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THE IMPACT OF SUPERVISION ON BANK PERFORMANCE: A COMPREHENSIVE REVIEW

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Abstract

The financial system is mostly controlled by the central bank of a country. Bangladesh Bank, being the central bank of Bangladesh, performs supervisory activities in order to maintain the efficiency, solvency, and overall stability in this sector. As depositors' interests are highly protected by the strong regulations of the central bank, this paper focused on the impact of Bangladesh Bank's supervision on bank performance. This paper has presented the performance of the banks over the years (from 2004 to 2015) based on different performance indicators using trend analysis tools. This paper demonstrates supervision has a great impact on bank performance but it's not the only curb to maximize the bank's performance. Government influence and the political stability of the country affect the bank's performance too. On-site supervision and Off-site supervision are used by Bangladesh bank with so many management layers. The impact of the supervisory initiative on the overall banking industry has been portrayed throughout the research. This research can be supportive to all the stakeholders of the banking industry to take more precise decisions. The government can ensure more power to Bangladesh Bank to confirm the proper actions and their implementation of the supervisory decision. Financial institutions need to show their commitment to supervisory rules and regulations formulated by Bangladesh Bank from time to time to keep the positive momentum intact within the industry.

Key Words: Supervision, Capital Adequacy, financial institution, Bangladesh bank, ROA, ROE

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1. Introduction

Bangladesh Bank performs the supervisory function in order to maintain the efficiency, solvency, and overall stability in the financial sector. Bangladesh Bank works for endless hours to develop the sector so that it can serve and protect the interest of the depositors. Bangladesh bank has been entitled with the responsibility to regulate and supervise the banks, operating in Bangladesh under the article7A (f) of Bangladesh Bank Order 1972 and section 44 of Bank Companies Act, 1991. The major objectives of the bank supervision are to ensure the safety, stability, and discipline of the banking sector and the banks' compliance with the defined rules and regulations. Bangladesh Bank identifies the weakness and takes necessary measures to strengthen the financial condition of the banks. Supervision activities are of two types; one is On-site supervision and another is Off-site supervision. There are seven departments of Bangladesh bank that are presently performing On-site inspection. These departments are namely; Department of Banking Inspection-1, Department of Banking Inspection-2, Department of Banking Inspection-3 Department of Banking Inspection-4, Department of Foreign Exchange Inspection, Financial Integrity and Customer Services Department, Bangladesh Financial Intelligence Unit. Mentioned departments mainly do three types of inspections; a. These are comprehensive inspection; b. Risk-based inspection or system check inspection, c. Special inspection. On the other hand, the Department of Off-site supervision and Foreign Exchange Operation Department run off-site supervision activities. Department run off-site supervision is responsible for continuous monitoring and assessment of key performance indicators of banks on the basis of various returns and statements. Department run off-site supervision performs its activities through CAMELS rating, liquidity, and capital adequacy monitoring. It plays an important role in implementing policy guidelines through continuous guidance. If any unhealthy banks found from the Department run off-site supervision's analysis then it takes the problem bank under its close supervision and added monitoring to get the bank's financial condition back. Consequently, Bangladesh Bank tries to protect the interest of the depositors from all sorts of risks.

2. Literature review

E Philip Davis and Ugochi Obasi (2009) did a research on "The Effectiveness of Banking Supervision". In this paper, they tried to explore the relationship between risk indicators for individual banks and the different approaches to banking supervision adopted around the world. In this paper, they had shown; Banks lend more and maintain higher liquidity levels, when the role of bank supervision is left under the umbrella of the central bank. Overall, their results supported a structure where central banks were sole supervisors of the financial services sector. Politicians should hold the supervisory agency accountable for their job but must also improve in the level of governance in their countries. For further research, they would encourage more empirical studies on the effects of supervision on the different aspects of the financial system, as well as increased availability of micro-level data on banks over a longer time span. Their work had also highlighted the need for a possible yardstick by which to both regularly check the efficacy of bank supervision and better hold supervisory agencies more accountable.

Faten Ben Bouheni (2013) explored the effects of supervision on banking performance based on European evidence (sample of the ten largest European banks of France, Germany, UK and Greece over the period 2005-2011) by using the generalized method of moments. The empirical analysis reports the following findings: Banking supervision seems to have an impact on performance. However, the introduction of variables, capturing the specific, the macroeconomic, the institutional and the financial development indicators, dismisses this effect. These findings support the view that the implementation of such banking supervision differs greatly depending on the institutional environment and the country's politics. The existing evidence on the relationship between different types of supervisory practices, and bank performance is rather limited and most of it typically relies on standard accounting measures of bank performance.

Barth et al. (2001) assembled the first extensive cross-country database on the characteristics of the supervisory and regulatory framework. The data came from a survey of bank supervisors, and measured the presence or absence of a series of regulatory features.

However, according to Barth et al. (2001), there was mixed evidence regarding the impact of regulatory restrictions on bank performance. In the some way, Barth et al. (2004) provided empirical evidence on the impact of specific regulatory and supervisory practices on bank development, performance and stability using survey data for a sample of 107 countries. The results suggested that there was no statistically significant relationship between capital stringency, official supervisory power, bank performance and stability. However, they found that regulatory and supervisory practices that force accurate information disclosure empower private sector monitoring of banks, and foster incentives for private agents to exert corporate control work best to promote bank performance and stability. Specifically, in a cross-country setting they showed that regulatory and supervisory regimes with these features had suffered fewer crises in the past two decades, had lower non-performing loans, and have deeper credit markets. In the light of the banking crisis in recent years worldwide, CAMEL is a useful tool to examine the safety and soundness of banks, and help mitigate the potential risks, which may lead to bank failures.

Uyen Dang (2011) conducted as a case study of American International Assurance Vietnam (AIA). It aimed to determine whether the CAMEL framework played a crucial role in banking supervision. Furthermore, the purpose was to identify the benefits as well as drawbacks, which the CAMEL system brought to AIA. The research problem was explored by quantitatively analyzing a bank's overall performance. The paper firstly started to collect theory relevant to the empirical research, and then drew conclusions from the findings by relating them back to the literature stated in the early stage. Although this study was based on collected data and numerical figures, it was a qualitative study. The findings revealed that CAMEL-rating system was a useful supervisory tool in the U.S. CAMEL analysis approach was beneficial as it was an internationally standardized rating and provides flexibility between on-site and off-site examination.

