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**COMPERATIVE ANALYSIS:** performance and possibility of bankrupt in banking sector of Finland, China and Bangladesh.

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**ABSTRACT:**

The purpose of this thesis is to study and compare bank performance, bank profitability and the possibility of bankrupt in the banking sector of selected three countries such as Finland, China and Bangladesh. Especially the study makes a valid comparison of the banking sector of these countries. The research problem can be stated in two sentences. Firstly, in comparison with Finland and China, what are the key financial factors that are lagging in the banking sectors of Bangladesh behind? Secondly, What are the strengths of banking sectors of Bangladesh in comparison with China and Finland that can be a big opportunity for Bangladesh?

This study is based on the Finnish, Chinese and Bangladeshi bank data acquired from Bank Scope database and Fitch Connect Data Services(FCDS), also foreign banks from selected countries which are considered in the sample section. The goal of this study is on large and systemically important banks from which sufficient data is available. The chosen sample criteria are different from one country to another. The sample periods are 2000 to 2017. The methods of the study is panel regression, more specially OLS regression and correlation matrix are estimated to measure profitability, and Altman-Z score is calculated to evaluate the possibility of bankrupt. Furthermore, it is important to know the strength of banking sector of an economy. This study also provides more details about overview of the financial sector, description of the controlling authorities, nature of the economies of these three countries.

The results of the study show that most of the variables chosen for the panel regression explain bank profitability and variable taken for the Altman-Z score measures the chance of bankrupt. Among three countries Bangladeshi banking sector is the least favourable position than Finnish & Chinese banking sector because Bangladeshi banking sector is considered an inefficient market and different market regulation than others. The profitability indicator like return of assets (ROA) and return on equity (ROE) in banking sector of Bangladesh fluctuates more than of other two countries. In addition, The banking sector of Bangladesh generates lower share of income, which is linked to lower profitability and higher liquidity risks than Finnish and Chinese banking sector. The bank's business growth do not explain bank profitability in Bangladesh. But during global financial crisis Bangladesh was the least affected countries among others. China is the largest economy in terms of GDP and technologically advanced. Moreover, Service sector plays an important role for both Finnish and Chinese banking industries.

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**KEY WORDS:** Bank Performance, profitability, Bankrupt, Altman-Z score



## 1. INTRODUCTION

Money is one of the most important elements for a nation and its economy because of its role as a medium of exchange. Proper utilization of money can lead any economy in any country of the world towards the economic development and sustainability. For the establishment of proper utilization of money by controlling the availability of money efficient, banking sector of any country of the world plays a very significant role (Rahman 2010). Generally, banks are the institutions that help a country to have proper control over its money. For the purpose of increasing the rate of investments in any country, banking system plays a very significant by collecting the money from its clients. The banking system also helps a country to create a culture of savings among the people of the country which increases the rate of investments results in having appropriate growth in the economy.

Although the economic structure and the culture of different countries of the world are very much different from each other, the roles of the banking system in most of the countries of the world are very much similar. An efficient banking system ensures the availability of money in the hands of the general people and the organizations in accordance with the situations or conditions of the economy (Rahman 2010). In spite of having similarities in the roles of a banking system in most of the countries of the world, lack of proper utilization of the rules and regulations of banking system numerous numbers of countries of the world do not get the actual benefits of Banking Sectors. For this reason, proper understanding about the banking system and its importance in the development of the economy of any country is essential for the purpose of ensuring the appropriate utilization of money.

To understand the efficiency of the banking system of a country is mostly a relative issue to measure. There are numerous numbers of different kinds of qualitative factors will be available in the economy of a country which makes it difficult for any country of the world to measure the efficiency of the banking system of that country (Parthasarathi 2011). For this reason, the easiest and quick approach to understanding the efficiency of

the banking system of a country is to compare the banking sector of that country than that of others.

The term efficiency of banking system basically refers to the financial performance of the banking sector of a country which gives any country of the world appropriate idea about the contribution of the banking sector in the development of an economy (Bajaj, 2010). As a developing country, Bangladesh needs appropriate uses of the banking system to cover the demands of money for production, development, or any other issues very much related to the development of the economy. Therefore it is important to study and understand how the financial system works in any countries. In this regard, there are numerous numbers of significant factors and ideas have been provided by numerous numbers of scholars from time to time according to the necessity to understand the financial performance of any banking institution in any part of the world. Bank profitability is one of the key indicator to measure bank financial performance for stability of the financial system, which has contribution for the capital market and the whole economy. The bank profitability measurement is connected with well being of banking sector and growth of the economy and influences not only corporate governance system but also focuses to stakeholders such as central banks, bankers association, government and other financial institutions Pasiouras & Kosmidou (2007). The motivation of this study arises from the argument made by Pasiouras & Kosmidou who explains about financial performance indicator. Dietrich & Wanzenried (2012) also measure bank profitability. Hence, financial performance indicator bank profitability is essential part to measure banking system. Moreover, bankruptcy is an another indicator to evaluate banking system in any country which measures financial distress. Due to bankruptcy not only individual institutions or owners are affected, but also financial institution such as investors, creditors, and the whole economy in general will be affected. As a result. The parameter of bankruptcy measures early warning of any bank, that may have chance to the lower risk and danger level of company. Another motivation of this study come from several studies. Firstly, Mahtab (2013) studied bankruptcy which is focused on only conventional and Islamic banking based on Bangladeshi banking data. Secondly, Altman (1968,1994) developed a model named Altmanz-score, which is most popular model measuring company bankruptcy using

financial ratios. Due to systematic and non-systematic factors, corporate failure is the subsequent conclusion. To measure corporate failure financial and accounting literature has over and over again reinvented the confidence in ratio analysis as a efficient predictor. And this attention has been focused on the predictor of corporate failure Chleng JR (2013). Chowdhury A (2009) claims that the Altman Z score does not apply to every situation in Bangladesh. This model is mainly used for forecasting company performance or financial health of company and also predict how much possibility company has entering bankruptcy or distress within a 2 year. The result of the study indicates that many companies are suffering from financial distress because of poor management and operating inefficiency even though the price of stock does not reflect that much in the market.

For understanding the financial performance and bankruptcy of the banking system of Bangladesh, the study is also going to evaluate and compare the financial predict indicator profitability and bankruptcy indicator Altman Z score of banking sectors of China, and Finland. For the purpose of a report, financial data about the performance of the different bank of these three countries have been collected from Bankscope and other available sources. After that different kind of analysis have been made to establish appropriate comparison among the performance of the banking sectors of these three countries.

### **1.1. Problem of the Statement**

Banking sector of a country is the intuition of the economy from where the most of the economy (Money) has been distributed. The proper utilization of money is largely dependent on its availability to the general people and the business organizations (Bajaj 2010). Ensuring proper utilization of money is not a very easy task for any country. The appropriate performance of the banking sector is very much responsible for this. For this reason, it is very important for a country to ensure proper utilization banking system for which finding out the efficiency of the performance of the banking sector of a country is

very important. In this report, we are going to compare the performance of the banking sector of Bangladesh with the banking sector of China and Finland for the purpose of understanding the efficiency of the banking sector of Bangladesh. In the recent times, there are numerous numbers of issues that have been taken place in the banking sector of Bangladesh which indicate lack of efficiency in the banking system of a country. On the other hand, there are some other positive issues shows the efficiency in the banking system of our country like the amount of Reserve. This report will give us an appropriate idea about actual financial lines of the banking sector of Bangladesh in terms of other countries with the help of different kinds of quantity factors. The purpose of choosing Finland and China is to help finding out the reasons behind the lack of efficiency in terms of financial performance and bankruptcy in the banking sector of Bangladesh by comparing performance indicator. Besides, it will also give us the idea of establishing numerous numbers of different kinds of methods for the purpose of making the banking sector of a country efficient and effective to contribute in the development of the economy of Bangladesh.

## **1.2. Nature of the Study**

The collected information from different kinds of sources about several banking institutions of different countries of the world is going to be analyzed statistically for the purpose of making quantitative comparison among the banking institutions of these countries (Azad 2012). For the purpose of a research, quantitative financial performance information will be analyzed in accordance with different kinds of ratios which indicate the financial performance of banking institutions all over the world before proceedings towards the statistical comparison among those ratios. So, the report is basically quantitative analysis which gives us appropriate comparison among the banking institutions of the selected countries which will help us to understand the efficiency of the banking sector of Bangladesh in the development of the economy of our country (Azad 2012). Besides, it will also give us the idea about different kinds of factors that are working as sometimes strengths, and sometimes weaknesses for the banking industry of a country by the help of proper understanding of the ratios that are going to

be analyzed at the very beginning of our analysis phase (Mahmud et al. 2011). In addition with these, some qualitative factors that are very much influential for the performance of the banking sector of Bangladesh have also been discussed in this report for the purpose of understanding and finding out the influential qualitative and quantitative factors that are creating different kinds of situations in front of the banking sectors of Bangladesh to perform efficient in the development of our economy.

### **1.3. Purpose of the Study**

After the completion of a study, we will be able to find out the factors that are affecting the banking sectors of our country to perform efficiently in comparison with others. Besides, by the help of our findings, we will be able to get some ideas and suggestions for the purpose of using our banking sector more efficiently. An efficient and appropriate comparison among the banking institutions of three countries will help to find out the key financial performance factors for Bangladesh and the impacts of these factors in the development of our society or economy.

### **1.4. Scope of the Study**

By understanding and utilizing all sources of information for the establishment and completion of this report, The study is able to understand the financial issues that are connected with understanding the banking sector and its performance of any banking system. And especially this report will help to get necessary information about the strengths and weaknesses of the banking sectors of Bangladesh. From this report, The study will be able to find some scopes in the banking sectors which can be very much effective in the economic development of a country. An overall the study gives more information especially bank performance and bankrupt in banking sector of the countries like Finland, China and Bangladesh by using comparison statement.

### **1.5. Significance of the Study**

For understanding Bangladeshi banking system, it is very important to understand the factors that are helping different countries of the world to establish a strong economy (Bahar 2009). One of the most important factors of the economy is banking system which will help any country of the world to provide an excellent economic platform to have a strong economic foundation to get developed. By this report, The study will get a chance to compare the banking industry of Bangladesh with the banking sectors of Finland and China which will give us the necessary information to find out the errors in our banking system for the purpose of solving those problems to establish an excellent banking platform for the purpose of keeping the money supply of a country smooth in accordance with the economic condition. This report will be very much informative for one who wants to find out several influential factors of a banking sector in comparison with the banking sectors of strong economies like China and Finland for the purpose of establishing or changing those factors efficiently in accordance with others to make ones economy one of the best in the world.

### **1.6. Research Objectives**

The primary objective of the report is to analyze the financial performance of the banking sector of China, Finland, and Bangladesh. Alongside merely presenting an analysis of the banking sector of these countries, I am intended to present comparative study among these three countries. So to analyze financial performance and compare among these three countries' banking sector is the primary objective of this report. Apart from this, this report will aim to meet several secondary objectives.

- To have a brief conjecture about the banking sector of China, Finland and Bangladesh
- To know the nature, strength, and weakness of the banking sector of Finland, China and Bangladesh

- To know about the financial players within the economy of these three countries
- To know the problem and prospect of the banking sector of these three countries
- To make a valid comparison of the banking sector of these three countries.

### **1.7. Research Questions and Hypotheses**

To make the analysis it very much wholesome, we need to have some proper knowledge about our findings. In this regard, in pursuance of the objectives of this report, we are going to deal with some specific questions which will at the end of a report provide the appropriate information we are looking for regarding the performance of banking sector of Bangladesh. The following questions have been selected for the purpose of a research to keep ourselves right on the track from the very beginning of a report until the very end. The questions for our research are:

- How strong is the Banking sector of Finland ?
- Do Bangladesh, China and Finland have the same degree of financial strength?
- In comparison with China and Finland, what are the key financial factors that are lagging the banking sectors of Bangladesh behind?
- What are the strengths of banking sectors of Bangladesh in comparison with China and Finland that can be a big opportunity for Bangladesh?
- What changes in rules and regulations are needed for Bangladesh to keep the industry to perform with expectation in accordance with the performance of China and Finland?

### **1.8. Structure of the study**

The rest of the study is structured as follows. The second chapter explains key concepts of financial performance assessment. The key concepts regarding method of financial and financial factor of analysis. The third chapter contains the literature review section,

in this chapter explains the whole economy of Finland, China and Bangladesh, specially it has included rules and regulations of banking system, banking authorities and banking sector of selected countries. The fourth chapter introduces the data and methodology where includes types of data and research, panel regression, Altman z score analysis. The empirical and financial analysis begins from the fifth chapter. There are two kinds of analysis included in chapter five, one explains bank performance analysis by using panel regression, another part explains banks bankruptcy by using Altman z score. The chapter starts by presenting descriptive statistics and continues to the results gained by conducting econometric tests and analysis. The final chapter concludes the whole study by summarizing the key findings and presents the recommendation for the Bangladeshi banking system.

### **1.9. Limitations of the study**

The most significant limitation of this research is going to be the authenticity of the information with which the actual comparison has been made among the banking institutions of these three countries and it will be very difficult to ensure. The authenticity of these information as most of them are taken from the specific sources of that institutions and it would be difficult find out those information anywhere else. The fact window dressing is another very important issue for the authenticity of the information here as we all know most of the institutions especially business Institutions are trying to impress the uses of their information by the help of their annual reports. In addition with this, economic structure of Finland and China is not similar to Bangladesh which may create a big impact in the findings of this report and the factors as very much qualitative here. Due to the time constraints of the report these factors have been ignored at the time of the research which can be a big limitation in the findings of this report.

## **2. FINANCIAL PERFORMANCE ASSESSMENT**

### **2.1. Methods of financial analysis**

At the time of taking decisions about picking up numerous numbers of different kinds of methods for the purpose of analyzing the performance of banking institutions of a country, it is very important to know about the factors that are going to affect the performance of the business organizations as banking institutions in an economy. There are numerous numbers of different kinds of factors are available who are providing different kinds of ideas about the performance of the banking institutions in different ways. Most common of them are:

#### **a) Customer profitability**

This is the indicator by which the performance of the banking institutions can be quite easily understood as it provides information about the customers' profitability or the profit that has been earned from the customers' revenue by cutting down all the costs that have been spent for the customers of banking institution (Chowdhury, & Ahmed, 2009). As banking institutions are basically working with the money of the customers by providing the money to the other customers as loan and getting the money from other clients as deposits for the banks for the purpose of providing all the necessary safety and security of that money on behalf of the clients and providing a percentage of the profits that has been collected by the bank from the others customers where they are providing this money as loan (Chowdhury et al. 2009).

