which they are appointed as the statutory auditor, the shareholding amount should be disclosed. A statutory auditor must not hold more than 1% of the shares of a company.

IV. Internal Audit
Principles:
- All listed companies must have an internal audit function within the organisation. Private companies should consider establishing a system of internal controls if they do not have an internal audit department.

B. The internal audit department should have a broad scope of work to investigate all levels of the organisation and be independent from management, with direct access to the Board of Directors and the Audit Committee.
C. Directors must take adequate action to protect the company and shareholders based on internal audit reports.

Guidelines:
- D. The internal audit department should have a letter from the board or chairman of the audit committee giving it the authority to access any records in any location at any time.
- E. The internal audit function should have the authority to propose initiatives and changes directly to the board.

V. Disclosures
Principles:
- A. The Board of Directors should present a balanced assessment of the company’s position and prospects that may be understood by shareholders.

B. All disclosures listed in this section should be disclosed in a public announcement and made available to the public and to shareholders.

Guidelines:
- C. Quarterly unaudited results. Within 30 days after the end of the quarter, companies should provide unaudited quarterly results to include:
  1. Sales and sales growth
  2. Profit and profit growth
  3. Reserves
- D. Interim announcements should be made available to shareholders when a material event occurs. In addition to the material events required to be disclosed by the Companies Act, Dhaka Stock Exchange, Chittagong Stock Exchange, and SEC notifications, the following material events should be disclosed:
  1. Signing or termination of a material contract13
  2. Loss of a materially important customer
  3. International or domestic regulatory approval or denial
  4. Half-yearly Balance Sheet and Profit and Loss Statement
  5. Audited Annual Balance Sheet and Profit and Loss Statement
  6. Annual Directors’ Report should include the following items presented in a narrative format:
    1. General Company
    a. Corporate Governance Statement, which explains compliance and/or non-compliance with the Code of Corporate Governance.
    b. Statement of the company’s policy and practice on Corporate Social Responsibility, Corporate Environmental Responsibility, and compliance with Bangladesh environmental standards.
    c. Quantitative disclosure of sales and market share, local and foreign (if applicable)
    d. Future business strategy
    e. Material risk factors and uncertainties
    f. Explanation of results, including key results for divisions or business segments
    g. Compliance Certificate, provided and signed off by the Company Secretary or other compliance officer or external auditor, and also signed off by the CEO, Chairman of the Board, and the chairman of each board committee dealing with compliance matters, attesting that:
      i. the company has not paid or offered any gratification to any quarter of the Board
      ii. the company has maintained all statutory books and registers, and in such order, as required by the Companies Act
      iii. the company has duly paid all applicable duties, levies and taxes to the exchequer during the year
      iv. the company has not paid or offered any gratification to any quarter
      v. the company has complied with all corporate norms, rules and regulations, and standards of good conduct, especially in relation to money-laundering, insider-dealing, restrictive trade practices, quality and representation of goods and services, and anti-competitive behaviour, as required by other regulatory authorities during the year under report.
    13 Generally, any exposure greater than 1% of net worth or 10% of profits should be considered material.
- 2. Ownership
  a. Ownership structure including disclosure of shareholders owning more than 10% of shares
  3. Board of Directors
    a. Directors’ shareholding and any changes therein
    b. Report on the relatives of directors as employees or members of the board and their shareholdings
    c. Details of directors’ remuneration
    d. Persons who have attended board meetings in the last year, included attendance of directors and any substitute directors
    e. Details of loans to directors and related parties
    f. Information on related party transactions, such as the purchase or sale of shares in associated companies where the company itself has a shareholding, or where the other company has a shareholding in the company, or where members of the board jointly or severally have a significant shareholding equivalent to 5% or more of the total share, and also on operational links and trading transactions with related parties.
- 4. Accounting and Financial
  a. Report on the end use of funds raised from the public when issuing shares or debentures
  b. Contractual agreements, if any, that would have a material effect on the accounts in the event of non-compliance
  c. Contingent liabilities and ongoing, pending, or likely legal actions against or by the company which may result in significant gain or loss to the company
  d. New creditors and details of material loans
  e. Credit rating, if any
  f. Details of investments, including market valuation, in equities, government bonds, and other securities
  g. Critical accounting policies, namely those accounting policies to which the financial results are particularly sensitive (e.g. depreciation and tax policy)
  h. Basis of estimates used in financial reporting (e.g. allowances for doubtful accounts, inventory obsolescence, intangible asset valuation and useful life, employees’ benefit plans, etc.)
  i. Depreciation and tax policy
  14 Generally, any exposure greater than 1% of net worth or 10% of profits should be considered material.
The following two sections detail corporate governance provisions that should be followed by specific types of organisations, namely, financial institutions (FIs) and state-owned enterprises (SOEs). These sections address issues that are unique to each sector, but are to be considered in addition to the provisions outlined in the previous sections of the Code of Corporate Governance. To achieve full compliance with the Code of Corporate Governance, FIs and SOEs should follow the provisions of the general Code as well as the sector-specific provisions that follow.