Imtiaz Ahmed Masum (2012) did a project on "An anatomy of central bank's supervisory functions with special reference to Bangladesh bank". He discussed various approaches to banking supervision; the coverage of bank supervision and the modes of bank supervision had been discussed too. He gave extra focus on the risk- based supervision.

Hirtle et al. (2016) did a report on "The Impact of Supervision on Bank Performance". They tried to find an answer of a question- did the intensity of supervision affect quantifiable outcomes at supervised firms? They began by demonstrating that the largest five BHCs (bank holding companies) in a district receive discontinuously more supervisory time than smaller BHCs in the district, even after controlling for size and a variety of other BHC characteristics. Using a matched sample approach, they found that these "top five" BHCs had lower volatility of accounting earnings and market returns than otherwise similar BHCs. These firms also appeared to hold less risky loan portfolios and to engage in more conservative loan loss reserving practices. While their risk was lower, top five BHCs did not experience lower accounting returns or slower asset growth. Given that these firms are subject to similar rules, our results support the idea that supervision had a distinct role as a complement to regulation.

Rahul Kanti Datta (2012) did his internship report on "CAMELS Rating System Analysis of Bangladesh Bank in Accordance with BRAC Bank Limited ". Here he showed how central bank rates the health of a particular bank through CAMELS rating. The components of the CAMELS rating have been discussed here.

Based on the supervisory information and results, central bank takes the necessary measures to the affected banks. Through the on-site and off-site supervision Bangladesh Bank ensures a balanced financial market where the default risk of a particular bank will be controlled. But recent information shows the government owned banks are not performing well, Imtiaz Ahmed Masum (2012). Bangladesh Bank should give more focus on the government owned banks and should be more strict on use of supervisory tools. Here, BB will have to ensure strict rules on the affected banks to ensure overall good performance of the economy of the country.

Objective of the report

There are two types of objectives of this paper. One is general objective and another is specific objective.

General objective:

The general objective is to know how central bank supervises all the activities of the banks and financial institutions to ensure soundness, solvency, and systematic stability of the financial sector.

Specific objective:

Some specific objectives have been defined for this research. These are as follows-

1. To know about supervision and supervision types followed by Bangladesh bank
2. To know about the departments of BB related to supervision and initiatives taken by Bangladesh Bank to ensure further control on over all banking industry.
3. To know the impact of supervision on bank's performance based on the performance indicators of overall bank industry

3. Methodology

This research, a descriptive one with an inquisitive study, required bulk data collection, enormous observations and analysis on the process of supervision done by the central bank to find the impact of the supervision on bank performance. For this research, information has been collected from the departments of Bangladesh Bank related to supervision. On the other hand, data related to bank performance have been collected from annual reports of the banks. Here, some data have been collected directly from the reports prepared for their respective departments by Bangladesh Bank Officials. Lots of processed data and primary data have been collected from Bangladesh Bank's website and other bank's websites too. After successful accumulation of the data from different sources trend analysis was run based on the collected data. Trend analysis means observing at how a potential driver of change has developed over time, and how it is likely to develop in the future. This paper has presented the performance of the banks over the years (from 2004 to 2015) based on different performance indicators using trend analysis tools. Conclusion has been drawn from the trends found from our analysis. There is a positive trend found from the collected data. Supervision has a positive impact on the bank's performance indicators. But supervision is not solely responsible for bank performance, as this paper has shown bank's performance was on downside from the year 2012-2014 due to political unrest through out the county. However, trend analysis, as a performance analysis tools, has been marked the best fit to understand the banks' performance over the years. It clearly depicts the development of performance of the banks and their commitment to supervisory rules and regulations formulated by Bangladesh Bank time to time.

4. Findings

There is a positive trend found from the trend analysis based on collected data. Supervision has a positive impact on the bank's performance indicators. But supervision is not solely responsible for bank performance, as this paper has shown bank's performance was on downside from the year 2012-2014 due to political unrest through out the county. Normal performance hampered by that time. However, this paper has some specific findings aligned with our research objectives too. Before discussing findings in depth, departments related to supervision can be discussed as follows;

4.1. Departments of Bangladesh Bank for Supervision

In broad head supervision activities can be categorised into two types; one is On-site supervision and another is Off-site supervision. Seven departments of Bangladesh bank are presently performing On-site inspection namely; Department of Banking Inspection 1, Department of Banking Inspection 2, Department of Banking Inspection 3, Department of Banking Inspection 4, Department of Foreign Exchange Inspection, Financial Integrity and Customer Services Department, Bangladesh Financial Intelligence Unit. These departments mainly performs three shorts of inspections. These are comprehensive inspection, risk based inspection or system check inspection, Special inspection. On the other hand, Department of Off-site supervision (DOS) and Foreign Exchange Operation Department run off-site supervision activities. DOS is responsible for continuous monitoring and assessment of key performance indicators of banks on the basis of various returns and statements. DOS perform its activities through CAMELS rating, liquidity and capital adequacy monitoring. DOS plays an important role in implementing the policy guidelines through continuous guidance**.**

1. Department of Banking Inspection (DBI) (1to 4)
2. Financial Institution Department (FID)
3. Money Laundering Prevention department (MLPD)
4. Department of off site supervision (DOS)

4.1.1. Department of Banking Inspection (DBI)

Department of Banking Inspection-1 (DBI) conducts comprehensive inspection of the private commercial banks including Islamic Banks and Foreign Commercial Banks according to a predefined annual inspection program. Branches of the a mentioned banks which are authorized to carry on foreign exchange business, labeled as Authorized Dealers also come under the purview on site inspection of DBI-1. On site inspection of banks including authorized dealers are carried out according to the annual inspection program sketched out by the department well ahead of the beginning of each calendar year. DBI-1 has also the responsibility to follow up inspection reports of the banks including authorized dealers and to enforce implementation of the recommendations contained therein and rectification of irregularities.

Department of Banking Inspection (DBI)-2 conducts comprehensive inspection of all the NCBs, Specialized Banks, and financial institutions like BSRS, BSB, Basic bank Ltd, Ansar VDP Unnayan bank, Grameen bank and ICB in accordance with the scheduled outlined in the Annual Inspection

Program. Branches of a foreside banks authorized to deal in foreign exchange transactions come under the purview of DBI-2. Moreover, money changes are also under the purview of inspection of DBI-2.