#### **b) Revenue per employee**

One of the most significant factors for any business organization in the financial market especially bank for the purpose of earning profits by serving the customers properly is the employee (Webb 2003). At the time of analysis the revenue of the employees of the organization it has become quite easier for the organization to understand the

profitability of the customers at the time of generating money for the organizations by making the customer satisfied to deal with the organizations.

**c) Risk-adjusted net interest margin**

It will help the organization to get an appropriate idea and knowledge about the risks related with the activities of the organizations and helps the organization to avoid those risks and have some contingency plans for the purpose of dealing with those resources efficiently and effectively. Having a healthy net interest margin will be very much positive in terms of expressing the performance of the banking institutions of a country. There are numerous numbers of different organizations and respective authorities are trying to understand the net interest margin of banking institutions for the purpose of comparing the ratio with others to understand the effectiveness of the activities of the organization in this highly competitive world of business.

**d) The ability to generate fee income**

Banking institutions have numerous numbers of different kinds of options in their hand for the purpose of earning a profit by generating numerous numbers of different kinds of fees for providing different kinds of services to the customers (Cronje 2007). At the time of generating income from different kinds of services, banking institutions must have appropriate idea about the demands of the customers for the purpose of fixing the rate of their services (Cronje 2007). For instance, banking institutions can make revenue from providing numerous numbers of different kinds of service like lockers, providing checkbooks, vaults, and so on to insert the safety of the customers and they are wealth. So, by finding out the amount of non-operating income of the banking institution in comparison with the previous years along with the amount of non-operating income of other banking institutions of a country or different countries of the world appropriate idea about the performance of the banking institutions can be easily found.

**e) Low-cost infrastructure allowing growth**

In each and every single institution in different industries by the growth of the organizations it is very important to grow the infrastructure of the organization in accordance with the demand of the organization (Cramer 1998). For this reason at the time of dealing with the groups of the organization it is very important for the organization to handle the growth and other positive activities of the organization effectively and efficiently at a very low cost for the purpose of making the organization successful (Cramer 1998). By understanding and analyzing the organizations capability to establish Infrastructures at low cost is very important factor for any kind of Banking institutional performance analysis which will give the organization an appropriate idea about the capability of the organization to deal with their growths efficiently or not. For the purpose of finding out the effectiveness of the performance of the business it is very important to know about the capability of the organization to have low cost infrastructure which is very much capable of handling any kind of going pressures of the organization and its business will be a key factor to find out the effectiveness of the performance of the banking institutions (Hempel, Simonson, & Coleman, 1994). Among all other factors, it is somehow very much difficult to compare with others as the structures, capacity, cultures, customer base, and the industrial environment of different banking institutions in different parts of the world or a country can be quite different from each other.

**f) Credit quality**

At the time of providing credit to the customers, there are numerous numbers of different kinds of significant issues are available by which the organization is dealing significantly for the purpose of understanding the capability of the customers to cover up all the amount of the loans before the expiry period of the loans (Hempel et al. 1994). For any banking institution in any country of the world understanding the customers is very important for analyzing the credit quality of the organization efficiently and effectively. To be successful as banking institutions in this highly competitive world of the banking business, providing quality credit facilities to the people who are capable of having appropriate credit facilities is very important for the organization to understand

by analyzing the customers and their characteristics appropriately. There are numerous numbers of different kinds of methods are available for the purpose of providing the credit quality report of the banking institutions for each and every single customer. Standard and Poor's, Moody's are the most popular credit rating methods for any business organization to rank or grade the customers efficiently.

For the purpose of being successful in understanding the performance of the banking institutions of any country of the world it is very important to have knowledge about this key factors which are very much influential in influencing the activities of the business and providing all the necessary ideas about the performance of the business effectively and efficiently for the purpose of making the organization successful by keeping the organization right on the track from time to time by properly tracking the performance of the business from time to time efficiently and effectively.

## **2.2. Financial factor for analysis**

At the time of understanding the financial performance of the banking sector of the country, understanding different kinds of ratios in accordance with the financial performance of different types of banking institutions of a country is very important. Not all the available resources are very much capable of providing necessary information about the financial performance of a banking sector. For the purpose of understanding the financial performance of banking sector, some specific ratios needed to be understood efficiently and effectively. For instance, profitability performance or measurement is one of the most important financial ratios with which an organization has to deal efficiently because it is the ratio which provides the appropriate understanding of revenue and cost of an organization. For the purpose of understanding the performance of banking institutions of a country, it is very easy to measure the profitability ratios of those banking institutions quickly for the purpose of getting a specific or appropriate idea close to the real performance of the organizations (Mazid 2012). These ratios have been taken as one of the basic ratios which have been dealing with the performance of the institutions. Generally, these ratios are needed to be very

much higher in comparison with others to get the appropriate idea of a positive performance of the institutions about which the appropriate understanding needs to be made. By the help of previous year analysis and the analysis among different Institutions of the industries along with the Institutions of other countries profitability ratios can be quite easily measured for having a proper understanding of the performance of the business.

**Return on Assets** is the most common of profitability ratio which provides an appropriate idea about the capability of the banking institution in utilizing the effect of the organization to generating profit. This ratio basically provides information about the capability of the management of the organization about the performance of the business and the management of the organization for the purpose of establishing appropriate utilization of the assets of the organization. This ratio can be increased by the organizations with the help of earning more profits or utilizing more assets efficiently and effectively which results in increasing the asset turnover of the organizations. But due to the availability of different kinds of conditions and competitions in the market, it will be very much difficult for the organization to increase the return on assets ratio easily.

**Return on Equity** is another efficient and effective indicator of financial performance of the banking institutions which provides an appropriate idea about the increase of profitability of the shareholders of the banking institutions of a country in terms of earning more profits by the assurance of proper utilization of shareholders capital. For any kind of business organization especially banking institutions, it is quite easier to increase the performance of return on equity by increasing the amount of debt according to the proper utilization of assets. But there is a trade-off the debt and equity of an organization which may make it difficult for the organization to increase the amount of debt due to the high interest rate (Mazid 2012). So, by the assurance of optimal debt-equity point the proper establishment of return on equity can be insured by the banking institutions of a country.

**Cost income** ratio is another very effective ratio for understanding the performance of any kind of organization in any industry. This ratio helps to find out the capability of the organization in generating profit in spending every single penny. In the banking institutions, the cost has been incurred for the proper utilization of money of other peoples by providing appropriate financial support to others in terms of the loan which creates the gap between revenues and costs of the organization for the purpose of understanding the appropriate capability of the organization in earning more money by the same costs.

At the time of understanding the financial performance of banking institutions of a country, along with the profitability ratios, liquidity ratios are very efficient tools for providing an appropriate idea about the performance of the banking institutions of a country. Generally, it is very important for the banking institutions to have the capability of meeting any kind of financial obligations at a very quick time as they are basically dealing with the most liquid assets for any kind of Organization in any industries which is cash and cash equivalents assets. In this regard, for understanding the performance of the business understanding and getting Idea and knowledge about liquidity ratios of the banking institutions of a country will give the appropriate understanding about the financial performance of the banking sector of a country in providing appropriate service to the customers or not. At the time of dealing with liquidity ratios, firstly, a liquid asset to total asset ratio is one of the most efficient ratios which will give appropriate knowledge and idea about the performance of the organization in meeting up all the future obligations of different organizations or banking institutions of a country. Along with this, Loans to total deposits ratio will provide an excellent idea about the ratio of the organization to give a loan to the customers and take deposits from the customers which give an appropriate idea about the performance of the organization in providing all the necessary financial obligations on time according to the demands of the customers.

So, by dealing with these kinds of ratios appropriate information regarding the performance of the banking institutions of a country can be easily found which will help

the general people to understand the banking performance and the efficiency of the banking institutions of a country (Mazid 2012). Besides, capital adequacy ratios are other very significant and effective measurements of financial performance of banking institutions of a country. Equity to total assets ratio, cost income ratio, loan to asset ratio can be taken as the ratios under capital adequacy ratio.

### **3. LITERATURE REVIEW**

#### **3.1. INTRODUCTION**

In the development of the economy of a country, the roles of financial and non-financial Institutions are very significant. There are numerous numbers of different kinds of financial and non-financial institutions, bank is one of the most significant factor by which the money market of a country can be controlled by the government. For the purpose of the development of the economy, proper control the currency of a country is very important. Bank is the institution that has all the capacity and the factor to control the money market (Rahman 2010). In each and every single country all over the world, the importance of banking institutions at the time of controlling the money market cannot be denied (Ongore et al. 2013). For this reason for the purpose of the development of a country it is very important to understand about the efficiency of the performance of the banking sector of any country of the world. Bangladesh is a developing country in South Asian region of the world. It has a large population base and lots of scope to develop which will be very much handy for the country to develop and established an excellent economy. By the proper utilization of money with the help of banking institutions it will be very much possible for Bangladesh to be successful and become one of the best economies of the world.

#### **3.2. ECONOMY OF FINLAND**

Among different developed European countries, Finland has mixed economy and has similar level of earnings like most of the European countries (Baten, 2016). Service sector is the most developed industry of the economy of this country and this country is generally a highly industrial country (Bradshaw, 2015). The most common organizations of this country are related with manufacturing, electronics, vehicle engineering, forest industry, chemical industry and so on. The country has been declared as the second largest Hi-tech economy in the field of manufacturing and

equipment across the world below Ireland (Baten 2016). To cover up this industry appropriately, there are numerous numbers of different kinds of organizations are working efficiently and the money market of Finland has the responsibility to provide all the necessary financial support some services to these organizations for the purpose of making the organizations work smoothly.

To cover up all the financial activities with the help of money market, Finnish Financial Supervisory Authority takes the parts to establish all the rules and regulations appropriately. The country has around 5,641 branches of cooperative banks (Baten 2016). The Central Bank of Finland is called Bank of Finland. There are several commercial banks and foreign banks are working together for the purpose of established and excellent economy in Finland for the purpose of making the organizations successful in the establishment of organizational goals and objectives in manufacturing and are the different kinds of production sectors.

### **3.2.1. Banking sector of Finland**

In Finland, numerous numbers of banking jobs are working together as cooperative banks for the purpose of the establishment of the money market of the country (Viinikka 2017). Here, OP Financial Group is the largest banking group having around 180 Cooperative Banks helping different types of organizations for the purpose of getting available financial supports at the time of needed (Viinikka 2017). Nordea Finland Group is another banking group has the second largest banking facilities all over the country originated in Sweden. Around 45% of the banking institutions in Finland are originated in foreign market this indicates attraction of the outsiders towards the Finnish to invest due to its prospects in doing well in manufacturing and production sectors. By the help of banking sectors, majority of the bills have been paid by the local people and the organizations with the help of online banking transactions through mobile and Internet. At present, capital adequacy ratio of finish banking industry is around 23.9% whereas the leverage ratio has improved to 5.9% (Toivonen 2017). The operating profit of Finnish banking industry has decreased by 6% due to the availability of zero interest

rate loans and the increase of the amount zero interest rate loans. Due to all of these factors, the return on equity or the profits of the banking institutions are tolerable position which is 8.2% (Viinikka 2017). The negativity in progresses happens in Finnish market due to valuable economic condition all over the world and challenging business environment results in creating numerous numbers of different kinds of organizations and countries competes with Finland in grabbing the market shares of manufacturing and production industries. Besides, negative market rates, very strict rules and regulations, are also very much liable for the vulnerability of banking sector of Finland.

For the purpose of our analysis like the other two countries, Central Bank of Savings Banks Finland PLC, Nordea Bank Finland PLC, Suomen Pankki - Finlands Bank, Union Bank of Finland have been taken as sample from the population of all the banks of Finland to make a better comparison among these three countries to have the appropriate idea about the performance of financial performance or the banking system of Bangladesh (Toivonen, 2017).

### **3.2.2. Banking regulations in Finland**

The activity of credit institutions in Finland has been maintained and established under Act on Credit Institutions (610/2014). In addition with this, the capital requirements and the regulations for understanding the efficiency of credit institutions have been analyzed by several different kinds of rules and regulations such as Act on Commercial Banks and Other Credit Institutions in the Form of a Limited Company (1501/2001), Savings Bank Act (1502/2001, Act on the Government Guarantee Fund (379/1992), Securities Markets Act (746/2012), and so on. The Central Bank of Finland as a regulatory authority of government for the banking sector of Finland is basically doing the following activities primarily for the purpose of the establishment of an excellent banking sector in Finland Monetary policy and research, financial supervision, Banking operations, and Maintenance of currency supply.

### **3.2.3. Banking authorities of Finland**

Generally, the banking system of Finland has been maintained and operated by Finnish Financial Supervisory Authority (FFSA). The establishment of different kinds of acts, rules, and regulations for the purpose of operating the business efficiently in banking sector has been ensured in Finland by FFSA. Besides, numerous numbers of different kinds of European rules and regulations has also been followed by the banking sectors of Finland to increase the prudential of managing the banking sector of Finland successfully. In addition with these, Finnish Financial Ombudsman Bureau (FFOB) is a well-established organization provides all the necessary ideas and advises to the regulatory authorities of banking system of Finland for making the banking sector of this country efficient.

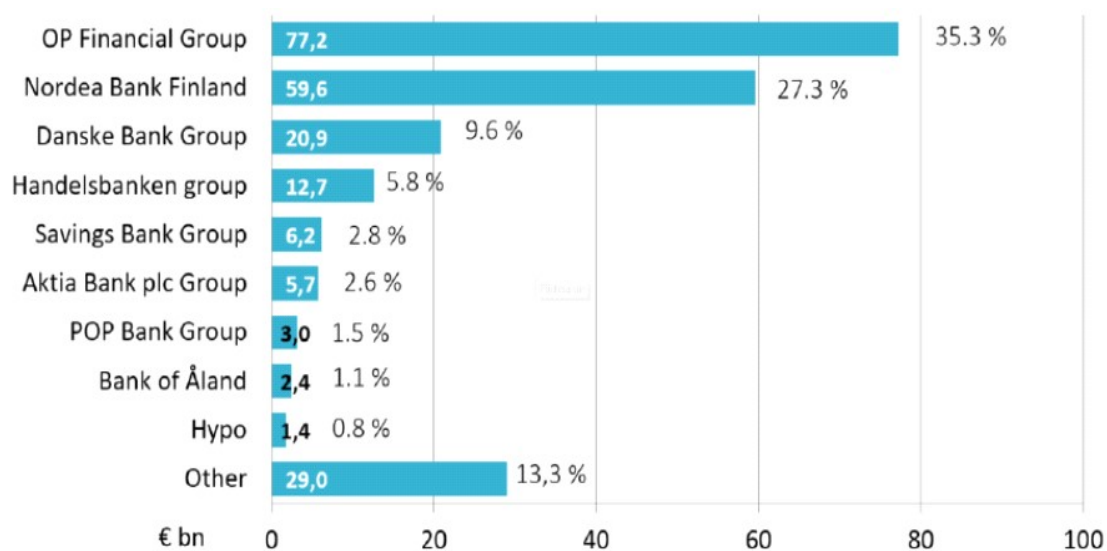
### **3.2.4. Finnish banking sector**

Due to the existence of economic recession in the current market scenario of Finland, the country is facing a huge challenge in activities of its banking institutions. For making the industry and the economy much more active the Finnish Government is taking numerous numbers of economic numerous numbers of different kinds of activities for economic reform. Here, it will be very much needed for Finnish banking institutions to provide all kind of financial supports to the government according to the demands. Although the country has already covered up most of its economic problems started from 2009, it is very important for the country to keep its economy moving towards the appropriate growth rate.