### FINANCIAL INSTITUTIONS

This section of the Code can be applied to all banks, including Nationalised Commercial Banks (NCBs), and non-bank financial institutions. 15 Financial Institutions (FIs) should follow the provisions laid out in the previous sections of the Code on Corporate Governance but this section provides guidelines particularly relevant to corporate governance in Financial Institutions.

Financial Institutions are specifically addressed here due to their unique position as the lifeline of any economy. The health of banks and public confidence in them are necessary to sustain and expand economic activity, as financial institutions form an essential link in the chain of national economic development. The Bangladesh Bank has the statutory power to regulate commercial banks to reduce systemic risk and the moral suasion to encourage high standards of probity and competitiveness among them, while commercial banks in turn can require their corporate customers to follow good risk management systems and encourage them to achieve high standards of corporate governance, in particular through the application of differential banking facilities. FIs are particularly powerful in an economy like Bangladesh where the capital market is small and FIs are the main source of capital for both public and private companies. Evidence of the importance of FIs is demonstrated by the fact that the financial sector is regulated by the government, through the Bangladesh Bank, and therefore has access to the government safety net. FIs are beneficiaries, fiduciaries, and managers of “other people’s money” in a number of ways and as such have a unique responsibility to uphold the highest standards of corporate governance.

#### I. Duties to Depositors and Customers

**Principles:**
A. As the institutions that safeguard depositors’ funds and invest it with borrowers, FIs have an obligation to observe the highest standards of care and due diligence in assessing and monitoring risk, including credit risk, interest rate risk, operational risk, political risk, etc.
B. As the institutions that provide essential financial services to families, public institutions, and business companies, FIs have an essential social as well as economic function in national life. Hence they have an obligation to observe the highest standards of customer care and efficiency while ensuring their own commercial competitiveness.

**Guidelines:**
C. Information should be provided to depositors, customers, and the public to enable them to adequately judge the strength and health of the bank and whether this section on Financial Institutions does not apply to Microfinance Institutions (MFIs) which are covered in the section on NGOs.
D. Financial institutions should publish a Code of Best Practice for Customers (as described below in II.C.7) and a Code of Corporate Social and Environmental Responsibility.
E. The system for handling complaints should be disclosed to customers and potential customers.

#### II. Disclosures

**Principles:**
A. Financial institutions must provide transparent, comprehensive disclosures to the public, depositors, and shareholders.