An inspection team is needed to evaluate the financial position, operational soundness, and management quality of bank branches including review of foreign exchange transactions. During head office inspection, **CAMEL** rating of the banks is also done highlighting the core indicators.

4.1.2. Financial institution department (FID)

Financial institution department was created under financial institution act, 1993. **Major functions are -** issuance of license for non banking financial institution, Formulation of policies relating to functions of NBFIs and Monitoring relevant compliance issues through on site and off site supervision

Non Bank Financial Institutions (FIs) are those types of financial institutions, which are regulated under Financial Institution Act, 1993 and controlled by Bangladesh Bank. Now, **34 FIs** are operating in Bangladesh while the first one was started in 1981. Out of the total, 2 is fully government owned, 1 is the subsidiary of a SOCB, 15 were initiated by private national initiative and 15 were initiated by joint venture initiative. Major sources of funds of FIs are Term Deposit (at least six months tenure), Credit Facility from Banks and other FIs, Call Money as well as Bond and Securitization.

4.1.3. Money Laundering Prevention department (MLPD)

As per money laundering act (act 7 of 2002) the responsibility and power of Bangladesh Bank for prevention of money laundering activities are as follows:

In order to lessen and inhibit money laundering activities or crimes related there to Bangladesh Bank this department scrutinize offence relating to money laundering, supervise and observe the activities of banks, financial institutions, Call banks, financial institutions and other organizations involved in financial activities for submission of reports on any subject related to money laundering, review the received report and take appropriate steps on the basis of those, organize training for the offices and employees of banks, financial institutions and other organizations in financial activities.

4.1.4. Department of off site supervision (DOS)

In Bangladesh, Bangladesh Bank started with On-site supervision Department. But it was not absolute for proper supervision. For that reasons it was necessary to launch the Department of Off-site supervision. DOS started its operation from 1993. An essential part of any supervisory system is the evaluation of a bank's policies, practices, the quality of assets, adequacy of loan loss provision & reserve and procedures related to the granting of loans and making of investments and the ongoing management of the loan and investment portfolios.

Functions of DOS[1]:

- Performance analysis and monitoring of the scheduled banks on the basis of CAMELS. Banks having weaknesses in any areas of operation are brought under Early Warning category or Problem Bank category and monitored very closely to improve their performance.
- Monitoring maintenance of Statutory Liquidity Requirements (CRR, SLR) of scheduled banks. Imposing and realizing penal interest and penalty for the shortfall of CRR and SLR.
- Assessment and monitoring of Capital Adequacy of banks. Review and monitoring of loans/deposits of Government and state owned Enterprises with scheduled banks.
- Monitoring the overall credit, deposit, investment and liquidity position of the banking system
- Review of the minutes of the Board of Directors, Executive Committee, Board Audit Committee meetings and the audited Financial Statements of scheduled banks and advising the banks to take necessary remedial measures their against.
- Provide deposit insurance coverage and safety nets to protect depositor's interest and thus enhance market discipline and systemic stability.
- Review of the Large Loan portfolio of the scheduled banks.
- Maintaining asset/liability of the liquidated banks and dealing with the court cases relating to the properties of liquidated banks, as official liquidator.

4.2. Objectives of Inspection/Supervision

SL. No.	Points
a.	Asses the financial soundness bank and financial institutions
b.	Dig out procedural defects/lapses/deficiencies and functional irregularities and to incorporate the same in the inspection reports

[1](Department of Off-site Supervision)

Department of Off-site Supervision. (n.d.).Retrieved August 10, 2016 from Bangladesh Bank: http://www.bangladesh-bank.org/

c.	Bring out the various irregularities incorporated and recommendations made in the report to the notice of the top management of the organization concerned in order to put it on sound footing&
d.	Develop sound banking practice in Bangladesh.

Source: Bangladesh Bank

4.3. Provisions under which Bangladesh Bank conducts inspections

Provisions	Institutions subject to inspections
(a) Under section 44(I) of the Bank Company Act-1991	Scheduled Banks and all branches Investment Corporation of Bangladesh Grameen Bank Ansar VDP Bank Ltd.
(b) Under Article 55 of the Bangladesh Bank Order, 1972	Scheduled Banks, all branches of Scheduled Banks & other financial institutions
(c) Under section 19A of the Foreign Exchange RegulationsAct-1947	International Department (ID) Authorized dealer branches, International hotels Indenting firms, Money Changers, Air lines General sales agent etc.
(d) Under 82(i) (B) of the Co-operative societies Ordinance-1984	Thana Central Co-operative Association (TCCA) Sugarcane Growers Co-operative Societies (SGCS)
(e) Under Article 3 of the Bank Company Act-1991	Bangladesh Samabaya Bank Ltd, (BSBL) Central Co-operative Bank Ltd. (CCBL) Central Co-operative Land Mortgage Bank Ltd. (CCLMBL) Others viz. Aziz Co-operative Bank Ltd. etc.
(f) Under section 5 and 20 of the Financial Institutions Act-1993 and the	Financial Institutions Industrial Dev. Leasing Company (IDLC) United Leasing Company (UIC) UAE Bangladesh Investment Co. Ltd. (BICL)

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Financial Institution Regulations-1994

Source: Bangladesh Bank

4.4. Recent initiatives of DOS and its impact on overall banking system

Recent initiatives of DOS:[2]

A lots of recent initiatives has been taken through out the past four or five years under DOS. Some very important initiatives can be quoted here;

A. **The supervission strategy adopted and followed by Deparment of Off-site Supervision:**
   I. Revision of CAMELS rating guidlines and its up-gradation
   II. Strong monitoring over Liquidity Management
   III. Constant review of the financial statements of banks
   IV. Introducing marking to market based revaluation system
   V. Risk management of banks
   VI. Guidlines regarding investment in capital market
   VII. Establishing Islami Inter Banks Fund management
   VIII. Introduction of self-Assesment Report
   IX. Introduction of Stress Testing Management and Guidline
B. **Supervision Techniques carried out under institutional Structure Reform:**
   I. Formation of Risk Management Unit
   II. Implementationof Large loan monitoring Softwere
C. **Establishment of Bank Supervision Specialist Structure**
D. **Aranged some awareness program**
E. **supervision tools established under polices issued by other department of BB and structural reformation:**
   I. Capital Adequacy Monitoring
   II. Initiation of Enterprise data warehouse(EDW)
   III. Launchingthe Intregrated Supervision System software
   IV. Coordination between Off-site and on-site Supervision
   V. Risk Management Committee of theboard of directors