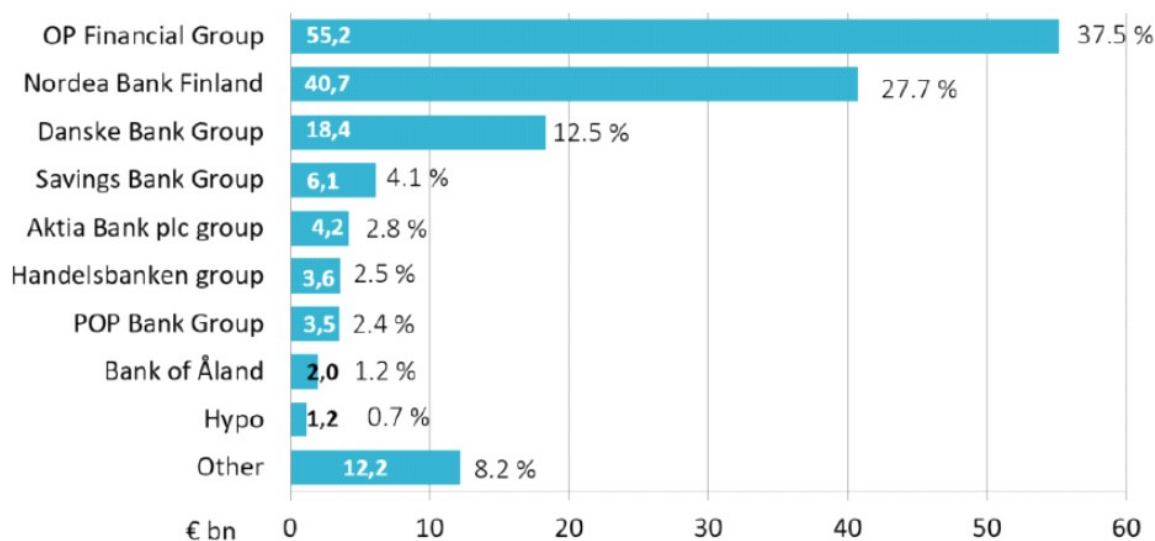
Due to the continuation of zero interest rate economy, the interest income of banking sector of Finland went down by 4% then the previous year. In addition with, the increase in operating costs reduces the operating profits of banking sector of Finland by 2%. Although the country has Finnish banks' Common Equity Tier 1 (CET1) capital

ratio of 21.7% which indicates the country has the most risk bearing capacity among all the countries of Europe.

At present around 274 credit institutions are working in Finland for the purpose of different kinds of financial support to the general people and the organizations who are operating in different industries of the country. The Finnish banking market is dominated by banking group or amalgamation. As per some statistics, the current banking sector of Finland is dominated by 12 banking groups.



**Figure 1.** Credit institutions' non-MFI loans in Finland, market shares.



**Figure 2.** Credit institutions non-MFI deposits in Finland, market shares.

### 3.3. ECONOMY OF CHINA

In comparison with the economy of Bangladesh, China is very large than the economy of Bangladesh (Mazid 2012). It is the second largest economy in terms of national GDP around the world. It is also one of the fastest growing economies in last 30 years. China is one of the mostly develop technological countries of the world (Solomon 2014). People of China have getting all the necessary financial support and services from their banking institutions from time to time. According to recent statistics, bank assets of China grow steadily as per the previous years (Solomon 2014). This happens, due to the fluctuations in the inter-bank assets of the country. But the overall performance of increasing assets in banking institutions of China is good. The rate of loans and advance in the banking institutions of China has increased according to the recent surveys. Reserve of banking institutions of China is 94.3 trillion RMB or \$14.4 trillion in USD which is highest among many countries of the world. All the rules and regulations and activities have been established by the top four banking institutions of China. For the development of the economy of China and to keep the development smooth, china has a strong banking system commanded by People's Bank of China which is the central

bank of china. China has 4 (four) banks in the list of largest bank in the world. They are Bank of China, the China Construction Bank, the Industrial and Commercial Bank of China and the Agricultural Bank of China.

### **3.3.1. Banking Sector of China**

In the recent past, china has a situation of shadow banking that leads the country to a financial crisis or a moment of financial crisis due to the availability of the funds to the general people by the help of other non-banking institutions or the financial firms having lower level rules and regulations but high risks (Wu 2016). These organizations are trying to do some accounting practices by the off balance sheet activities (Bradsher 2012). Due to the availability of shadow banking in the recent past at the highest level in the regulatory loan payment system faces some trouble of not having appropriate number of clients (Solomon 2014). On the other hand, banking authorities of China are recently able to reduce the amount of shadow banking in the economy which makes and creates the pressure on the regulated financial system for the purpose of making the funds available for the general people. But the shadow banking and the reduction of shadow banking reduce the chances of financial crisis in China due to the unethical and illegal uses of money by the people collected from different financial sectors except Banks.

Like the other banking institutions in different countries of the world, banking institutions in China are providing commercial services, different loans and advances from varieties of accounts, different kinds of card facilities, to the general people for the purpose of make the lives easier. Besides, due to the prospects of the economy of the country, numbers of foreign banking institutions are working in China for the purpose of earning profits by providing proper financial services to the organizations (Barboza 2015). Electronic banking is started in China in 1994 with the establishment of Golden Card Project. Presently, the country is offering numerous numbers of different kinds of electronic banking facilities across the country.

China is one of the largest and fastest growing countries of the world deals with numerous numbers of different kinds of development in different industries (Barboza, 2015). To support and cover all the costs of production and operation for the purpose of keeping the general people and the organizations very much capable of going through the operational procedures of the organization efficiently, the money market plays a very significant role. In 1970, at the time of the restructuring of the financial sector of China banking institutions play a very significant role for the purpose of covering the costs of reconstructions.

By the help of these reconstruction procedures, the monopolistic nature of the money market of Chinese industry has been gone in the hand of the governments of China which gives the government of china all the necessary authority and power to control the entire money market condition (Dou & Carew 2016) At present there are around 4 (four) major banks who are basically the policy maker of Chinese banking system working for establishment of different kinds of rules and regulations for the commercial banks of China (Talley 2015). In the past, inter banking activities are mostly taken place among the smaller banks with the larger banking institutions whereas now a days non-financial making institutions at taking loans from the larger Bank for the purpose of covering of the money demands in the shadow banking market.

There are numerous numbers of Financial Institutions are working in China due to the availability of clients for the purpose of providing numerous numbers of different kinds of loans and other facilities for the purpose of earning profits which makes the economy of the country very much diversified in nature and makes other financial organizations to work in this country. For this reason, the varieties of different kinds of banking institutions originated from numerous numbers of different countries of the world have increased at a large number (Jalil, & Feridun, 2011). For this reason, to understand the actual scenario of the banking sectors of China, numerous numbers of different kinds of institutions have needed to be taken for the purpose of getting the actual scenario of the market from different organizational view point.

### **3.4. ECONOMY OF BANGLADESH**

Bangladesh Bank is the central bank of Bangladesh that has all the authority to establish different kinds of rules and regulations along with all the activities to control the money market of our country (Rahman, 2010). Bangladesh Bank has been established as a central bank of Bangladesh in 16 December 1971 by reorganizing the Dhaka Branch of State Bank of Pakistan. The bank has finally come to the recognition by Bangladesh Bank Order, 1972 (Ongore & Kusa 2013). At present, the bank is a member of Asian Clearing Union having activity in green banking, and financial policy development of our country. The most important function of Bangladesh Bank is establishment of price through the establishment of economic and monetary policy (Rahman, 2010). Besides, the bank also takes necessary steps in the development of foreign exchange and reserves of country. This bank only has the capability to issue Bank notes in Bangladesh. In addition with these, the bank also performs the functions like monetary and Credit Policy development, establishment of different kinds of rules and regulations for financial and non-financial institutions, supervision of different kinds of payment systems, work as a Banker of government, establishing rules and regulations against money laundering, finding out different kinds of credit information and establishing numerous numbers of different kinds of rules and regulations in accordance with the information, establishing foreign exchange act, and some other activities (Ongore & Kusa 2013). So, in the performance of the economy of Bangladesh by making the money market working efficiently, Bangladesh Bank plays a very important role for the purpose of making the banking institutions very much aware about all kinds of activities that will give the government and excellent opportunity to control the economy of a country by the controlling the money.

#### **3.4.1. Banking Sector of Bangladesh**

In Bangladesh, there are three basic types of banking institutions of there who are operating their business for the purpose of serving numerous numbers of different types of purposes both for the general people and different kinds of business organizations (Bahar 2009). Private Bank, Government Bank, and Specialized Bank are three basic

types of banks that have been found in Bangladesh. In the development of different kinds of industries these banks are playing very significant and deficient role for the purpose of providing the organizations money from time to time for the purpose of making their operations smooth and easy.

According to recent statistics, around 64 banks are working in Bangladesh. Among these banks, one Central Bank, 6 nonscheduled banks, 57 schedule banks among them 8 banks are specialized banks, 40 banks are private commercial banks, and 9 banks are foreign banks. In different parts of Bangladesh, Bangladesh bank has around 10 branches for the purpose of the establishment of government rules and regulations for money market. For the purpose of the development of the economy of Bangladesh, these banking institutions are working together in controlling the money market of our country in accordance with the scenario of the economy as per the orders of Bangladesh Bank.

By the help of numerous numbers of different kinds of innovation and creativity in providing services to the customers, banking institutions of Bangladesh are providing Quality Services to make the people very much satisfied to get the service they are looking for from different kinds of banking institutions for the purpose of achieving their personal and organizational goals and objectives (Azad 2012). For instance, like the banking institutions in different countries of the world, banks in Bangladesh are providing the service of current accounts by which millions of organizations and customers are capable of doing their banking transactions without having any kind of interest rate. Here a service charge has been taken after every 6 months in most of the banks which is very low in amount for the purpose of providing the customers these types of services. It helps the people and the organizations that are doing services and businesses in different parts and industries to cut down the costs of operating the business or maintaining bank account for the purpose of saving their money.

In addition with this, banking institutions are providing the service of savings account to the customers and different organizations that are capable of transacting more amounts

for the purpose of saving some amount (Azad 2012). For this reason the organization and the general people who have the saving accounts have to pay a limited interest rate and service charges for the purpose of getting appropriate service from the banks in terms of providing appropriate security and safeguard to their accounts and the assurance of having their money back at the time of needed.

Electronic Banking Services is other very significant facility different kinds of banking institutions of Bangladesh are providing to the customers and different organizations for the purpose of making the banking transactions easier for the general people and the organizations as well (Bhattacharya 2003). This is a kind of facilities by which it will be very much easier for the customers and the organizations of different test to get their financial reports of their bank accounts quite easily by the help of Internet and different kinds of online banking facilities.

Besides, the availability of tele-banking makes it also very easy for Bangladesh and its people to make their life much easier than the past. It is a very easy process where by using the mobile phone of the general people in the banking transactions can be made quite easily. Rocket of Dutch Bangla bank is one of the most common of mobile banking system in Bangladesh (Bhattacharya 2003). By the help of these kinds of services, people are getting it quite easier in operating their day to day activities of the business which results in providing all the necessary supports to the organizations of Bangladesh at the time of the necessity of money.

By the help of the establishment of different kinds of banking service in Bangladesh in accordance with the availability and establishment of numerous numbers of different kinds of international banking activities in different banking institutions of Bangladesh, the establishment of efficiency in banking Industries has been made very effectively and efficiently. But there are numerous numbers of different kinds of incidence have been taken place inside the economy of Bangladesh which makes a proper statement in the regulatory authority of banking institutions of Bangladesh about the efficiency of banking system of Bangladesh in different ways. Besides, the availability of different

kinds of services does not indicate the appropriate efficiency of banking sector for any country (Bhattacharya 2003). The proper command and control over the money is one of the most important ideas that the regulatory authority of money market has to establish efficiently for the purpose of providing an efficient and well performed economic system in Bangladesh. In February 2016, there is a large incident of bank robbery of US\$ 2 billion from the account of Bangladesh Bank which has been taken place through international SWIFT Network. A group of hackers made it possible to get the money from the account of Bangladesh Bank which questioned all the security systems of our country and its banking system severely (Bhattacharya 2003). In addition with this, numerous numbers of different kinds of incidents, ATM hacking and some other incidents make it very familiar to the people to question the efficiency of banking institutions in keeping the money safe and secure for the general people and different organizations. So, it is also very much important for our country at present to ensure the security of the funds in all the banking institutions of Bangladesh for the purpose of saving the money of the general people and different organizations of our country.

At the time of finding out the appropriate performance of the banking sector of a country, the safety and security measure of the banking sector of a country is not enough for judging the performance of the business (Ncube 2009). There are numerous numbers of different kinds of factors which are also there which are influencing the performance of the business and which are very much related with the financial operations and activities of the banking institutions for the purpose of achieving different kinds of organizational goals and objectives by establishing customer satisfaction in providing appropriate monetary facilities according to their demands.

At the time of measuring the performance of a bank, numerous numbers of different kinds of financial factors are available which make it possible for measuring the performance of the business of banking institutions for anyone. At the time of understanding the performance of banking institutions in any country of the world, there are no such rules and regulations available for the purpose of making an appropriate judgment about the performance of the banking system (Ncube 2009). This is because

numerous numbers of different kinds of qualitative and quantitative factors are available in the performance of the banking institutions of a country which cannot be measured by any kind of theories or methods. So, the best way to measure the performance of the banking institutions of a country is comparing the performance with the banking institutions of other countries of the world which are very much similar in terms of economy, culture, and some other issues which are very much influential in terms of having appropriate banking operations.