**Guidelines:**
B. Disclosure information should be made available to shareholders, depositors, and the public in a standardised format:
   1. On the company’s website
   2. Displayed at branches and the head office
   3. Available to those who request upon payment of fee for posting.
   4. The following disclosures should be provided by financial institutions:
      - Type of capital and percent of capital relative to credit exposures, as per Basel Capital Accord or guidelines from Bangladesh Bank.
      - Institutions’ credit rating, if any. If there is no credit rating, an explanation as to why the rating has not been completed should be provided.
      - Exposure concentration relative to institution’s capital, including exposure to individual counterparties, groups of associated counterparties, particular economic sectors, or industries.
      - Maturity grouping of assets and liabilities based on the remaining period, at the balance sheet date to the maturity date
      - Information on market risk (interest rate risk, exchange rate risk, equity risk) using the Basel Committee’s market risk methodology or a similar alternative.
      - Nature and extent of exposures to and transactions with related parties and affiliates
      - Publication of a Code of Best Practice for Customers, describing the services and consideration customers should expect from the institution, as well as the responsibilities of the customer. This code should include lending guidelines and internal corporate policies.
      - Publication of a Code of Corporate Social and Environmental Responsibility.
      - Disclosures of the systems for handling complaints, from both internal and external parties.
      - Nature of any conflicts of interest with directors or senior managers and the rules for handling such conflicts.
      - Board structure (size, membership, qualifications and committees)
      - Senior management structure (responsibilities, reporting lines, qualifications and experience)
      - Basic organisational structure (lines of business, legal entity structures, etc.)
      - Information about the incentive structure of the bank (remuneration policies, executive compensation, bonuses, stock options)

#### III. Board of Directors

**Principles:**
A. The function of the Board of Directors is to set policy and strategic direction for the financial institution. Committees and senior management should then carry out these policies and monitor their implementation.
B. Directors must be fit, proper, and competent to carry out their duties.
C. Boards of FIs must have an Audit Committee, which oversees the internal and external audit process.

**Guidelines:**
D. All bank directors should have essential financial competency and recognized professional or management experience in banking, finance, law, marketing, operations, human resources management, or general management.
E. Any directors appointed to the board for their non-financial specialist knowledge should undergo intensive training in financial analysis for non-financial directors.
F. FIs must have an Audit Committee of the Board, which oversees the internal and external audit process. The audit committee must include members with adequate financial and banking expertise to carry out their duties properly. The audit committee will also report to the Board of Directors on risk management unless there is another committee that does so. The chairman of the audit committee must be a financial specialist and a non-executive director.
G. Boards of FIs should have an Asset-Liability Committee (ALCO) which examines the overall position and risk level of the asset and liabilities held by the FI.
H. Either the ALCO or an Executive Committee, including Chairman of the Board, CEO and at least one non-executive director should meet at least monthly to review:
   1. Major loan approvals
   2. Debt restructuring
   3. Risk management
I. All boards should have a Company Secretary or Compliance Officer as the adviser to the board and responsible to the board as a whole.
J. Board meetings must be fully and properly recorded in minutes so that decisions taken can be adequately carried out. The Bangladesh Bank has issued a standard format that must be followed in recording the minutes of board meetings.

#### IV. Credit Assessment and Asset Monitoring

**Principles:**

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A. Good business practices with regard to credit assessment and asset monitoring should be observed by FIs.
1. Borrowers should be required to have a business plan and strategy for use of funds borrowed.
2. The credit assessment and loan approval process should be isolated from personal conflicts of interest and political influence.
3. Risk assessment for groups of companies should use a total risk assessment of the whole company.
B. FIs should use their position and influence as suppliers of financing to actively encourage their customers to conform to the Code of Corporate Governance by using the Code in credit decisions, since better corporate governance in borrowing customers’ organisations will improve performance and accountability, as well as reduce risk.
C. FIs should consider the application of advantageous banking facilities to their corporate customers who maintain high standards of corporate governance, risk management, and business strategy and management.

**Guidelines:**
- D. Personnel assigned to Credit Risk Management functions should have training prerequisites and ongoing requirements.
- E. To avoid personal conflicts of interest and political influence:
  1. Employees and board members should not be involved in matters in which they have a personal interest.
  2. Methods of loan authorisation and lending limits should be clearly spelled out and complied with.
- F. Large borrowers should be required to show compliance with the Code or progress towards that end. Any credit rating agencies used by the FI for assessing creditworthiness will be required to use corporate governance as a major factor in assessing risk.
- G. FIs should require financial statements that comply fully with Bangladesh Accounting Standards.