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[2]Hassan, S. R. (2013). *Off-site supervision of Bangladesh Bank Recent Initiatives (2009-2013)*. Retrieved march 04, 2015 from www.bb.org.bd: http://www.bb.org.bd/pub/special/new_initiatives_dos_e.pdf

Substantial progress has been made in achiving goals os Bangladesh bank due to the aforesaid initiatives taken place by DOS in the last five years.The capital base of the whole banking system has become deeperbecause of close monitoring by Bangladesh Bank

4.5. Analysis of the impacts of supervision on overall banks' performance

Impacts can be shown through using graphs from collected data drawing a comparison among different years (2004 – 2015). Here, The Author has brought couple of performance indicators under consideration for this research to demonstrate the bank's health over the years. We have categorized total banking industry under four heads; a. State owned commercial banks b. Development financial institutions. c. Private commercial banks d. foreign commercial banks.

4.5.1. Capital Adequacy Ratio (CAR)

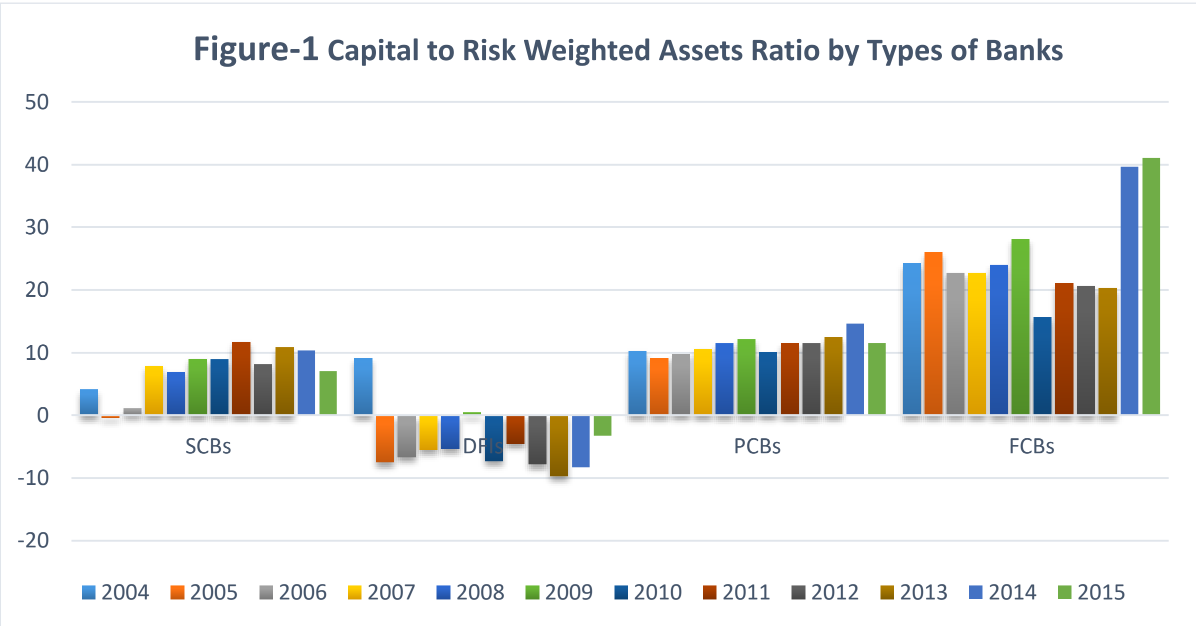
Capital Adequacy Ratio (CAR), also known as Capital to Risk (Weighted) Assets Ratio (CRAR), is the ratio of a bank's capital to its risk. Regulators track a bank's CAR to ensure that it can absorb a reasonable amount of loss and comply with statutory Capital requirements. Currently Banks maintain CAR @12.5% or 400 corer taka whichever is higher. CAR is supervised in a quarter bases.

Minimum Capital Requirement = (Total Eligible Capital/Total Risk Weighted Assests)

Total Eligible Capital= (tier one+tier two+tier three) capital

RWA= (Credit risk+Market Risk+Operational risk) weighted asset

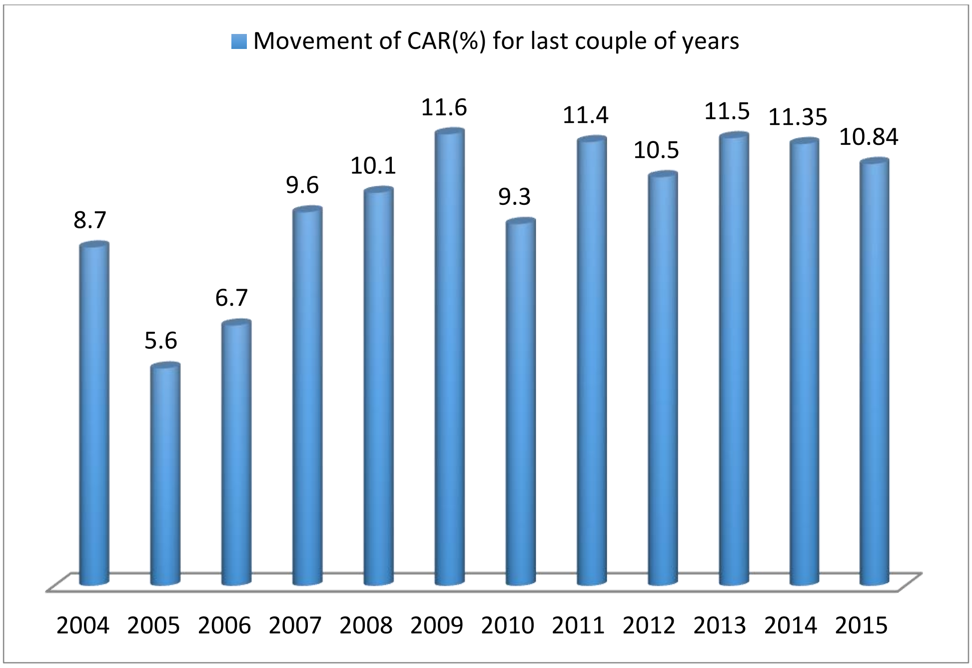
Capital to Risk Weighted Assets Ratio by Type of Banks: (in percent)



Source: Department of Off-site Supervision, Bangladesh Bank

Capital adequacy represents the amount of capital a bank has against its risk-weighted assets. Bangladesh is in stronger position now comparing with previous decades. The CAR for the whole banking industry was 10.48 percent in December 2015. Here we see, state owned commercial banks maintained close to 10% in the recent past. But previously their Capital adequacy ratio was poor. As BB is monitoring continuously, their financial condition is improving. Private commercial banks have maintained above 10% so it shows that they are performing well in term of capital adequacy. On the other hand, foreign commercial banks were really impressive with their CAR ratio, they have maintained more than necessary over the years. It indicates their financial soundness.