For the purpose of having successful understanding of the performance of banking institutions of a country, there is enough opportunity available for the purpose of understanding the performance of the banking institutions by making proper understanding of different kinds of financial ratios which are very much influential and key indicators of the financial performance of the banking institutions of a country and which are very much comparable to financial Institutions of other countries of the world especially banking (Mazid 2012). At the time of understanding the financial performance with the help of different kinds of financial ratios of a country in comparison with others, the similarity among the financial or the economic structure of the two countries is not always mandatory for the purpose of making better comparison. In this report, for the purpose of understanding about the financial performance of the banking sectors of Bangladesh there are numerous numbers of different kinds of banking institutions have been taken along with some other banking institutions of China and Finland. Before understanding the economic conditions of China and Finland and the banking sectors of these two countries, it is high time to understand the factors that are very much compared in understanding the financial performance of banking institutions of a country in comparison with others.

#### **3.4.2. Types of Banks in Bangladesh**

The present world is having numerous numbers of different kinds of banking institutions in most of the countries of the world. The diversification in the types of banking institutions makes it quite difficult for analyzing the performance of banking

sector of a country in comparison with others (Mazid 2012). Besides the structure of banking sector of a country is quite different from others. Not all the banking institutions are very much influential for the economy and not all the banking institutions are indicating the actual performance of the banking sector of a country. For this reason, understanding about different types of banking institutions will help us to find out the appropriate banking institutions at the time of picking up numerous numbers of different kinds of banking institutions of different types among a large number of banking institutions of our selected countries. Among numerous numbers of different kinds of banking institutions most common of them are discussed in below.

**Commercial Banking:** In most of the countries of the world this kind of banking institution is the most common organization that the countries are having for the purpose of meeting up all the necessary needs of the individuals regarding the financial support for their day to day activities or different kinds of business activities (Mazid 2012). In most of the cases, a large portion of the banking sector of a country is very much influenced by the activities of the commercial institutions for which it is very important to take the performance of commercial banking institutions of a country under consideration for understanding the performance of the banking sector of a country in accordance with others. It will give the opportunity to the researchers to make an appropriate comparison among the banking institutions of different countries of the world quite easily.

**Retail Banking:** Like the commercial banking institutions it is also very much familiar in the banking sector of any country of the world. The basic difference between these two types of Banking activities are the amount of money that has been taken and spending in borrowing and lending activities of the banking institutions (Mazid 2012). In retail banking the amount of money that has been taken from the customers and given to the borrowers of the organizations are very large in comparison with the commercial banking institutions. Like the commercial institutions the retail banking institutions are very much available all over the world for which at the time of make comparison between the banking institutions of different countries of the world these types of

banking institutions can be taken by the researchers for the purpose of having appropriate knowledge and ideas about the banking sector of a country and their performance.

**Investment Banking:** To support the needed financial facilities of the business organizations of different industries investment banking plays a very significant role. For the purpose of being successful as an organization in developing numerous numbers of different kinds of economy the influence of investment banking is very high. Countries like China and Finland who are very much dependent on the establishment of different kinds of economy of the country are needed investment banking facilities which will make it quite easier for the organizations of different industries to have appropriate financial facilities. But in Bangladesh the availability of investment banking is not that much high for this reason it is needed to be escaped at the time of analysis of the research due to the unavailability of this type of banking institution in Bangladesh. In most of the cases, commercial banking institutions and other financial organizations are trying to provide all the necessary supports of investment banking in Bangladesh.

**Central Banks:** At the time of understanding the performance of the banking sector of a country, it is very important to analyses the performance of the central bank and its reserve significantly. The performance of the central bank of a country is very much influential in the operation of all other banks of the country (Mazid 2012). Besides Central banks are the only authority who are basically operating the money market of any country of the world which results in providing appropriate knowledge and idea about the availability of the financial supports for the organizations of different industries by the banking institutions of a country is one of the most significant indicators of the banking institutions and banking service of a country. For the purpose of understanding the performance of the banking institution of any country of the world it is very important to learn about the strengths, weaknesses, policies, procedures and capability of controlling the banking institutions of the central bank of a country. The availability of Gentleman all over the world in each and every single country of the world makes it quite easier to take the central bank as the first choice of the sample for

the purpose of comparing the performance of the banking sector of different countries of the world.

In most of the countries of the world, these types of banking institutions are basically available which results in providing numerous numbers of different kinds of financial support to the people and banking institutions and the organizations of different industries according to their demands (Mazid 2012). For the purpose of understanding the banking performance of a country it is very important to find out the types of Banking institution the country has for the purpose of finding out the same type of banking institutions to make a proper comparison among them for the purpose of make the understanding authentic and deficient enough to predict the appropriate culture of the banking sector of a country.

### **3.4.3. Scenario Analysis of Banking Sector of Bangladesh**

According to the recent statistics, numerous numbers of different kinds of industries are establishing in Bangladesh from time to time (Levin & Rubin 2007). The prospect of exporting is increasing in Bangladesh which results in providing the country and appropriate opportunity to grab for the purpose of establishing its economy with the help of export of different kinds of goods and products in different parts of the world. For covering up these huge demands in different parts of the world about the product of our country which is the result of low cost of production, it is very important to have all the necessary financial facilities to the organizations who are basically dealing with this type of activities both public and private organizations.

To fund this huge market with large prospect it is very important for the Government of any country of the world to provide all the necessary financial facilities to these organizations for the purpose of keeping their activities very much is much in making the organizations successful. This is for the needs of numerous numbers of different kinds of banking institutions are growing in our country day by day (Levin & Rubin

2007). According to recent analysis and survey, in 2017 significant numbers of banking institutions at taken place in the economy of Bangladesh for the purpose of providing the necessary supports of financial services in this highly growing economy which is one of the fastest growing economy of the world.

According to recent news, there are numerous numbers of different kinds of incidents taken place in the banking sector of Bangladesh which is not a very good thing. Central bank robbery, in security in ATM booth, bank robbery, misuse of authority at the time of providing loan, corrupted authorities, intervention of powerful people at the time of taking loan, and so on are most common problems of banking institutions of Bangladesh which is needed to be solved as soon as possible for the purpose of having an excellent economic condition by the help of banking sector of Bangladesh in providing the financial support and services to the people who deserve the service more rather than who have the opportunity to take the service to misuse it.

At the time of analyzing the numerous numbers of different kinds of factors, these qualitative factors and needed to be taken into account to make an appropriate comparison among the safety and security measures of all other countries of the world in the banking sector in accordance with the security and safety measures of Bangladesh and its banking sector (Levin & Rubin 2007). It will give us an appropriate idea about the capability of the general regulatory authority of Bangladesh in the banking sector to give the money of the people very much safe and secure from being misused.

But the establishment of so many banks will result in losing the control over the money market of a country which results in making the availability of money at the highest level and it has become quite difficult for the central bank of a country to control the situation appropriately if it goes out of control (Levin & Rubin 2007). To deal with different kinds of problems that has taken place in the banking sector of Bangladesh, understanding and making proper comparison with the strong banking sectors of the world will give appropriate idea to find out numerous numbers of different kinds of ways and technique to utilize the banking institutions properly and make the money

market very much comfort and efficient to support different kinds of banking institutions or non-banking institutions as well in the development of their business.

After the completion of all the analysis and comparison among the banking institutions of the different countries of the world it is not enough for the researchers to keep themselves satisfied by understanding the present situation of the banking sector of Bangladesh. To support the future development process and to established numerous numbers of different kinds of industries all over the world by the help of appropriate financial support it is very important for the researchers to find out numerous numbers of different kinds of ways to recommend to the appropriate authorities for the purpose of providing all the necessary supports and services to the people who are looking for appropriate financial support to do something better for the economy.

The appropriate uses of different kinds of credit quality and the appropriate use of credit rating policies and procedures is very important for Bangladesh to understand the capability of different kinds of lenders or ball was at the time of taking money or providing money to numerous numbers of different kinds of people at the bank for the purpose of their money safe and Secure and get some profit out of it without keeping them safe by keeping them in the vault for a long time.

For this reason, to provide appropriate idea about the banking performance of our country to the regulated authorities of Bangladesh, it is very important to provide some ideas and recommendations to them for the purpose of analyzing them properly in the development of future rules and regulations in banking institutions of our countries which will give us an opportunity to have an established banking system which provide all the necessary supports to the customers were eligible for having some alone and finding out all the customers who are fraud and have the attitudes to misuse the money of the bank and banking institutions for their own benefits.

The establishment of banking institutions in any country of the world is not a very easy task. The establishment of efficient banking sector is very much difficult in terms of the development or the establishment of Banking Institution in any country (Levin & Rubin 2007). There are numerous numbers of significant roles that have been played by the banking Institution of a country efficiently and effectively for the purpose of shaping the appropriate structure of the economy of a country.

For this reason, proper understanding about the banking and banking institutions of a country will be very much helpful for the decision makers of the countries of the world to have enough knowledge about the recent performance of the banking sectors of a country and take necessary decision about the future business activities and policies and procedures of Banking Institution of a country which will help the country to be more efficient in using the banking institutions of that countries of the world efficiently and effectively for the purpose of the development of the society and economy of that country in accordance with the level of growth.

By the help of this report, we will be able to understand the actual scenario of present economic situation of Bangladesh in the light of the banking sector of Bangladesh which is basically the lifeblood of any economy of all over the world. What the purpose of making the banking institutions successful in providing appropriate financial support to numerous numbers of different kinds of uses it is very important to make the banking institutions very much efficient in accordance with the rules and regulations of the central banks of the country of Bangladesh which is Bangladesh Bank for the purpose of controlling the money appropriately so that the appropriate utilization of money can be ensured.

Corruption in the banking institution especially in the public banking institutions is needed to be reduced effectively which will make the Government of our country very much successful in providing all the necessary financial support to the government related projects and reducing the dependency of the Government of our country over The other banks of our country especially who are working in the commercial sectors (Levin & Rubin 2007). It will give the regulatory authorities of our country an excellent

opportunity to make appropriate rules and regulations for the establishment of banking institutions in Bangladesh so that no banking institution will be able to take any kind of insignificant decisions against the development of the economy for the purpose of earning more profit unethically or illegally.

By the establishment of strong Government free from any kind of corruption, the appropriate utilization of banking institutions of a country can be easily ensured without having any kind of trouble. In this regard understanding about the performance of banking sector of a country like Bangladesh is very important (Levin & Rubin 2007). It will help the government of a country to understand and learn about the present banking situation and take some appropriate knowledge and idea about reconstructing the policy and procedures of the activities of the banking sector of a country for the purpose of reforming the banking sector efficiently and effectively for the purpose of helping the economy of a country like Bangladesh to grow in accordance with the expectations and prospects.

## 4. DATA AND METHODOLOGY

After reviewing of bank overview and theory regarding bank performance, this part includes the part of thesis where bank performance, bankruptcy, and more precisely bank profitability and bankruptcy, is studied empirically. Research methodology is defining step by step guideline about the procedure of conducting the research. For example it includes defining the nature of data, nature of research, sources of data, formulating data analysis model and so on. Thus the methodology of this report discuss in this chapter.

The empirical analysis is based on an international sample from three different countries for the period from 2000 to 2017. The main data source is Bankscope, which provides information on statements of banks, and the nature of ownership of bank. To create time series information on the ownership of banks, I use Bankscope portfolio starting from 2000 and Fitch Connect Data Services(FCDS) for recent years. In addition, I use a different website to collect annual report to classify the nature of ownership of bank including Fitch Connect Data Services(FCDS. To make this study valid and reliable, population of the data is all the listed banks operating in Finland, China, and Bangladesh. Thus, a bank is defined correctly based on the structure of bank. Because the banking structure of Finland, China, and Bangladesh is quite different. Finland and China are well-structured banking industry in the Europe and Asia respectively whereas the Bangladeshi banking industry is still developing after the independence of Bangladesh.

The motivation of the study is to examine bank profitability and bankruptcy. The commonly used performance metric to measure bank profitability is return on equity (ROE) and return on an asset (ROA), Return on equity is defined as profit after tax divided by equity whereas return on assets is the ratio of profit after tax and total assets. The first part of analysis is based on panel regression, extending the time from 2000 to 2017, where includes bank performance in three countries specially determining bank profitability in Finland, China and Bangladesh.

In the second part of the analysis Altman-Z score has been presented. This model presents the probability of a company being bankrupt can be assessed and evaluates financial environment of Finland, China, and Bangladesh.

#### **4.1. Research Type**

It is already known that research can be categorized from different perspective. In this section, category of this report among the available category of research will be discussed.

This report is quantitative research. Because it involves calculation of mathematical and numerical data. In this report Altman Z-Score and Hypothesis test will be presented. These two analysis will make this report as quantitative research.

This research will be considered as basic research. Because basic research is conducted to acquire, improve, gather knowledge. It is conducted for human welfare not to find solution of any problem. In in other words it is called as pure research.

#### **4.2. Types of Data**

Mainly there are two types of data used in any research; Primary data and secondary data. In this report secondary data will be used. Data will be collected from journal, newspaper, articles, banks' annual reports, government statistics etc. Besides data will also be collected from Fitch Solutions and Bank scope website.

#### **4.3. Panel Regression Analysis**

Panel regression analysis is the widely used method for determining bank performance. Staikouras & Wood (2003), Athanasoglou et al. (2006) and Pasiouras & Kosmidou (2007) studies are used panel regression method.. For this reason, the study of analysis has chosen panel regression model. Data which is provided for this report, that are appropriated for panel regression model. To elaborate Ordinary Least Square Method (OLS) method presents here. To determine whether the presented model is consistent or

not, these two model are used. The time from 2000 to 2017 is being chosen for the analysis.

Generally the study has chosen certain financial ratios and which measure banks profitability as dependent variables. After that the study compare how other financial ratios or indicators are associated with them. Return-on-Assets and Return-on-Equity are so common measures of bank profitability in existing literature. ROA is used for instance by Pasiouras & Kosmidou(2007) and Staikouras & Wood (2003). And for ROE is used by Goddard, Liu, Molyneux and Wilson (2011). Both ROA and ROE are used for example by Athanasoglou, Brissimis & Delis (2008), Dietrich & Wanzenried (2011) and Kanas, Garcia-Herrero, Gavila & Santabarbara (2009) Vasilou and Eriotis (2012).

### **Dependent variables**

It is already mentioned that bank profitability has been calculated for three different countries. In fact ratios which measure the profitability of a bank are selected as independent variables. Return of Asset and Return of Equity ratios are chosen as a dependent variable. From the list of numerous profitability ratios a bunch of important ratios are taken into consideration.