### V. Debt Recovery

**Principle:**
- There should be a separation of personnel and reporting responsibility between loan origination/ marketing, credit approval, transaction processing, and loan recovery. As per Bangladesh Bank’s definition a large borrower comprises at least 15% of total capital.

### VI. Risk Management

**Principle:**
- A. Corporate Governance arrangements in FIs should include systems and procedures that identify, monitor, and manage business risks.

**Guidelines:**
- B. Staff should be assigned responsibility for risk management systems, and training should be provided to enable them to understand and manage risks.
- C. Risk management should be part of the responsibilities of all senior management and directors. Training should be provided that will give senior management and directors the background and knowledge to carry out this responsibility.
- D. Management systems which require regular reporting to senior management on the nature and magnitude of risks to which the FI is exposed, as well as the provisions to mitigate and control those risks. This should include proof that risk management systems are being properly and robustly applied. Reporting to the board should include a report of the estimates of allowances for doubtful accounts.
- E. CEOs/MDs should sign an attestation that they are fully satisfied to the best of their ability that the FIs material risks are being effectively identified, monitored, and managed through operating systems of risk management. The attestations should appear in the Directors’ Report. Regulators should hold CEOs/MDs responsible if the attestations are found to be misleading or false.

### VII. Corporate Governance Compliance

**Principle:**
- FIs should have an officer assigned to monitor and report on corporate governance compliance. The Compliance officer should make regular reports to the board on the adequacy of corporate governance arrangements.

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**BASIC CHECKLIST FOR IMPLEMENTATION OF THE CODE OF CORPORATE GOVERNANCE**

Below is a simplified summary of specific recommendations for implementation of the Code of Corporate Governance. The basic checklist below is drawn from the Code but is not an exhaustive list of steps that could be taken to improve corporate governance.

<table>
<thead>
<tr>
<th>Section</th>
<th>Recommendation</th>
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| **I. Board of Directors** | 1. Develop a Director Job Description including roles, rights, responsibilities, and required qualifications.  
2. Develop and agree to a Board Code of Conduct.  
3. Create Committees of the Board of Directors as appropriate.  
4. Initiate a board performance review process. If a review has not previously evaluated the size of the board, director re-election policy and term limits, such items should be included in the review.  
5. Create and affirm a Statement of Going Concern and Compliance Certificate.  
6. Develop a Board Charter, which establishes the roles, responsibilities, and specific annual objectives of the board. From the Board Charter, a board work plan can be developed.  
7. Develop a programme of training of individual directors and the board as a whole. Particular focus should be given to new directors.  
8. Based on the above, make appropriate changes to the Memorandum and Articles of Association. |
| **II. Employees** | 1. Develop an Employee Code of Conduct.  
2. The Code of Conduct should be incorporated into employment contracts and be a requirement of employment.  
3. An enforcement programme should identify and punish violations of the Code of Conduct. |
2. Examine procedures for AGM notice, setting the AGM agenda, voting practices, and recording the results of the AGM.  
3. Review procedures for nomination of directors and nomination of the external auditors to ensure adequate and appropriate opportunities for shareholder participation. |
| **IV. Disclosures and Reporting** | 1. Make appropriate changes in auditor appointment guidelines to institute a rotation of audit firms or partners.  
2. Expand the annual report to include disclosures |
| **V. Financial Institutions** | 1. Develop and publish a Code of Best Practice for Customers.  
3. Expand disclosures in the Annual Report and other public documents to comply with the Code of Corporate Governance.  
4. Initiate a risk management review, if such a review is not already practiced.  
5. Review credit assessment process to incorporate corporate governance into credit decisions.  
6. Develop and affirm an attestation from the CEO/MD that material risks are being effectively identified, monitored, and managed.  
7. Develop and assign personnel to a Corporate Governance Compliance programme. |
| **VI. Institutional Investors** | 1. Develop and publish investment principles and practices.  
2. Develop voting guidelines and procedures. Establish a record-keeping system for proxy voting performance monitoring.  
3. Develop guidelines for taking an active role in corporate governance of companies in which investments are made.  
4. Publish corporate governance principles and practices which are expected from companies in which investments are made. |