Year wise movement of CAR (%) in overall industry:



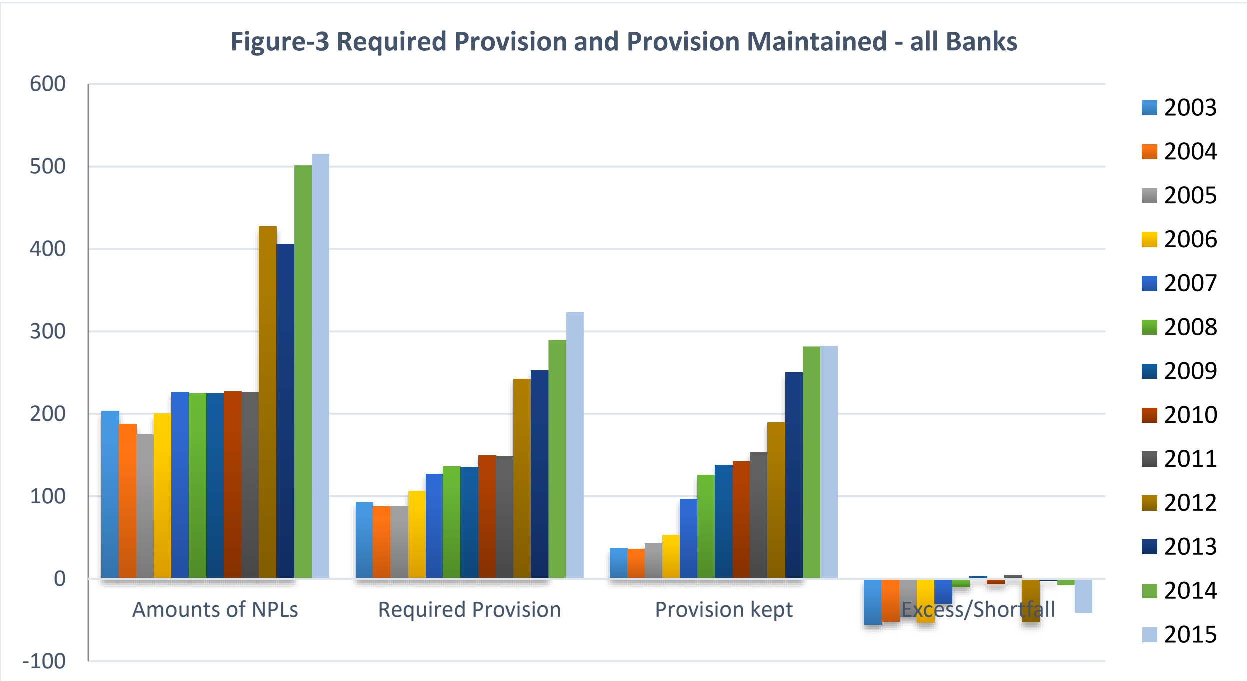
Source: Department of Off-site Supervision, Bangladesh Bank

Average movement of CAR in the banking industry for last couple of years has been shown in this graph. Average is also satisfactory over the past couple of years. Here, we see a positive trend, CAR is improving over the years. So it reflects the stability in the financial system. Bangladesh Bank gives too much pressure on the banks to maintain this ratio because of the importance of this ratio. It reflects the stability of the banks.

4.5.2. Increase amount of capital maintained by banks

The amount of capital maintained by banks was Tk.205.78 billion in December2008 and stood at Tk.651.91 billion in December 2013, amounting to a 217 capital growth. In the year of 2014,2015 banks ware in the capital surplus position. In 2014 capital surplus was 4069.08 corers, in the year of 2015 capital surplus was 2371.00 corers. Transfer of large portions of income into capital as well as new capital injections by bank is accounted for this growth. As a result the base of the whole banking system in your country has been strengthened.

Required Provision and Provision Maintained - all Banks: (billion taka)



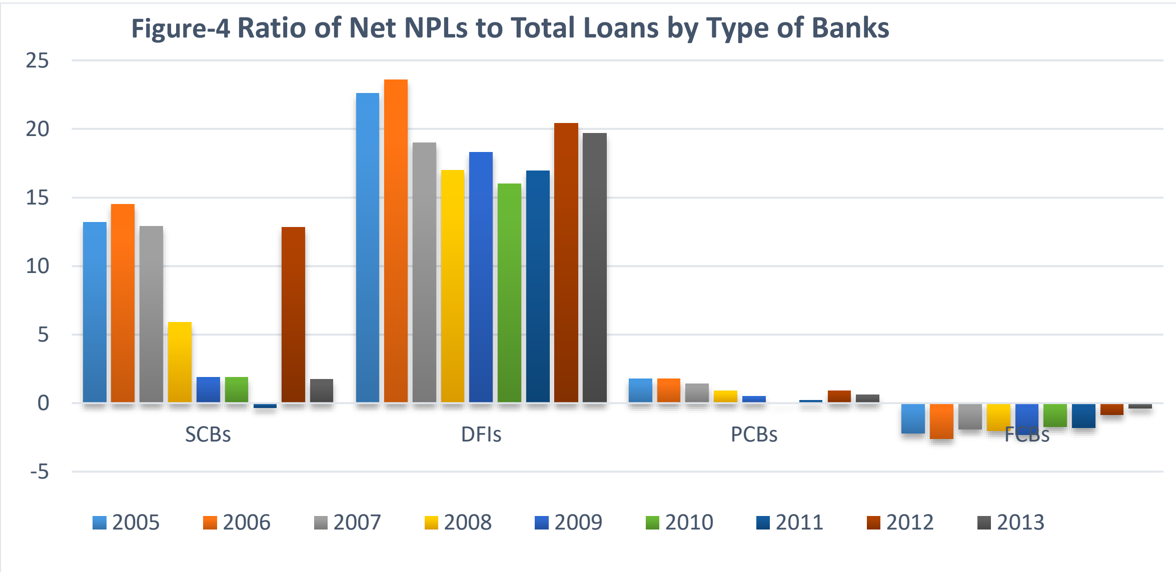
Source: Department of Off-site Supervision, Bangladesh Bank