**ROE** can be calculated by dividing net income with total average equity. It is an important measurement of profitability measured in relation with equity. One of the important consideration is that the amount of capital influence the return from equity. If return does not change, the greater amount of capital causes to decrease the ROE and vice verse is also true. It is obvious that after the crisis period, regulation has been made strict to prevent further crisis and for this reason the ratio after crisis period is expected to increase. But all other underlying determinant need to be considered.

**ROA**, Second dependent variable is Return on an asset or ROA. It is calculated as net income divided by total average asset. This ratio combining with ROE has become an important tool to measure profitability. Return on asset measure the profitability

generated from using asset while ROE measures the profitability in equity capital. (Dietrich & Wanzenried 2011)

Using these two ratios to determine bank profitability is not new. From determining Swiss bank performance up to recent financial crisis has been measured using this method Dietrich & Wanzenried (2011). Greek bank performance has been determined for the year 1985 to 2001 Athanasoglou et al. (2008). For determining Asian bank performance Lee & Hsieh (2013) used these variables to measure bank profitability.

### **Control Variables**

To measure the variation in the dependent variables, nine independent variables as chosen as control variable in the regression model. These variables are already used in different empirical studies. These variables reflect different important determining factors in bank performance.

**SIZE** is calculated as taking log of banks' total asset. The amount of total assets are different for different banks, that's why log of total asset is needed to calculate. Consequently asset size among different banks become comparable in a common ground. Sample banks chosen in this study show difference in asset size though category of the banks focused on large and systematically important banks. Empirical literatures showed conflicting result so expected behavior of these variables remain unclear for both pre crisis and post crisis period. The SIZE variable uses from the study Barros et al.(2007), Pasiouras & Kosmidou(2007) and Fahlenbrach et al.(2012).

**CAPITAL**, The ratio of equity capital and total asset determines the CAPITAL in asset. It is interpreted as how much equity capital is backed by the asset of the banks. Alternatively Tier-1 ratio could be chosen as the capital to profitability ratio mentioned in empirical studies. But more detailed data can be found about equity to total asset ratio in Bankscope and consequently this ratio has been chosen over Tier-1 ratio. Capital is expected to affect bank profitability positively in pre-crisis period while according to

empirical evidences the movement of this variable during crisis period is not clear. For this reason expected movement of this parameter cannot be predicted in advances. The variables appears in studies by Staikouras & wood (2003), Garcia Herrero et al. (2009), and Athanasoglou et al. (2008).

**CREDIT** simply denotes as the ratio of loan loss reserve to loan which measure the credit risk. In other words it means the strength or capability of the bank to absorb the loss of the non-performing loan. Risk is determined as the chance of losing profit and it is always negatively correlated with bank performance. For this reason it is expected that this variable will show negative impacts over bank profitability for both of the pre-crisis period and for post crisis period. Studies by Athanasoglou et al. (2008), Dietrich & Wanzenried (2011) use this variables in their studies for instance.

**LIQUIDITY**, liquidity risk or the chance of losing liquid asset is denoted as liquidity in this report. It is calculated by the ratio of liquid asset to deposit of the bank. Empirical studies did not find any consistent result with each other because those studies were not conducted based on earlier studies. For example Fahlenbrach et al.(2012) use the variables in their studies.

**INCOME**, How many portions of income is generated from non-interest earning source is being calculated by INCOME parameter. It is found by the ratio of Non Interest Income to Total Income. Earlier studies showed the positive correlation of this variable with bank profitability and so it is expected that during pre crisis period and post crisis period this ratio will show a positive correlation with bank profitability. Fahlenbrach et al.(2012) also use Income variables in their studies.

**GROWTH**, The growth of gross loans is denoted in this report as GROWTH used a proxy variable of business growth of the bank. Like liquidity risk, empirical studies of this variable showed conflicting result with bank profitability and for this reason expectation for this variable has not been drawn yet. Fahlenbrach et al.(2012) and Dietrich & Wanzenried (2011) asses the impact of this ratio on bank performance.

**LOAN**, The parameter LOAN is calculated by the ratio of Loan to Total Asset. It reveals the impact of the characteristics of balance sheet to the regression equation. Like earlier variables, empirical evidences did not show any consistent result regarding the relationship between this variable and bank profitability and that is why expectation in this report has been drawn yet. Staikouras & Wood (2003), Barros et al. (2007) and Garcia herrero et al. (2009) use the LOAN variables in their research paper.

**DEPOSIT** is determined by the ratio of retail deposit to Total Asset and it is the second variable which include the impact of balance sheet in the regression model. Empirical evidences showed that these variables had positive correlation with bank profitability during both pre crisis period and the crisis period. So in this study it is expected as a positive correlation with bank profitability. Barros et al. (2007) and Garcia herrero et al. (2009) use DEPOSIT variables in their study.

### **Dummy Variable**

TYPE of the banks are considered as dummy variable in this study and also used as to determine whether this variable affects the bank profitability or not. Empirical researches categories the banks which rely more on interest income as a commercial bank and the banks which rely more on non interest income as investment banks. In this report the dummy variable follows this categorical method.

### **4.4. Altman Z-score Analysis**

To determine the financial performance of a company, accounting and financial ratios can be considered as an important tool. Among these various ratios, Altman Z-Score is used to determine the probability of a company to become bankrupt. In the year of 1968, Altman Edward operated an experiment over bankrupt companies and discovered that some financial ratios actually predicted that these companies were going to be bankrupt. With the combination of these ratios, Altman formulated a formula and

named as a Altman Z-Score which can successfully predict the probability of being bankrupt.

Altman (2000) found that the Z Score model can predict almost ninety percent of the bankruptcy, one year before the event where he took 33 samples of bankrupt and non bankrupt companies. Multiple Discriminant Analysis (MDA) technique, was used to determine the Altman Z Score formula. The variables residing in population which exert impacts over the discerned can be differentiated by the MDA technique. This method is also used to determine which independent variable will be categorized under which category. This method uses a formula like as:

$$Z = V_1(X_1) + V_2(X_2) + \dots + V_n(X_n)$$

Where,  $V_1$  = Weights of the Parameters.

$X_1$  = Parameters. In this case financial Ratios.

Altman successfully categorized the companies having higher probability of being bankrupt and the companies having lower probability of being bankrupt, using this formula. This formula can predict the probability of being bankrupt two years before the actual event.

One of the drawbacks of this method is that the method can not depict specific time where bankruptcy can take place. This method can not be used universally in every situation. But it can be used a very good method for taking precautionary measurement. weights and parameters of the Z Score model are:

$$Z = 0.012(X_1) + 0.014(X_2) + 0.033(X_3) + 0.006(X_4) + 0.999(X_5)$$

Where ,

$X_1 = \frac{\text{Working Capital}}{\text{Total Asset}}$	<p>How much working capital can be generated using total asset is being determined by this ratio. The difference between current asset and current liabilities is known as working capital.</p>
$X_2 = \frac{\text{Retained Earning}}{\text{Total Asset}}$	<p>How much earnings can be generated using total asset can be determined by this ratio. This ratio indicates the ability of earnings to compensate total asst.</p>
$X_3 = \frac{\text{Earning before interest and Tax}}{\text{Total Asset}}$	<p>This ratio is quite similar to the first ratio. But it indicates the ability of generating earnings before interest and taxes using total asset.</p>
$X_4 = \frac{\text{Market Value of Equity}}{\text{Book Value of Total Debt}}$	<p>This ratio indicates the strength of the company in terms of debt repaying capability. It determines the ability of the company to repay the debt using equity capital. Market value of the equity can be found by multiplying the number of share outstanding with the common stock price. Book value of Debt can be found by the addition of current and long term liabilities.</p>
$X_5 = \frac{\text{Sales}}{\text{Total Asset}}$	<p>This ratio measures the efficiency of the management to generate sales using total asset and thus can be called as asset turnover ratio.</p>

## Values and Interpretation of the Z-Score Model:

$Z \leq 1.81$	It indicates high risk for the company. The company may become exposed to bankrupt very likely.
$1.81 < Z < 2.67$	The company is in gray area. Direct conclusion can not be drawn. In this situation, the company will face various financial difficulties that may lead to bankruptcy if proper measurement has not been taken. In this case, various macro and micro economic variables are being considered while evaluating the probabilities.
$Z > 2.67$	Financial conditions is quite sound, the probability of being bankrupt is low.

## **5. FINANCIAL ANALYSIS AND EMPIRICAL RESULTS**

In this section of the report financial performance and bankruptcy analysis of the banking sector of the above-mentioned countries will be presented. To get a comprehensive idea about the financial performance and bankruptcy of these three countries performance analysis through panel regression and bankruptcy test through Alt-Man Z-score will be presented here. Besides, reliability and authenticity will be checked through a hypothesis test. The proper theoretical discussion will be presented in due places. So it is crucial to have a clear concept before delving into quantitative analysis.

### **5.1. FINANCIAL PERFORMANCE ANALYSIS**

In order to gain a more consistent result, the analysis has separated into three different countries, also categorized by using profitability indicator return on assets (ROA) and return on equity (ROE). The first section of the financial performance analysis exhibits the descriptive statistics for the sample including a correlation matrix. The second part includes OLS regression results.

#### **5.1.1. Profitability analysis of Finland**

Table 1. Shows the descriptive statistics of different variables for the empirical analysis for the period of 2000-2017. The values normally differ between different banks and countries, but the most important general observations are as follows. The whole sample for Finland narrowed down to 120 observations for each variable. The profitability of average has positive variables, ROA being 0.26% and ROE 7.26%. Standard Deviation for ROA 0.15% and for ROE 3.64%.

In case of Finnish Banking sector, the scenario is not far different from that of China. Total size of the asset, equity capital and ROA parameters have the least standard deviation among all the parameters. In other words, it implies that these three variables fluctuates least. Apart from this Growth and Deposit parameters are in vulnerable

position because these two parameters fluctuate most. This reflects the inefficiency in managing total asset, total loans and total deposit. Compared to Chinese banking sector, Finland is in weaker position in managing loan. This notion becomes obvious from the earlier descriptive statistics analysis.

**Table 2.** Descriptive statistics in Finland.

<b>Variable</b>	<b>Description</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
ROA	Net Income to Total Assets	120	0.263	0.153	0.02	0.69
ROE	Net Income to Total Equity	120	7.261	3.641	0.28	13
SIZE	Log Total Assets	120	10.766	2.505	4.352	13.15
CAPITAL	Equity to Total Assets	120	4.479	3.837	1.87	19.82
CREDIT	LLP to Gross Loans	120	0.733	0.418	0,89	1.38
LIQUIDITY	Liquid Assets to Deposits +ST funding	120	59.39	60.676	0,529	197.25
INCOME	Total Income	120	38.757	39.806	-52.42	104.02
GROWTH	Growth of Gross Loans	120	14.28	59.26	-100	260.01
LOANS	Loans to Total Assets	120	12.292	10.890	0.02	37.33
DEPOSITS	Deposits to Total Assets	120	7.876	8.318	0.01	21.51

**Table 2.** Correlation matrix in Finland.

<b>Profit ability</b>	<b>CAP</b>	<b>DEP</b>	<b>GRO</b>	<b>INC</b>	<b>CRE</b>	<b>LIQ</b>	<b>LOA</b>	<b>SIZE</b>	<b>ROA</b>	<b>ROE</b>
CAP	1									
DEP	-0.047	1								
GRO	-0.036	-0.501	1							
INC	0.396	-0.777	0.756	1						
CRE	-0.144	0.852	-0.606	-0.788	1					
LIQ	-0.289	-0.86	0.522	0.630	-0.597	1				
LOA	-0.121	0.850	-0.363	-0.738	0.548	-0.796	1			
SIZE	-0.080	0.939	-0.474	-0.818	0.750	-0.869	0.919	1		
ROA	-0.001	0.956	-0.499	-0.783	0.808	-0.859	0.857	0.981	1	
ROE	-0.182	0.932	-0.542	-0.854	0.748	-0.843	0.881	0.970	0.952	1

From the above table it is noticed that all the parameters are correlated with each other both negatively and positively. Capital, Income, Liquidity and Growth are negatively correlated with ROAA and ROE while Income should be correlated positively with ROAA and ROE. This can be happened due to additional cash dividend offering to the shareholders. Besides Liquidity and Deposits are negatively correlated with the parameter of capital. It indicates the inefficient management of capital or liquid fund in productive sector. Credit, Loan and Income are negatively correlated in the correlation table, it indicates that sanctioned loan failed to generate enough profit for the banks. So from this table few sectors which need to be observed prudentially can be identified, those are Income, Loan and Capital.

**Table 3.** OLS regression results in Finland.

<b>Dependent Variable</b>	<b>ROA</b>			<b>ROE</b>		
<b>Control Variable</b>	<b>Coefficient t</b>	<b>t-Statistic</b>	<b>Prob.</b>	<b>Coefficient</b>	<b>t-Statistic</b>	<b>Prob.</b>
C	2.443	5.635	0.1118	41.7807	0.304	0.812
SIZE	0.186 ***	6.533	0.0967	-2.019	-0.225	0.859
CAPITAL	-0.029	4.767	0.1316	-1.318***	-8.576	0.595
CREDIT	0.0167**	2.359	0.015	0,873**	2.571	0.054
LIQUIDITY	-0.083	0.7764	0.1571	0.0085	0.128	0.918
INCOME	0.037***	7.289	0.000	0.204***	8.038	0.000
GROWTH	-4.143	-2.984	0.8564	-0.001	-0.265	-0.834
LOANS	0.0173***	5.607	0.003	0.156***	7.343	0.000
DEPOSITS	0.002**	2.93	0.026	0.441	0.4402	0.736
TYPE-dummy	0.591	4.482	0.139	-17.893	-0.428	0.742
R-squad						
Adjusted R-squared		0.719			0.657	
F-statistic		0.645			0.543	
Prob.(F-statistic)		28..496			13.47	
		0.005			0.008	

\* significant at alfa = 10%, \*\* significant at alfa = 5%, \*\*\* significant at alfa = 1 %.

ROA = 2.44 + 0.185 x Size + (0.026 x Capital) + 0.016 x Credit +( 0.0083 x Liquidity + 0.037) x Income +( 4.143 x Growth) + 0.0173 x Loans + 0.002 x Deposits.