**Source:** Bangladesh Enterprise Institute, 2004
Appendix - 18: Semi Structured Interview Guideline

Data Privacy

I would also like to confirm that the responses of this interview are subject to data privacy and will be treated in the strictest confidence. They will be used exclusively for the research purpose and will be presented in an aggregate form. Therefore, it will not reveal any individual or any particular bank’s practice.

Name of the Respondent (optional): ____________________________________________
Name of the Bank (optional): __________________________________________________
Banking Generation: ___________________________________________________________
Position: _____________________________________________________________________
Date: _______________________________________________________________________

Part – I : Corporate Governance of Banks

1 Board Issues

1.1 Mission of the Board of Directors
   1.1.1 Do they lead and oversee strategy and policy of bank?
   1.1.2 Do they provide direction to management?
   1.1.3 Do they take action for the best interest of the bank and shareholders?

1.2 Duties of the Board of directors and their role and job responsibilities
   1.2.1 Are they serving legitimate interests of shareholders and/or owners and account to them fully?
   1.2.2 Are they ensuring bank comply with all relevant laws and regulations including the Code of Corporate Governance (CCG)?
   1.2.3 Are they determining, monitoring and evaluating strategies, policies, management performance criteria and business plans?
   1.2.4 Are they identifying and monitoring key risk areas and performance indicators?
   1.2.5 Are they ensuring technology and information systems used are sufficient to operate the bank effectively and maintain competitiveness?
   1.2.6 Are they reviewing and monitoring risk management systems and internal control mechanisms to enable decision making and maintain the accuracy of financial results?
   1.2.7 Do they appoint the Managing Director/Chief Executive officer and participate in the appointment of senior management?

1.3 Board Membership Criteria
   1.3.1 Are each director well-qualified to carry out their duties and prepared to devote sufficient time and effort to their duties?
   1.3.2 Do they add value to the board and bring independent judgement to bear on their duties?
   1.3.3 Do directors attended at least 50% of the board meetings and provide a leave of absence to be eligible for re-election to the board?

1.4 Nomination of New Board Members
   1.4.1 Consideration of nominating new director - characteristics, experiences, diverse perspectives and skills that is most appropriate for the bank.
   1.4.2 Role of Nominating Committee - the method to seek out and nominate qualified persons for directorships.
   1.4.3 Do shareholders’ get the opportunity to nominate board candidates before the notice of annual meeting?

1.5 Training
   1.5.1 Is there any opportunity and fund available for training of individual directors and the development of the board?
### 1.6 Separation of Chairman and CEO
1.6.1 Is there a separation of positions of Chairman of the Board and CEO since their functions are necessarily separate?

### 1.7 Board Composition
1.7.1 Does the size of the board large enough (membership of 7 to 15 directors) to include directors with diverse expertise and experience?
1.7.2 Does the board periodically review its size and composition?
1.7.3 Does the majority of board members non-executive and independent directors?

### 1.8 Board Compensation:
1.8.1 Whether the board compensation is sufficient to compensate directors for the time and effort required to complete their duties well.

### 1.9 Board Agenda:
1.9.1 Do the agenda and materials for each board meeting provide to directors sufficiently in advance of the board meeting to allow them to prepare?
1.9.2 Do the Board Agenda prepare by the Chairman, who also determine the materials for the board meetings, which circulated by the bank secretary?

### 1.10 Committees (Type, structure and responsibilities)
1.10.1 Is there any conflict of interest between committees?
1.10.2 Role of the Audit Committee and Nomination Committee of the board.
1.10.3 Role of Executive Committee of the board
1.10.4 What are the terms of reference of these committees (structure; roles, responsibility and authority delegated to it by the board; frequency, length and agenda of committee meetings)?
1.10.5 Do these committees have access to adequate resources?