Here the vertical axis of the graph shows the amount in billion (BDT), on the other hand horizontal axis shows the years .we see the ups and downs of the total required provision held by all four categories banks. In the recent years DOS is giving more focus on this thing. This graph completely shows that banks are not keeping the amount of provision required. Most of the year there are shortfalls in term of provision maintained. NPL increased in the year from 2012 to 2015 because of the political turmoil. One of the major reasons is the reluctance of the State owned commercial banks to run efficiently and the continuous pressure or influence on the SCBs by the ruling government party. It's increasing the risk in the banking sector. Most of the depositors are losing trust on the banks. It may lead to a bad situation in the near future. So they should be kept under direct supervision and help them to maintain the required provision.

4.5.3. Effect of stress testing technique on Banks

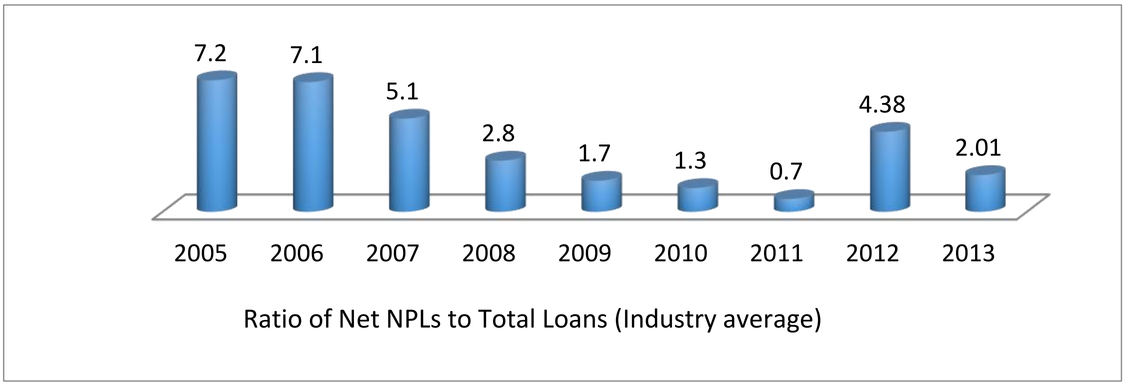
In order to estimate systematic risk, a stress testing technique was introduced and strengthened, which encouraged banks improve their shock absorbing capacity by giving more emphasis in maintaining capital and provisions. At seen in stress testing, most of the banks have a moderate level of reliance. At this moment liquidity management in banking system remains stable, with the call money rate hovering at satisfactory level.

Ratio of Net NPLs to Total Loans by Type of Banks: (in percent)



Source: Off-site supervision of Bangladesh Bank Recent Initiatives (2009-2013), DOS, Bangladesh Bank.

Nonperforming loan is an important issue to show our overall economics performance. If it increases it means economy is not performing in the proper way. Loan taker is failing to repay the loan. However, state owned commercial banks and development financial institutions have huge NPL. Ratios are showing that the amount of NPL to total loan is really high in those banks and financial institutions.

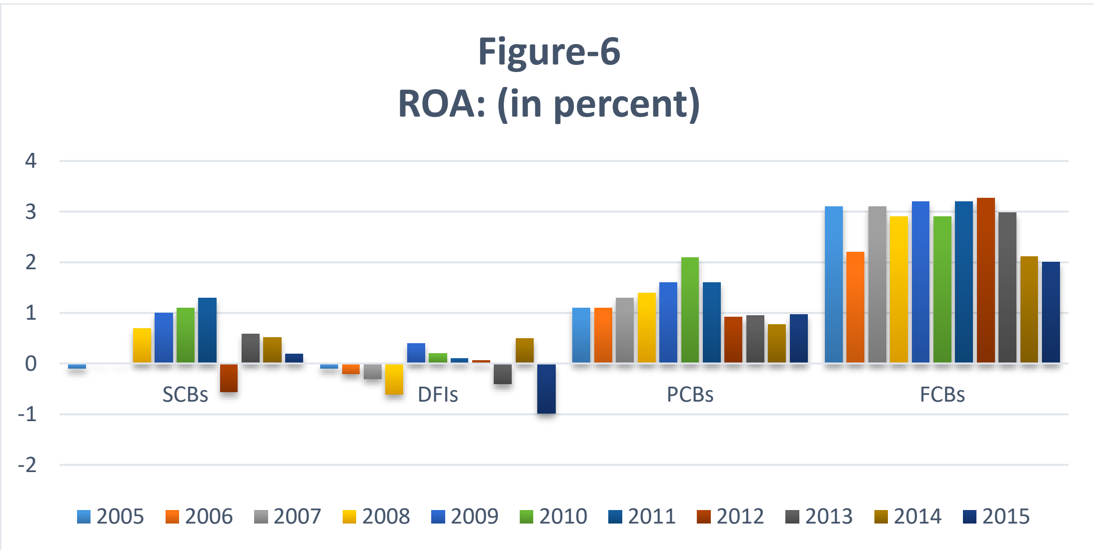


Source: Department of Off-site Supervision, Bangladesh Bank

This Ratio soared throughout 2012 and 2013 because of political instability and its adverse effects on business. Before 2012 it shows a downward trend that was really a got indication for
the economy of our country. However government should extra focus on this ratio. If NPL raises it will create a negative impact on the depositors mind. The borrowers should use the money borrowed properly. They should no do any sort of fund diversion. They should not show any reluctance on repaying debt. Banks should increase the monitoring on the borrowers' activities and help him to take financial decisions.