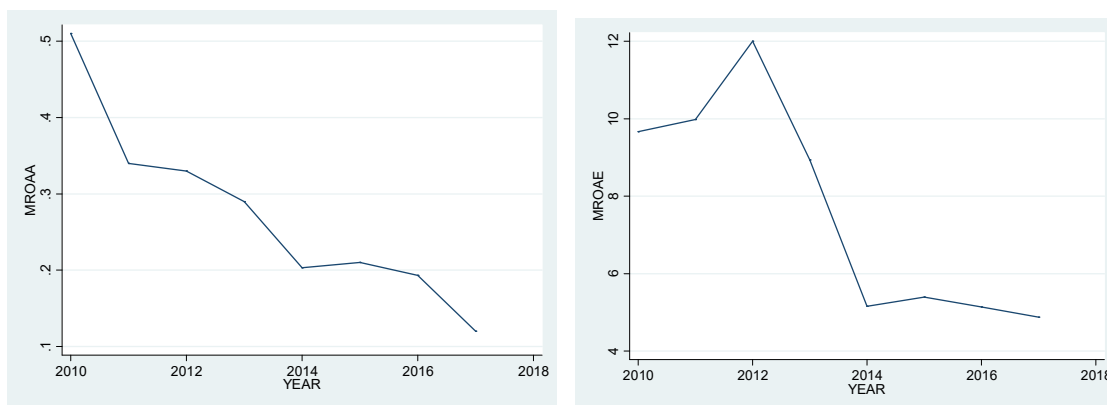
ROE = 41.78 +( 2.019 x Size) +( 1.318 x Capital) + 0.873 x Credit + 0.0085 x Liquidity + 0.024 x Income +0.001 x Growth + 0.156 x Loans + 0.441 x Deposits.

The Variables of the model explain probability that are CAPITAL, CREDIT, INCOME, LOANS and DEPOSITS. All these variables explain both return on assets(ROA) and return on equity (ROE). SIZE only explains ROA and LIQUIDITY, GROWTH and TYPE don not explain probability indicator of ROA and ROE.

The association between CAPITAL and ROE is negatively and statistically significant level on 1%. There has been statistically significant and positive association between CREDIT both ROA and ROE on 5% level. LOANS also correlates positively and statistically on significant level of 1%. Interestingly, DEPOSITS only explains ROA on 5% level.

The results indicate that Finnish banking system has an adverse effect on the asset quality and profitability. The loan process of Finnish banking system increases significantly, although from a low level. Moreover, Increased credit risk costs, high funding costs are responsible to continue on bank's profitability. Also, the results reveal that most of the banks are exposed to liquidity risks. Due to weekend asset management, it seems that income remains under pressure.

From the OLS table it is also obvious that for both of ROA and ROE this OLS model is properly explained by the selected explanatory variables. R square for ROA and ROE are 71.9% and 65.7% respectively. That means with the help of mentioned independent variable, more than 65% of the variation of dependent variable can be explained. In the study of statistics this percentage is quite appreciating. In case of ROA regression line only Growth has negative coefficient which means one unit of loan growth cause 4.143 unit of degradation of ROA, on the other hand Capital and Growth have negative coefficient in relation of ROE. Combining these two equation it can finalized that Finnish banking sector is not efficient in generating profit through extra loan. Adjusted R square for both of the ROA and ROE is below the value of R square which indicates that no additional independent variables need to add in the model for having higher value of R square. As for the accuracy of the model F test has been conducted. With the help of denominator and numeration (df-1) and numerator (df-n-1), tabulated F-statistics can be achieved and it is 1.08 (significance level 0.10). So the Null hypothesis will be rejected. That means independent variables influences to change the dependent variable.



**Figure 3.** ROA and ROE of all banks combined in Finland.

During the same time period ROA and ROE in Finland faced downward growth up to the year of 2014. During that time ROA fell to almost 2% from 5% and ROE fell to almost 4.8% to 12%. This rate of degradation became less afterwards. From the year of 2014 up to the year of 2018 both of the ratios became stable than earlier years.

### 5.1.2. Profitability analysis of China

In the previous section of the report, all the indicators used in this report are discussed. So it will be redundant to explain some parameters again. For this reason only the interpretation of the calculated parameters will be discussed here. From the below table mean value and the standard deviation of all the parameters can be observed easily. It is noticed that mean value of Capital is 16.25 along with 17.28 standard deviation. It implies that China banking sector has shareholder claim over 16% of its' asset on an average. This claim fluctuates around 17% from the mean. Similarly rest of the parameters can be explained from this table. It is obvious that all the parameters except LOANS and DEPOSITS have the greater standard deviation than that of these two parameters. It implies that China banking sector showed stable performance in case of generating loan from asset and of collecting deposits from assets. Apart from these two variables, rest of the variables have higher standard deviation value than its' respective mean values which implies as unsuitability in the indicator.

**Table 4.** Descriptive statistics in China.

Variable	Description	Obs	Mean	Std. Dev.	Min	Max
CAPITAL	Equity to Total Assets	414	16.247	17.27	0.94	98.77
CREDIT	LLP to Gross Loan	414	2.126	2.56	0.55	26.93
INCOME	Total Income	414	31.348	36.91	-205.63	414.29
GROWTH	Growth of Gross Loans	414	14.723	113.82	-100	1488.33
LOANS	Loans to Total assets	414	46.87	20.15	3.0457	93.77
DEPOSITS	Deposits to Total Assets	414	51.545	25.919	0.020	93.4
ROA	Net Income to Total Assets	414	0.49	2.733	-22.77	19.66
ROE	Net Income to Total Equity	414	9.67	16.111	-83.11	102.95
LIQUIDITY	Liquid Assets to Deposits +ST funding	414	86.991	248.78	2.9	3940.23
SIZE	Log Total Assets	414	9.244	3.187	1.21	15.203

**Table 5.** Correlation matrix in China.

Profit ability	CAP.	DEP.	GRO.	INC.	CRE.	LIQ.	LOA	SIZE	ROA	ROE
CAP.	1									
DEP.	-0.337	1								
GRO.	0.062	-0.057	1							
INC	0.140	-0.046	0.043	1						
CRE	-0.005	-0.227	-0.026	0.017	1					
LIQ	0.537	-0.489	0.055	0.195	0.044	1				
LOA	-0.274	0.057	-0.024	-0.247	-0.182	-0.532	1			
SIZE	-0.548	0.321	-0.144	-0.101	0.015	-0.464	0.275	1		
ROAA	-0.221	0.242	0.043	0.061	-0.196	-0.142	0.046	0.287	1	
ROAE	-0.359	0.306	-0.013	0.068	-0.196	-0.198	0.111	0.575	0.775	1

In case of correlation matrix, it is obvious that all the parameters are related with each other either positively or negatively. Capital, Income, Growth and Liquidity are negatively correlated with Asset. That means if asset increases then above mentioned ratio decreases. Liquidity parameter has the most negative correlation with Asset on the other hand Size has the most positive correlation with Asset. Similarly rest of the correlation parameters can be explained. Credit, Loan, Deposit, ROA, ROE, size are negatively correlated with Capital while rest of the parameter are positively correlated with capital. It is an alarming condition for the Chinese banking sector. Because it reflects the inefficiency in capital management. As for the Credit parameter, all the parameters are showing normal correlation. Correlations are showing exactly same direction which should be in relation to Credit with other parameters. So it can be concluded that, Credit management skilled is satisfactory for Chinese banking sector. In the section of Income parameters, it is noticed that Income and deposit are negatively correlated. But income and deposit should be correlated positively. It is happened due the high maintaining cost of the deposit in Chinese Banking sector. Thus Income can not be generated so much though deposit increases. It is expected that ROE, deposit and loan will increase with the increment of capital growth. But in case of Chinese banking sector it is noticed different. It is the resultant of mismanagement of equity capital which is already reflected in the capital correlation. Chinese banking sector are proficient in managing loans and advances. This can be concluded from the Loan correlation with other parameter. With the increment of loan all the parameters showed positive increment in ratios.

**Table 6.** OLS regression results in China

Dependent Variable	ROA			ROE		
	Coefficient	t-Statistic	Prob.	Coefficient	t-Statistic	Prob.
C	0.751	1.477	0.1407	11.543***	3.559	0.004
SIZE	0.128***	3.607	0.0004	2.037***	8.281	4.401
CAPITAL	-0.0137	-1.375	0.1702	-0.164**	-2.444	0.051
CREDIT	-0.104***	-3.099	0.0021	-0.831***	-3.431	0.007
LIQUIDITY	0.0012***	0.741	0.459	0.045**	2.487	0.015
INCOME	0.004**	2.443	0.1501	0.049**	2.358	0.010
GROWTH	-0.002**	-2.521	0.1294	-0.007**	-3.209	0.227
LOANS	-0.002	-0.638	0.7921	-0.023	0.556	0.563
DEPOSITS	0.009*	1.902	0.0582	0.084**	2.569	0.017
TYPE-dummy	0.185	1.063	0.2888	0.791	0.653	0.514
R-squared						
Adjusted R-squared	0.159956			0.361812		
F-statistic	0.134153			0.342209		
Prob.(F-statistic)	6.199026			18.45691		
	5.22			2.73		

\* significant at  $\alpha = 10\%$ , \*\* significant at  $\alpha = 5\%$ , \*\*\* significant at  $\alpha = 1\%$ .

ROA = 0.751 + 0.128 x Size +( 0.0137 x Capital) +( 0.104 x Credit )+ 0.0012 x Liquidity + 0.004 x Income +( 0.002 x Growth) +(0.002 x Loans) + 0.009 x Deposits.

ROE = 11.543 + 2.037 x Size +(0.164 x Capital) +( 0.831 x Credit) + 0.045 x Liquidity + 0.049 x Income +( 0.007 x Growth) + 0.023 x Loans + 0.084 x Deposits.

The variables of the model what explain the profitability of the sample banks are SIZE, CREDIT, LIQUIDITY, INCOME, GROWTH and DEPOSITS. All of this variables determine return on assets and return on equity. On the other hand, LOANS and

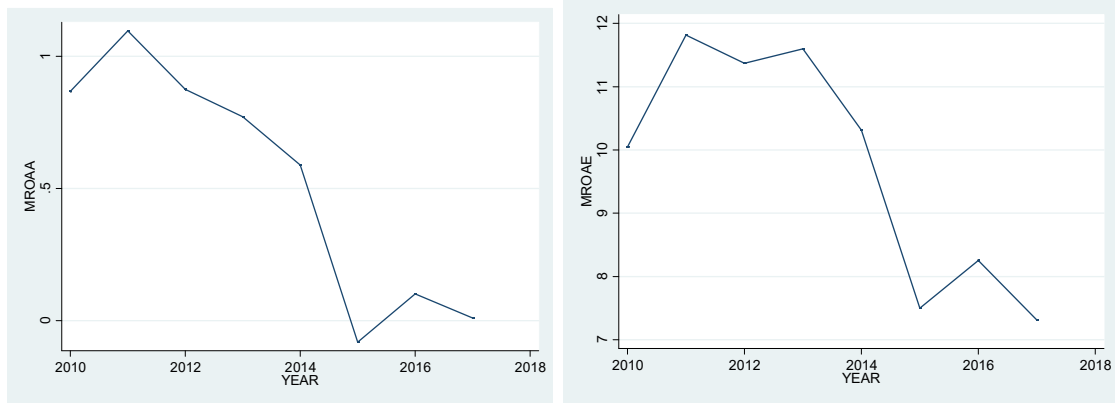
CAPITAL do not explain ROA and LOANS explains ROE. Dummy variable TYPE also does not support both ROA & ROE.

Interestingly, total log of assets SIZE is positively and statistically associated with both of ROA and ROE at significant level of 1%. The association between CAPITAL and ROE is negative and statistically significant on 1% level. There has been negative and statistically relationship between CREDIT, GROWTH and ROA, ROE 1% and 5% accordingly. The association between DEPOSITS and ROA is weaker which is 10% significance level. But in case of ROE DEPOSITS variable stronger.

The results indicated that credit risk and insolvency risk significantly influence profitability of Chinese banking industry, specially the high level of competition in the age globalization leads to lower profitability in banking industry and cost efficiency is positively related to bank profitability, it also predicts that lower profitability can also be explained by higher taxes. It is noticeable that there is negative relationship between growth and bank profitability.

From the OLS table, it is also noticed that with the help of the mentioned parameters the independent variable ROA and ROE can be explained respectively 16% and 36%, since the value of R square are 0.1599 and 0.3618. But these explanatory variables are sufficient for the model as the value of adjusted R square indicates. From the coefficient table it is obvious that Capital, Credit and Loan decreases 0.133 unit, 0.104 unit and 0.002 unit respectively with the one unit increases of ROA. On the other hand the dependency among the explanatory variable and ROE are same except Loans and ROE. ROE increase one unit if Loans increases as 0.5756 unit. 1.051 and 17.5143 are the value of constant which means without having the influence of any other independent variable ROA and ROE will increase 0.751 and 11.543 unit. Finally hypothesis testing is conducted through F-test which measure the joint dependency of the dependent variable over the independent variables. With the denominator (df-1) and numerator (df-n-1) the F tabulated value can be calculated. Tabulated F value become 1.08 (significance level 0.10). Since Calculated value exceed the tabulated value then Null

hypothesis will be rejected. So it can be concluded that independent variables cause change in the value of dependent variables.



**Figure 4.** ROA and ROE of all banks combined in China.

Above pictures depict the trend of ROA and ROE over the period in China. From the graph it is obvious that both the ratios are presenting almost similar trend over the period. From the period of 2010 to late 2012, both of the ratio was increasing, this increment continues up to the year of 2014 with slight degradation. Then from the year of 2014 to 2015 massive downfall occurred though after the year of 2015 both of the ratios began to increase.

### 5.1.3. Profitability analysis of Bangladesh

Table 8, we can see that parameter statistics are fluctuating like other two countries. Here mean value means average achievement of this particular parameter and standard deviation is the fluctuation around the mean value. From the observation, we can see that growth of gross loan has the highest fluctuations around the mean value. It is easily predicted. Due to the excessive bureaucracy and corruption growth of gross loan fluctuates more. Apart from this rest of the parameters fluctuates more or less. Besides Deposits and Loans have the highest mean value among all the parameters. It indicates the efficiency of Bangladesh banking sector to generate loan and deposit from total asset. Consequently it increases the profitability if properly managed.