### 1.11 Director’s report: (In the annual director’s report is an important communication between shareholders and the board of directors)
1.11.1 Does it explain both past results, board decisions and the future direction of the bank?
1.11.2 Does it follow the guideline and include the items those are materiality to the bank’s operations and results?

### 1.12 Code of Conduct
1.12.1 Do the Boards create a Code of Conduct for directors detailing directors’ roles, responsibilities and duties?
1.12.2 Do directors review and agree to abide by this Code of conduct every year?

### 1.13 Bank Secretary/ Compliance Officer
1.13.1 Do banks employ a qualified company secretary or compliance officer to advise senior management and the board on their responsibilities and liability with regard to legal and regulatory requirements and compliance with the Code of Corporate Governance?
1.13.2 Does the bank secretary/compliance officer provide advice on issues of internal control as well as requirements due to external entities?
1.13.3 Does the bank secretary/compliance officer keep an annual record of the bank’s compliance/non-compliance with the code of corporate governance and in the event of non-compliance an explanation for the record from the board?
1.13.4 Does the bank perform activities by external advisers or bank lawyer or adviser the board?

### 1.14 Access to senior management, outside professional advice
1.14.1 Does the board seek out or invite senior management and other non-directors or outside professionals to board meetings for accessing any information deemed appropriate or necessary in order to effectively deliberate and perform duties?
1.14.2 Does the MD/CEO remain informed of all requests for information put to management?

### 1.15 Evaluation of board performance
1.15.1 Does the board evaluate its own performance both collectively and individually including the performance of the chairman, at least once a year to ensure it is operating effectively and adjust its constitutions and policies accordingly?
1.15.2 Does the board consider of using an independent outsider to conduct an external evaluation of the board and its performance, which will make recommendations based on its evaluation?

### 1.16 Employees
1.16.1 Does the bank develop an Employee Code of Conduct?
1.16.2 Does the Code of Conduct incorporate into employment contracts and a requirement of employment?
1.16.3 Is there any punishment for the violation of the Code of Conduct?

### 1.17 Disclosures and Reporting
1.17.1 Make appropriate changes in auditor appointment guidelines to institute a rotation of audit firms or partners.
1.17.2 Expand the annual report to include disclosures as provided in the Sample Contents of an annual report as given in the Appendix of the Code of Conduct booklet.

### 2 Role of Shareholders:

#### 2.1 Shareholders Handbook
2.1.1 Does the Shareholders’ Handbook provide with the notice for the AGM and circulate to all shareholders to educate and inform?
2.1.2 Does the Shareholders’ Handbook find available on the websites of the stock exchanges and individual Bank’s websites and offices?

#### 2.2 General Meetings
2.2.1 Are the shareholders well-informed regarding general meetings and receive equitable treatment?
2.2.2 Does the outcome and proceedings of general meetings get recorded and verifiable?
2.2.3 Do shareholders receive information about bank resolutions, decisions and operations?
2.2.4 Do banks explain disclosures in detail and provide information about their effect?

#### 2.3 Voting rights and duties
2.3.1 What is the principle regarding voting rights to present and potential shareholders?
2.3.2 Are the proxy voting rules simple and easy to follow?
2.3.3 What is the review procedure for nomination of directors and external auditors?

### 3 Financial Reporting, Auditing and Non-Financial Disclosures:

#### 3.1 Accounting Standards:
3.1.1 Do banks ensure that their accounts conform with all BD accounting standards (BAS) as adopted by the Institute of Chartered Accountants of Bangladesh (ICAB) and the implementation time frame given by ICAB?

#### 3.2 Preparation of Accounts:
3.2.1 Do banks employ qualified personnel with professional accounting qualifications to prepare financial statements and accounts?
1.9.2 Do the Board Agenda have a broad scope of work to investigate all levels of the organisation and be independent from management, with direct access to the Board of Directors and the Audit Committee?
3.3.2 Do the Auditors appoint by the shareholders?