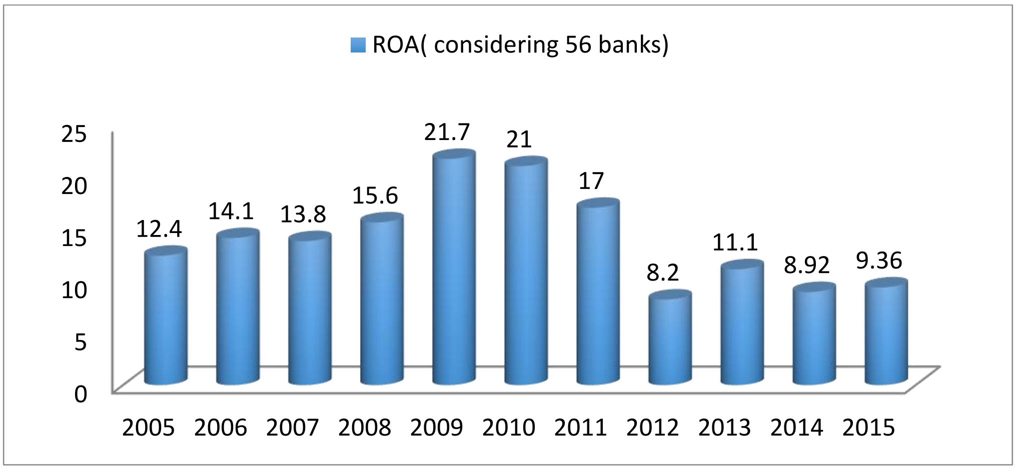
4.5.4. Profitability Ratios

4.5.4.1. ROA: Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage.



Source: Department of Off-site Supervision, Bangladesh Bank

Here in this graph, we see ROA is in positive trend from the year of 2005 to 2011for State Owned Commercial Banks, Private Commercial Banks and Foreign Commercial Banks. But after 2011 we see a negative trend. From the year of 2012 to 2015 banks' ROA are decreasing for all sorts of banks (PCB, SCB, FCB). Political instability is the main reason of this condition. People are not involving in new businesses and they don't borrow. However government should ensure proper infrastructure facilities to the investors and entrepreneurs. BB should be more cautious on this issue. Bangladesh Bank will have to ensure close supervision to the banks to get an improvement.

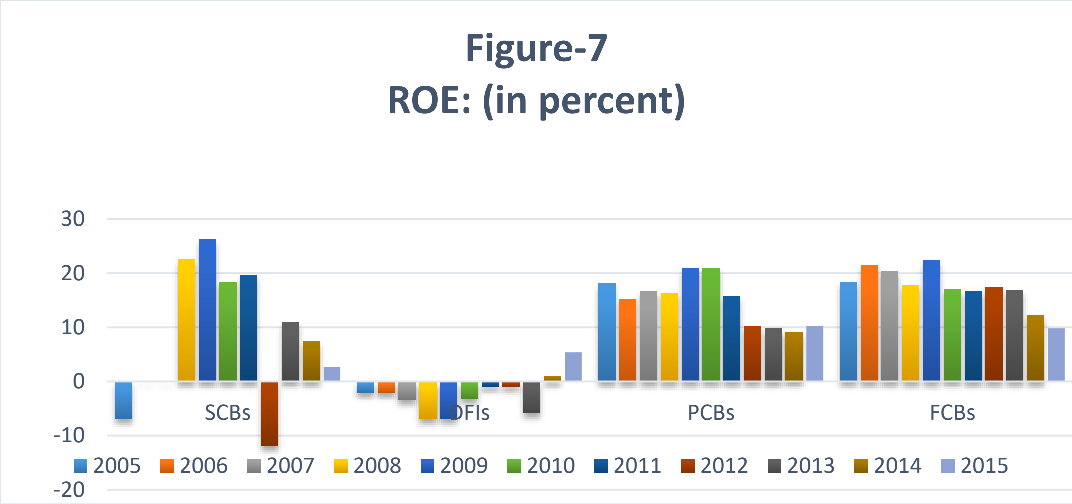


Source: Department of Off-site Supervision, Bangladesh Bank

In this graph, we see the overall ROA of the bank industry. It also shows a positive trend from the year of 2005 to 2011. Here 56 banks' performances have been considered. So you can say these are the year wise industry average. From the year of 2012 to 2015 Banks are not performing well. Their ROA shows a negative trend. However, situation is improving and hopes they will do better in the near future if the government and opponent political parties can ensure a stable and turmoil free economy.

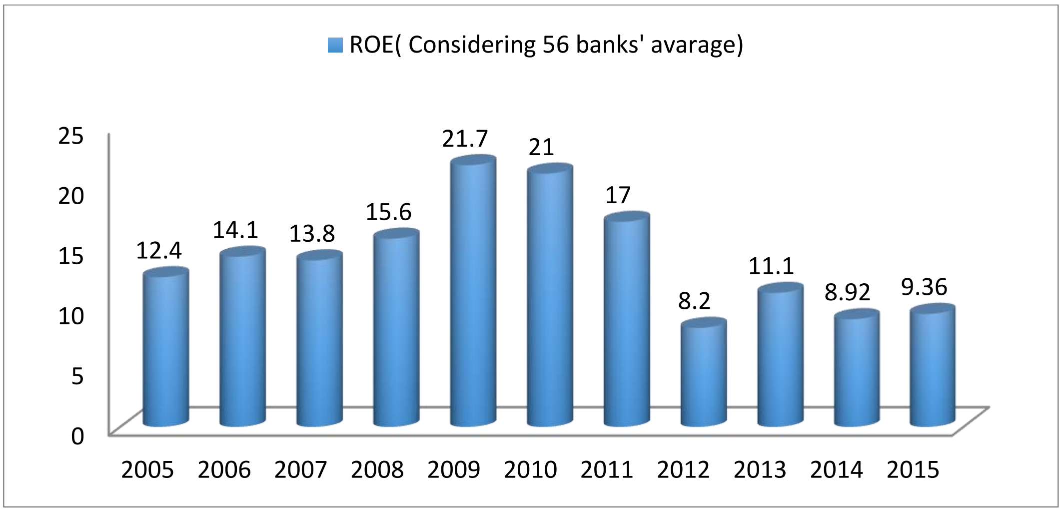
4.5.4.2. Return on equity (ROE) is a measure of profitability that calculates how many dollars of profit a company generates with each dollar of shareholders' equity. The formula for ROE is: ROE = Net Income/Shareholders' Equity. ROE is sometimes called "return on net worth

ROE (Return on equity)



Source: Department of Off-site Supervision, Bangladesh Bank

Here in this graph, we see ROE is in positive trend from the year of 2005 to 2011for State Owned Commercial Banks, Private Commercial Banks and Foreign Commercial Banks. But after 2011 we see a negative trend. From the year of 2012 to 2015 banks' ROE are decreasing for all sorts of banks (PCB, SCB, FCB). Political instability is the main reason of this condition. BB should be more cautious on this issue. Bangladesh Bank will have to ensure close supervision to the banks to get an improvement.