**Table 7.** Descriptive statistics in Bangladesh.

Variable	Description	Obs	Mean	Std. Dev.	Min	Max
CAPITAL	Equity to Total Assets	136	12.127	13.448	-24.95	51.48
CREDIT	LLP to Gross Loans	136	5.585	5.491	0.07	21.57
INCOME	Total Income	136	47.818	37.202	-15.82	271.54
GROWTH	Growth of Gross Loans	136	18.043	47.58	-100	87.06
LOANS	Loans to Total Assets	136	52.925	23.991	1.32	81.87
DEPOSITS	Deposits to Total Assets	136	68.670	23.391	0.346	100.73
ROA	Net Income to Total Assets	136	1.252	2.819	-15.75	5.5
ROE	Net Income to Total Equity	136	13.328	11.855	-15.7	46.46
LIQUIDITY	Liquid Assets to Deposits +ST funding	136	25.692	14.360	7.2	62.08
SIZE	Log Total Assets	136	22.937	2.567	18.279	26.543

**Table 8.** Correlation matrix in Bangladesh.

Profitability	CAP	DEP	GRO	INC	CRE	LIQ	LOA	SIZE	ROA	ROE
CAP	1									
DEP	-0.244	1								
GRO	-0.105	0.247	1							
INC	0.25	-0.34	-0.28	1						
CRE	0.845	-0.104	-0.022	0.205	1					
LIQ	0.558	-0.233	-0.179	0.025	0.372	1				
LOA	-0.564	0.868	0.254	-0.46	-0.436	-0.434	1			
SIZE	-0.547	-0.418	-0.097	0.03	-0.504	-0.478	-0.086	1		
ROAA	0.41	0.008	-0.074	0.034	0.167	0.429	-0.229	-0.197	1	
ROAE	-0.059	0.11	-0.06	-0.214	-0.177	0.186	0.052	0.077	0.812	1

Correlation matrix reveals the inter-relationship or the direction of changes between the variables. From the above table, correlation among the parameters can be determined. If all the parameters are compared with the Asset parameter, it become prevalent that all the parameters are correlated negatively with Asset except Income. It is unusual for any country. But it reveals the utmost unprofessional ism in managing banking industry. It reflects the inefficient economic condition. Apart from the first parameter, correlation parameter for the rest of the parameters are not different from that. Beside if we look into ROA and ROE correlation that it is revealed that ROA is positively correlated with Capital, Credit, Income and Deposit. It indicates that the industry can generate profit through capital but not from the loan. On the other hand, ROE is positively correlated with Loan, Deposit and ROA. But ROE should be positively correlated with Equity capital.

**Table 9.** OLS regression results in Bangladesh.

Dependent Variable	ROA			ROE		
	Coefficient	t-Statistic	Prob.	Coefficient	t-Statistic	Prob.
C	0.796	0.8961	0.374	13.83 ***	3.034	0.000
SIZE	-0.538***	-6.224	0.000	-9.919***	-9.772	0.0000
CAPITAL	0.135***	4.257	0.000	0.623 **	2.827	0.074
CREDIT	0.232**	2.668	0.0103	0.83	0.836	0.407
LIQUIDITY	-0.024***	-13.774	0.000	-0.174***	-11.266	0.000
INCOME	-0.009	-1.163	0.2504	-0.083*	-1.894	0.0649
GROWTH	-0.0024	-0.1819	0.8564	-0.027	-0.4063	0.6865
LOANS	-0.081**	-2.105	0.004	-0.542**	-2.666	0.0108
DEPOSITS	0.082**	2.559	0.016	0.546***	3.188	0.0027
TYPE-dummy	0.048	0.051	0.051	15.06***	15.064	0.0095
R-squard						
Adjusted R-squared		0.607			0.426	
F-statistic		0.535			0.306	
Prob.(F-statistic)		8.417			3.55	
		0.005			0.002	

\* significant at  $\alpha = 10\%$ , \*\* significant at  $\alpha = 5\%$ , \*\*\* significant at  $\alpha = 1\%$ .

From the above table, value of constant and coefficient of the regression can be found. Thus regression equation can be formulated.

$$\text{ROA} = 0.796 + (0.531 \times \text{Size}) + 0.135 \times \text{Capital} - 0.232 \times \text{Credit} + (0.024 \times \text{Liquidity}) + (0.009 \times \text{Income}) + (0.0024 \times \text{Growth}) + (0.081 \times \text{Loans}) + 0.082 \times \text{Deposits}.$$

$$\text{ROE} = 13.83 + (9.91 \times \text{Size}) + 0.623 \times \text{Capital} - 0.83 \times \text{Credit} + (0.174 \times \text{Liquidity}) + (0.083 \times \text{Income}) + (0.027 \times \text{Growth}) + (0.542 \times \text{Loans}) + 0.546 \times \text{Deposits}.$$

**Table 10.** Comparative OLS regression results summary.

Variable	FINLAND		CHINA		BANGLADESH	
	ROA	ROE	ROA	ROE	ROA	ROE
SIZE	(+)***	no	(+)***	(+)***	(-)***	(-)***
CAPITAL	no	(-)***	no	(-)***	(+)***	(+)***
CREDIT	(+)***	(+)***	(-)***	(-)***	(+)***	no
LIQUIDITY	no	no	(+)***	(+)***	(-)***	(-)***
INCOME	(+)***	(+)***	(+)***	(+)***	no	(-)*
GROWTH	no	no	(-)***	(-)***	no	no
LOANS	(+)***	(+)***	no	no	(-)***	(-)***
DEPOSITS	(+)***	no	(+)*	(+)***	(+)***	(-)***
TYPE	no	no	no	no	no	(+)***

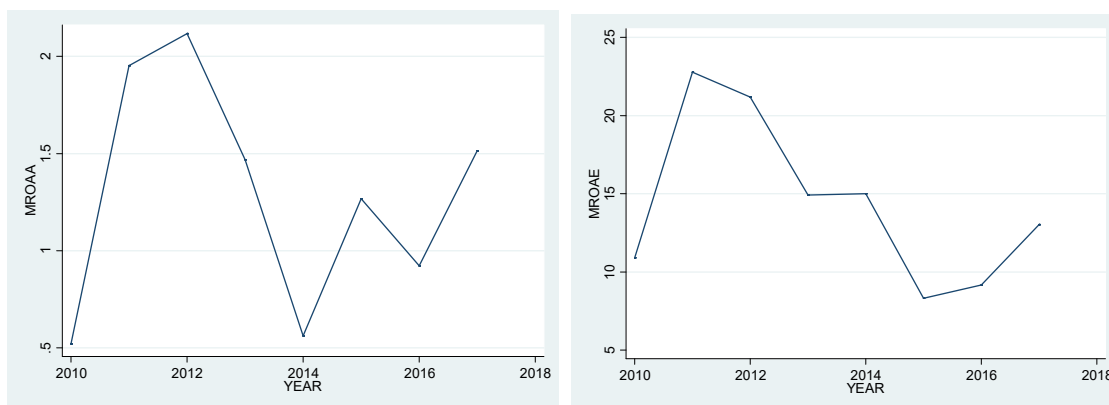
Impact: (+), (-) or no (no effect), \* significant at  $\alpha = 10\%$ , \*\* significant at  $\alpha = 5\%$ , \*\*\* significant at  $\alpha = 1\%$ .

In table 11, the most variables of this model in profitability sample differs from other countries model. SIZE, CAPITAL, LIQUIDITY, LOANS DEPOSITS and TYPE-dummy explain profitability model of ROA and ROE with exception that CREDIT only explains ROA. According to the results, INCOME, GROWTH do not explain profitability of dependent variables.

Interestingly, There is a negative association between SIZE and ROA, ROE which is also statistically significant on 1% significant level. In the same way LIQUIDITY is

also negative and statically significant on 1% level. There exists sadistically significant positive association between CREDIT, DEPOSITS and the dependent variables, for both ROA and ROE on 5% and 1% level respectively.

The results indicates nonperforming loans, bank size and liquidity has significant negative effect on both ROA & ROE, while non traditional activities measured by deposits has positive effect on both ROA and ROE. It is also obvious that no significant impact of the macroeconomic variables-rate of growth of real GDP and inflation rate included models on profitability. Looking into that equation, easily value of that equation can be interpreted. 0.796 unit and 13.83 unit are the value of constants, which means if no changes occur in independent variable ROA will increase 0.796 unit and 13.83 units for ROA and ROE respectively. Consequently rest of the parameter coefficient can be interpreted in similar way. It is obvious that growth and income cause the ROA to decrease while income, growth and loan cause the ROE to decrease. R square for both ROA and ROE are 0.607 and 0.426. These values of R square are acceptable. This notion is being proved by the value of adjusted R square. Adjusted R square for both of ROA and ROE remain below the value of R square. It indicates that no additional independent variable need to add in the model. If any new variable is added in the model, the model will not produce any better result. Finally with the help of denominator (df-1) and numerator (df-n-1), joint influence of the model can be tested. The F statistics are 8.417 and 3.55 for ROA and ROE and the tabulated F value are 1.08 (significant level 0.10). Thus Null hypothesis will be rejected. Here predefined Null hypothesis was that "there is no significant relationship between the independent variable and dependent variable" and it becomes rejected. So it can be concluded that independent variables significantly influenced to bring changes in dependent variable.



**Figure 5.** ROA and ROE of all banks combined in Bangladesh.

ROA and ROE of Bangladesh showed unusual pattern than that of the two countries. Both of the ratios fluctuates more than that of two countries. This ups and downs is interpreted as the political unrest and corruption in the economy. Economy of Bangladesh is inefficient which means a group of people control the whole economy. That's why most of the return derived from the economic transaction goes to very few individuals. Consequently total average return in the economy become drastically low. In last couple of years banking sector of Bangladesh has faced crucial economic crisis. Few financial scandal has brought into light. As a result economy faced liquidity crisis. Few banks become bankrupt including one of the state owned government banks. This notion is being reflected in the downward trend of ROA and ROE ratio after the year of 2014.

## 5.2. BANKRUPTANCY ANALYSIS

Altman-Z score: Altman; Professor of school of business of New York University formulated a financial model through which the probability of a company of being bankrupt can be assessed. This formula can be used additionally in case of a financial environment of a country. This model is known as Altman Z Score model.

Altman-Z score model is established upon five accounting formulas. These five accounting formulas predict five different components of financial health of an organization.

Formula	Prediction
Working Capital/Total Asset ( $T_1$ )	Relative Liquid Asset
Retained Earnings/Total Asset ( $T_2$ )	Cumulative profitability
EBIT/Total Asset ( $T_3$ )	Earnings excluding the effect of taxes and leverages
Equity/Book value of Liabilities ( $T_4$ )	Predicts the effect of the decreasing the market value of equity
Sales/Total Asset ( $T_5$ )	Asset Turnover

So to sum up, Altman Z Score formula can be written as

$$Z = 1.2T_1 + 1.4T_2 + 3.3T_3 + 0.6T_4 + 1T_5$$

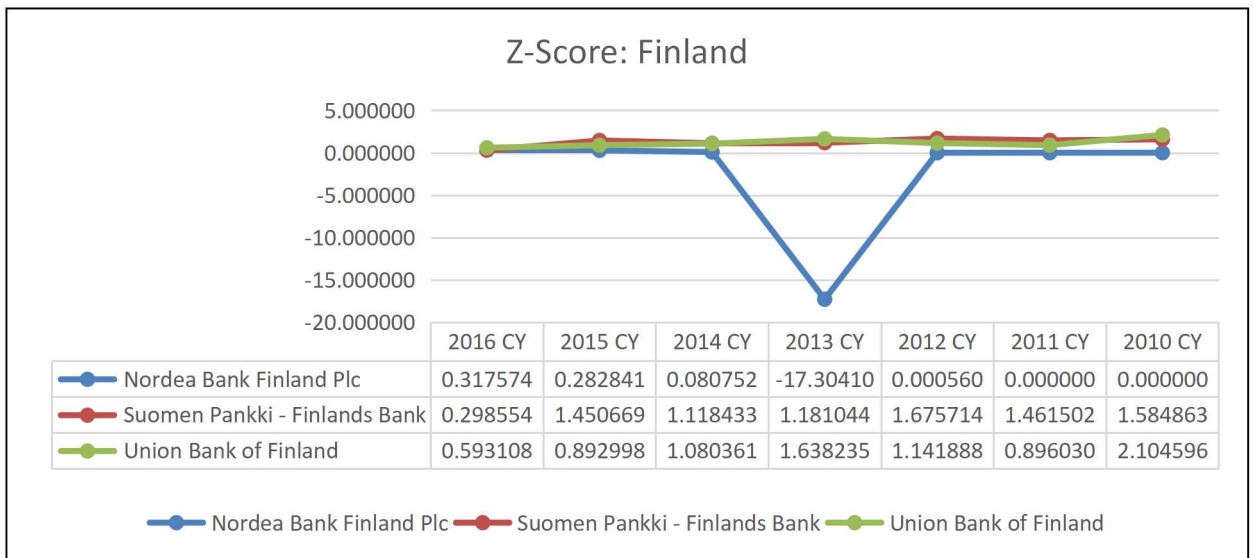
Here, Z score is the sum of the weighted accounting ratios. The sum total of Z score can be interpreted as

Z Score	Interpretation
$Z > 2.6$	Least likelihood of being bankrupt
$1.1 < 2.6$	Gray area, cannot be determined
$Z < 1.1$	Higher probability of being bankrupt

In case of accuracy of this test, this model could produce 72% accurate result in initial stages, but within thirty years of time period accuracy of this model increases. This notion is reflected by the higher accuracy rate of 80%-90% in the year of 1999. Besides having this accuracy rate, hypothesis testing will be presented to show the accuracy of the calculation and interpretation of the analysis will also be presented in due places.

### 5.2.1.1. Altman Z-Score: Finland

Finland is considered one of the most hi-tech countries among the European countries. Due to the availability of the technology based products, this country has expertise in exporting technologies. Finland has a glorious past in manufacturing industries like engineering, telecommunication and technologies. Before the year of 2009, Finland was considered as the best economic giant in European countries. In the year of 2010, due to the efficiency of Banking sector, it minimized the effect of global crisis. For the z score graph it has been selected three banks from 2010 to 2016.



**Figure 6.** Z-Score in Finland.

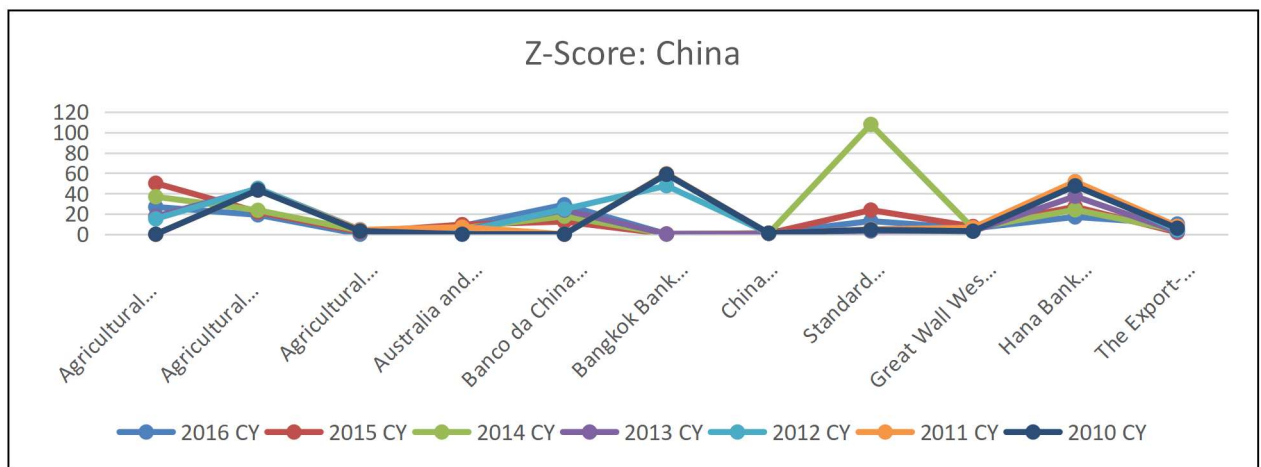
But from the above graph, this positive outlook cannot be extracted. From the graph, it can be seen that autonomous banks are in “Gray Area” position in Z-Score from the year of 2010 to 2015. In other words, it reflects the strong and efficient supervision of the controlling authority over the financial market participants in the financial system.