#### 3.3 External Auditors:
3.3.1 Is the External Auditor independent, well-qualified to carry out their duties and free of conflicts of interest?
3.3.2 Do the Auditors appoint by the shareholders?

#### 3.4 Internal Audit:
3.4.1 What are the roles and responsibilities of the bank’s internal audit department?
3.4.2 Does the internal audit department have a broad scope of work to investigate all levels of the organisation and be independent from management, with direct access to the Board of Directors and the Audit Committee?
3.4.3 Do directors take adequate action to protect the bank and shareholders based on internal audit reports?
4. Financial Institutions (FI) Checklist:

4.1 Duties to Depositors and Customers:
   4.1.1 Does bank observe the highest standard of care and due diligence in assessing and monitoring risk?
   4.1.2 Does bank provide information to depositors, customers and the public to enable them to adequately judge the strength and health of the bank?
   4.1.3 Does bank publish a Code of Best Practice for customers and a Code of Social and Environmental responsibility?
   4.1.4 Is there any system of handling complaints claimed by customers and potential customers?

4.2 Disclosures:
   4.2.1 Does bank provide transparent comprehensive disclosures to the public, depositors and shareholders?
   4.2.2 Does disclosure information made available to shareholders, depositors and the public in a standardised format on the bank’s website, branches and head office and upon request?
   4.2.3 Are disclosure provided adequate particularly on - type and percent of capital relative to credit exposure; institutions credit rating; exposure to concentration relative to institutions’ capital; maturity grouping; information on market risk; nature and extent of exposure to and transactions with related parties and affiliates; publication of a Code of Best Practice for customers; publication of a Code of corporate social and environmental responsibility; disclosure of system of handling complaints; nature of conflicts of interest with directors or senior managers and rules for handling these; structure of board, senior management, and organization; information about the incentive structure of bank?

4.3 Board of Directors:
   4.3.1 Does the board set the policy and strategic direction for the bank while committees and senior management carry those out?
   4.3.2 Are the directors meet the fit and proper test and competent to carry out their duties?
   4.3.3 Does the board of bank have an audit committee to oversee the internal and the external audit process?

4.4 Credit Assessment and Asset monitoring:
   4.4.1 Does the bank have any credit assessment practices to be observed?
   4.4.2 Does the credit assessment and loan approval process isolate from personal conflict of interest and political influence?
   4.4.3 Does the bank have any risk assessment strategy?
   4.4.4 Does the bank influence and encourage employees and customers to conform the Code of Corporate Governance while taking credit decisions?
   4.4.6 Does the bank consider the application of advantageous banking facilities to corporate customers who maintain high standards of corporate governance, risk management and business strategy management?

4.5 Debt Recovery:
   4.5.1 What is the bank’s strategy on loan origination/marketing, credit approval and transaction processing and loan recovery?

4.6 Risk Management:
   4.6.1 Does the Corporate Governance arrangement in banks include systems and procedures that identify, monitor and manage business risks?

4.7 Corporate Governance Compliance:
   4.7.1 Does bank monitor and report on corporate governance compliance to the board?
   4.7.2 What is the status of corporate governance arrangement of the bank?

Part – II : Efficiency of Banks

1. What could be the reasons of Revenue Efficiency gap between 1st Generation with 2nd and 3rd Generation Private Commercial Banks?
2. Is there any relationship between Bank Size and its Efficiency?
3. Do the PCBs follow any ranking from year to year?

Part – III : Profitability of Banks

1. What could be the reasons of Profitability gap between 1st Generation with 2nd and 3rd Generation Private Commercial Banks?
2. Is there any relationship between Bank Size and its Profitability?
3. Is there any relationship between Market Structure and Profitability?

General Comment:
Please make any additional comments if you would like to do so.

Thank You Very Much for Your Valuable Time