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However, over the couple of years we see the trend of ROA and ROE was positive or upward. It is increasing year to year. Due to recent political instability these indicators are getting bad in the very recent years. ROA and ROE are showing comparatively better in term of FCBs. State-owned Commercial Banks are not performing well. On the other hand Private Commercial Banks are doing well indeed. Recently performance of the banks is not that much satisfactory. One of the reasons is this sector has become very competitive because of the huge number of the banks comparing with the economy size. However due to continuous monitoring of the implementation status of capital marketing exposure-related policies and regulations, investment in capital market by the banks (on both a solo and consolidated basis) has come down within the prescribed limit. In fact risk associated with capital market exposure has reduced a lot.

Supervision of the banking sector is complex, never-ending process. So to keep up with the changes of the financial market all the supervision patterns are changing

5. Recommendations

Some objective based recommendations can be given more specifically. It will better sum up our research findings too.

Objective-1 To know about supervision and supervision types followed by Bangladesh bank

Finding-1 BB supervises centrally through Off-site and On-site Supervision to maintain the efficiency, solvency and overall stability in financial sector thus safeguard depositors' interest. However, some unnecessary management layers exist throughout the supervision process.

Recommandation-1 Supervisory activities should be more prompt and Installation of the updated technologies is mandatory. On the other hand, real time supervisory system should be introduced removing unnecessary management layers and ensuring more efficient & properly trained people throughout the supervision system.

Objective-2 To know about the departments of BB related to supervision and initiatives taken by Bangladesh Bank to ensure further control on over all banking industry.

Finding-2. Bangladesh Bank runs supervisory activities through on-site and off-site supervision departments. There are almost 7 departments found which are directly involved with supervisory activities. Some initiatives were taken by those departments especially initiatives taken by department of off-site supervision of Bangladesh Bank put huge impact on the banks' performance.

Recommendation-2 More and more need based training can be arranged for the human resources to make them international standard. Government should give more power to Bangladesh Bank to ensure the proper actions and their implementation on supervisory decision.

Objective-3 To know the impact of supervision on bank's performance based on the performance indicators of overall bank industry.

Finding-3 Supervision has a great impact on the bank performance but Supervision is not the sole factor that controls bank's performance. BB can exercise more supervisory power on PCBs and FCBs thus Private Commercial Banks and Foreign Commercial Banks are performing well but BB supervision can put less impact on State owned Commercial Bank's Development Financial Institutions performance due to government interventions.

Recommendations-3 BB will have to ensure direct influence on State owned Commercial banks and Development Financial Institutions having no government intervention or political pressure. Over all BB should reduce the dependencey on banks for data accuracy. They can enhance the capacity to collect real time data with the help of the modern technology. They should exercise more freedom in the supervision and enforcement of laws.

6. Limitation and scope of further research

This research is conducted based on some sensitive secondary data. Finding those data may not be viable for the research since it requires an unusual time. Hence, adequate time and sensitivity of the information are two main limitations of this research. I may also find the research very hard due to the lack of knowledge in this field of study. Another major limitation of the research is the collection of trustworthy and relevant data. Some data from BB is restricted to use publicly. So all the relevant information is not available. The other limitation of this research is this paper is based on old data. As this research has been conducted based on the backdated data (up to 2015), a similar type of research can be conducted with more recent data following the same methodology to depict a more accurate picture of the researched industry.

7. Conclusion

Bangladesh Bank, the central bank of Bangladesh, is trying to ensure control of the overall banking sector with its different initiatives. But everything sums up with some limitations eventually Bangladesh Bank has some limitations too. In spite of all those limitations, Bangladesh bank has kept our economic growth stable and inflation under control although the world economy was going through turmoil in the last couple of years. Bangladesh Bank identifies the weakness and takes the necessary measures for strengthening the financial condition of the banks. It supervises centrally through Off-site and On-site Supervision to maintain the efficiency, solvency, and overall stability in the financial sector thus safeguard depositors' interest. Supervisory activities should be more prompt and Installation of the updated technologies is mandatory. Lots of updated tools were accommodated by the DOS and implemented those for better supervision. The government should give more power to Bangladesh Bank to ensure the proper actions and their implementation of the supervisory decision at the same time government intervention and political stability must be ensured to bring back harmony within the industry. This paper has demonstrated the overall impact of supervision on banks' performance (industry performance) based on the performance indicators of the overall bank industry. BB can exercise more supervisory power on PCBs and FCBs thus Private Commercial Banks and Foreign Commercial Banks are performing well but BB supervision has not been that much impactful on State-owned Commercial Bank and Development Financial Institutions' performance due to external influences prevail within the system. Bangladesh Bank will have to ensure direct influence on State-owned Commercial banks and Development Financial Institutions having no government intervention or political pressure. BB should reduce the dependency on banks for data accuracy. It should exercise more freedom in the supervision and enforcement of laws. In the recent past (2012-2013) it appeared to be an impossible task to control the economy because of the political turmoil throughout all over the country. The banking sector became more affected due to the unrest. However, our government has ensured political and overall stability within the country, which is a good sign for the banks and for the overall economy as well. Still, investors and general people sense an internal problem between the two major political parties. So, to safeguard the depositors' money the government must confirm a turbulence-free economy. This research can be helpful for the government policymakers including Bangladesh Bank to make better policy understanding the overall impact on the banking industry side by side this paper will find a way to help all the stakeholders of the banking industry for better understanding of the supervision of banking sector. Hopefully, Bangladesh Bank will try to find a possible solution for consulting with the government to keep the economy on the right track.

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