To sum up, economy of Bangladesh has greater chance of being bankrupt in terms of Altman Z-Score. Almost all types of banks in Bangladesh have Z-score less than 1.1, few types of banks are in gray area and very few banks are in safe position. On the other hand, in Finland autonomous banking industry is in safe position, they have Z Score

more than 2.6. In china almost most of the categories of the banks are in safe positon except very little segments of universal commercial banks.

### 5.2.1.2. Altman Z-Score: China

The banking sector of China is one of the largest sector in the world, in connection the economy of China is also one of the ten largest economy in the world. This beautiful notion is also reflected in the Z-Score scenario of China.

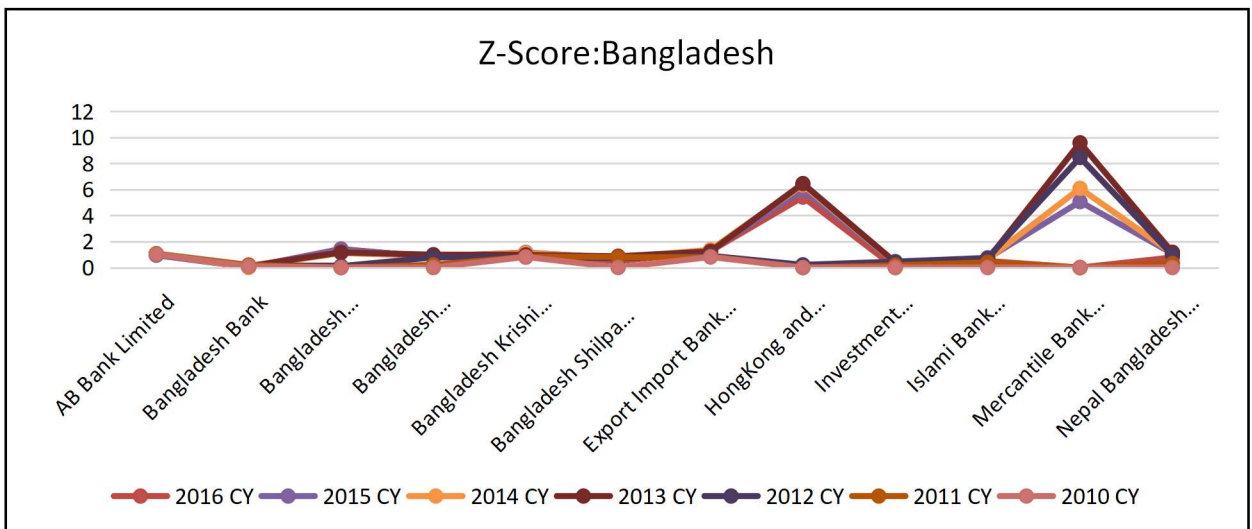


**Figure 7.** Z-Score in China.

It is obviously noticed that only some of the development banks and universal commercial banks were performing below the risk level of being bankrupt. From the above mentioned graph it is clearly understood. Almost all of the categories of the bank have much higher value than having the probability of being bankrupt. During the time period from 2010 to 2016, it fluctuates sometimes but rarely decreased below the risk level of being bankrupt. It becomes possible due to the largest size of the banking sector of the country. Because China exports its products almost all around the world. That's why this country can achieve economies of scale due to larger scale of production. Since China has to produce much goods because of import demand, economies of China successfully creates employment and production in the economy. Consequently it increases GDP, NNP and other economic indicator.

### 5.2.1.3. Altman Z-Score: Bangladesh

When we deeply look into Z-Score of Bangladesh financial system, it is obvious that some of the universal commercial banks and development banks only have the least probability of being bankrupt. On the other hand, Trading and investment banks and Islamic banks could not be able to show satisfactory Z-score. None the less, universal commercial banks could not show least likely probability of being bankrupt persistently. In the year from 2013 to 2016 it shows satisfactory Z-Score. Besides some of development banks and universal commercial banks reside in gray area in Z-score model. It became possible due to nature of the financial system of Bangladesh. In Bangladesh government sectors are the most corrupted in the total economy. That's why only universal commercial banks showed the positive Z-score model. But in would not be able to continue its positive Z-score because of the intense bureaucracy and corruption. It can be noticed by observing the data of ICB from the year of 2010 to 2016. Apart from this another noticeable point is that all the banks faced most fluctuations in the year of 2013 compared to other mentioned year. Because of political unrest in the year of 2013, this fluctuation occurred.



**Figure 8.** Z-Score in Bangladesh.

In the year of 2013, several terrorist attacks happened in Bangladesh. Besides some of the war criminals have been executed. These events significantly influenced the financial sector of Bangladesh.

### 5.2.2. Hypothesis Test

Before presenting Test of Hypothesis, it will be helpful to present simple variance analysis. For simplicity five accounting ratios are considered as independent or explanatory variables and Z-Score is considered as dependent variable.

**Table 11.** Analysis of Variance (ANOVA).

Country		2017	2016	2015
Bangladesh	SSR	21.794	36.132	49.652
	SSE	1.518	2.174	0.0055
China	SSR	843.521	2526.25	10121.4
	SSE	56.824	0.014	0.005
Finland	SSR	0.0543	0.682	0.692
	SSE	0	0	0

Analysis of variance is an important component to measure the nature of the variance occurred in the sample. SSR implies as sum of square due regression while SSE implies as sum of square due to error. If SSR exceeds the value of SSE, then it can be concluded that the variance in statistics is occurred due different sample selection but not for statistical error. From the above table, we can notice that for all countries SSR exceeds the value of SSE for all three years. So it can be concluded that the variation in the statistics is occurred due to sample variation, In other words, it indicates the correctness of the model.

I have decided to conduct hypothesis test to evaluate the relationship found in Altman Z score. It is very essential tool to assess the accuracy of mathematical model. From the

formula of Altman Z-score, relationship between the probable level of bankruptcy and the five accounting parameters has been established. But whether the relationship already build up is really true or not can be assessed by hypothesis testing. Thus no mathematical model is said to be completed without hypothesis testing.

Simply Hypothesis Testing implies as a process of determining whether the hypothesis is a reasonable statement or not. Broadly hypothesis testing or significance testing is a method for testing a claim or hypothesis about a parameter in a population, using data measured in a sample.

From F-table, we can find tabulated F-Statistics. Combining altogether degrees of freedom 5 and 6, significance level 0.025, we find table value as 4.39. As degrees of freedom and significance level are same for all three countries, so tabulated value will be same for the all the countries.

**Table 12.** Hypothesis Testing.

Country	year	F Statistics	Decision
Bangladesh	2017	2.722	Accept the Null Hypothesis
	2016	1.94	Accept the Null Hypothesis
	2015	1.083	Accept the Null Hypothesis
China	2017	1.48	Accept the Null Hypothesis
	2016	2.19	Accept the Null Hypothesis
	2015	2.42	Accept the Null Hypothesis
Finland	2017	3.64	Accept the Null Hypothesis
	2016	2.354	Accept the Null Hypothesis
	2015	4.36	Accept the Null Hypothesis

Thus from the above table, obvious conclusion can be made. It is clear that for all the countries Null Hypothesis became accepted. That means the calculated Z-Score is not different from actual Z-Score.

### 5.3. FINDINGS

Earlier it is mentioned in Chapter -1 that one of the primary objectives of this thesis report is to have a brief idea about the banking sector of these three countries. Besides, the nature of the financial sectors, strength and problems of the financial sectors, financial players of these sectors will be also presented in this report. So findings from theoretical discussion as well as from financial analysis will also be discussed in this section.

Among these three countries, financial sector of Bangladesh is in the least favorable position. Financial system of Bangladesh is considered as inefficient market. Financial market of Bangladesh is not influenced by public information. Few people control the whole market. Share price and fluctuations of the price is not affected by any market information. General investors are the most sufferers. Price of shares and securities cannot be predicted with the statistical prediction tools. Price of Z category share becomes abnormally high while price of A category share becomes lower. If we deeply look over the banking sector of Bangladesh, it is become apparent that banking sector of the country is over flooded with many banks. This country has almost 60 banks are operating throughout the country. This number is higher than necessary. Most of the banks are owned by the government ministers and higher officials. This unnecessary initiative of opening too many banks obviously harmed the banking sector. Within the few years of opening new banks, some of the banks started to fall. Farmers Bank Limited is the perfect example in this case. Remittance from abroad is the main earnings in the economy of Bangladesh. Apart from this, ready made garments sectors, ship building sectors, pharmaceuticals sectors are the major player in the economy. Service sector in Bangladesh is not so structured and developed since Bangladesh is a developing country. With all of this unpleasing information, Bangladesh economy has some good news also. In the time of Global financial crisis in 2007-2008, Bangladesh was among the least affected countries. Since service sector of Bangladesh was not so structured and not popular, this sector remain almost unaffected. That's why Bangladesh faced least impact on global crisis over its economy.

On the other hand, financial sector of both China and Finland are in favorable position. Economy of Finland mainly based on upon hi-tech technology. Finland has a mixed economy where service sector plays vital role. Finland has established and structured services sector unlike Bangladesh. Almost half of the Banks in Finland are originated in foreign countries; it implies that Finland is attractive for foreign investments. Finland banking industry has to face intense competition with other established economy in Europe to grab market share. Due to this intense competition, average return from this sector decreased usually. But the controlling authority of Finland like Bank of Finland-Suomen Pankki strictly formulated banking regulations and strictly implemented so that any corruption in the economy cannot be occurred. After the global recession in the year of 2009, Finnish banking has facing recession in its economy also. The Finnish banking authority has taken reform initiatives to cope with this recession. But the country has already made up most of it's' loss happened in the year of 2009.

China is the second largest economy in terms of GDP and most technologically advanced economy in the world. For this reason, China practiced a wider range of banking activities throughout the country. Economy of china is flooded with manufacturing industry similarly with services industry. Large amount of production activities compelled to adopt in banking services. For this reason China developed an efficient and structured banking system throughout the country. It is reflected by the statistics that China has four banks in the list of largest ten banks in the world.

All the above discussions are being reflected through the financial analysis of thesis report. From the financial analysis part of this report this notion has become confirmed. When we look over the bank performance and bankruptcy model of these three countries, we will have a clear picture. We can see from the analysis that almost all types of banks are in bankrupt position except universal commercial banks and development banks. But some of the universal commercial banks remain in gray area position. Trading and investment banks and Islamic banks are in safe position. On the hand, in Finland autonomous banks are in safe position reflecting strong authoritative situation in the economy. A very different picture can be extracted in case of China financial system. Almost all types of banks are in safe zone except development banks

and universal commercial banks. Among all these three countries, Z-score of China economy fluctuates least.

## 6. CONCLUSION

Banking sector is the main driving force of an economy's pace. Without the advancement and availability of banking product an economy cannot be developed. But role of banking sector varies economy to economy due to the different nature of an economy. This study aim to find a glimpse of the nature of three different countries economies and to have comprehensive comparison among these three countries' economy. Time period for this thesis report is from 2010-2017. Every works subject to some limitation. This study is not different from that. The main limitation of this report is the unavailability of required data. It was very difficult to find all the required data. Data used in this report is secondary in nature, secondary data is not sufficient always to draw a conclusive comment over an economy. So to use the findings of this report, this point need to be observed. But although having all of its limitation, I hope this report will be sufficed to have a bird's eye view over the economy of these three countries

After having such a discussion, we can present a bunch of recommendations. As for Bangladesh, it is already mentioned Bangladesh has inefficient economy which does not react properly with the market information. Recently, banking industry of Bangladesh is facing liquidity crisis, it is happened due to excessive default loan rate among the banks. Recently government of Bangladesh give permission considering political influences. These banks are being operated inefficiently. For that reason, these banks are failed after sometimes. Consequently it has created liquidity crisis. If government of Bangladesh wants to prevent from creating such an incidents, permission for opening new banks considering political influences must be stopped. Because the root cause of all the problems happening now in Bangladesh is corruption and bureaucracy.

Another problem of Bangladesh banking system is that the ratio of non-performing loan for state owned banks are higher than any other banks operated in the country. That is because that state owned banks sanction loan without conducting proper due diligence process. Besides, Bangladesh Bank is ready to provide financial support in any case. This opportunity creates moral hazard for the bankers. So, this culture of reckless

should be stopped. Another recommendation is that for the winding up the non performing banks. It will increase the money supply in the economy. Bangladesh Bank can reduce its CRR rate so that all the scheduled banks can have more liquid money in hand to face liquidity problem. On the other hand Finland economy is one of the growing and leading economy in European countries. So this economy has less weakness compared to other countries. From the analysis of this report, it is obvious that autonomous banks are in weaker position compared to other banks like universal commercial banks, development banks etc. This indicates that all the private commercial banks are being regulated under strict and efficient supervision. Consider all the factors, it is apparent that Finnish banking sector is not facing no immediate threat. Finnish Banking system successfully has overcome the global financial crisis in the year of 2009-2010. Finnish Banking system already has implemented necessary reformation program. But Finnish banking authority should implement European Deposit Insurance Scheme as soon as possible. Banking sector of china belongs to one of the largest economy of the world. So, naturally banking sector of China is one of the largest banking sector. Overall the situation of Chinese economy is not very different than that of Finland. From the analysis of this report, it can be concluded that some of the universal commercial banks and development banks are in below risk level of being bankrupt. It indicates the efficient economic policy like of Finland. But in most recent years, Chinese banking industry is facing increasing debt in the industry. It is because the higher demand of exporting of products. China needs to import a lot to meet export demand. But to keep cost lower, China can utilize its cheap human resource to minimize cost of labor and thus to minimize debt from abroad.

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