ANALYSIS ON THE INFLUENCE OF SIZE, CAPITAL, LOAN, GROSS DOMESTIC PRODUCT, INTEREST RATE, AND EXCHANGE RATE TOWARDS RETURN ON ASSET

(A CASE STUDY OF COMMERCIAL BANKS IN INDONESIA)

By

Endin Zainudin
ID No. 014201100301

A Skripsi presented to the Faculty of Business President University in partial fulfillment of the requirements for Bachelor Degree in Economics Major in Management

2015
The Panel of Examiners declares that the Skripsi entitled “Analysis on the Influence of Size, Capital, Loan, Gross Domestic Product, Interest Rate, and Exchange Rate towards Return on Asset — A Case Study of Commercial Banks in Indonesia” that was submitted by Endin Zainudin majoring in Management – Banking and Finance from the Faculty of Business was assessed and approved to have passed the Oral Examinations on March 18th, 2015.

Purvanto ST, MM
Chair – Panel of Examiners

Rosita Widjojo, SE, MBA, CRMP
Examiner I

Vinsensius Jajat Kristanto, SE, MM, MBA
Examiner II
SKRIPSI ADVISER

RECOMMENDATION LETTER

This Skripsi entitled “Analysis on the Influence of Size, Capital, Loan, Gross Domestic Product, Interest Rate, and Exchange Rate towards Return on Asset — A Case Study of Commercial Banks in Indonesia” prepared and submitted by Endin Zainudin in partial fulfillment of the requirements for the degree of Bachelor of Science in the Faculty of Business has been reviewed and is found to have satisfied the requirements for a Skripsi for Oral Defense.

Cikarang, Indonesia, February 14th, 2015

Acknowledged by, 

Recommended by,

Vinsensius J. Kristanto SE, MM, MBA  
Head, Management Study Programme

Iman Heru W., MBA  
Advisor
DECLARATION OF ORIGINALITY

I declare that this Skripsi, entitled “Analysis on the Influence of Size, Capital, Loan, Gross Domestic Product, Interest Rate, and Exchange Rate towards Return on Asset — A Case Study of Commercial Banks in Indonesia” is, to the best of my knowledge and belief, an original piece of work that has not been submitted, either in whole or in part, to another university to obtain a degree.

Cikarang, Indonesia, February 14th, 2015

Endin Zainudin
This study is about to analyse the influence of internal and external factors towards Return on Asset of 18 commercial banks listed in IDX period 2009 – 2013. The problem stated in this research is about the fluctuation of financial ratios and external factors affecting profitability, strengthened by the occurrence of research gaps between theories and the actual empirical evidence in the banking industry. The object of this research is to analyse both the internal factors which are Size, Capital, Loan and the external factors which are Gross Domestic Product, Interest Rate, and Exchange Rate towards ROA of 18 commercial banks listed in IDX period 2009 – 2013. The methodology used in this study is quantitative research method using secondary data. The sampling method used is purposive sampling, with criteria of 18 commercial banks listed in IDX which provide annual audited financial statements along with the ratios that are relevant to the variables to be examined during period 2009 – 2013. The analysis of this research uses multiple linear regression analysis, with significance level of 0.05. The result shows that partially Size, Capital, and Loan have a positive significant influence towards ROA while GDP has a positive but insignificant influence along with Interest Rate, and Exchange Rate which have a negative and insignificant influence towards ROA. Simultaneously all of the independent variables significantly influence the ROA, with the coefficient of determinant in this research is 48.5%.

Keywords: Return on Asset, Size, Capital, Loan, GDP, Exchange Rate, Interest Rate
I would never have been able to manage to finish this skripsi of mine without the people who have always helped me during the journey. At the moment that I am in the end of the journey, I would therefore like take this opportunity to offer my sincere gratitude to all of them.

I would like to express my deepest sense of gratitude to my advisor, Mr Iman Heru Wijayanto, MBA who continuously offered his excellent guidance, advice, patience, and encouragement through all these months of this skripsi. Thank you for your sincere support regardless all the activities you might have postponed and/or cancelled only for the consults so I could successfully finish this skripsi.

Mr Vinsensius Jajat K., SE, MM, MBA who has always given his kind motivation whenever I met him that I could finish this skripsi in a timely manner.

I have no words to express my gratitude for and I am indeed so grateful to my parents, brothers, sisters, and relatives who have been wholeheartedly loving, encouraging and supporting me through all the years. This skripsi is heartily dedicated to my caring family who always prays and wishes the best for me, which acted as a paddle and boosted me to have a swift sail in my academics. Thank you for your endless love. My love was, is and will always be with all of you.

I am beholden to Laora Dwi Ariana, Tan Julia Christine Fransisca, and Yorico Yohanes Lampus for their huge help in dealing with technical troubles during the research. Not only did they teach me to solve the technical problems, but they shed the light on the meaning of a true friendship, that through best or worst times, friends would want to share with through all the moments. They are the people whom I have always been clinging to for the last three and a half years. Thank you for being friends of mine and accepting me the way I really am. I could have never
imagined how I would go through my university life without having you as, the people I have been adoring, my best friends.

Two best friends of mine since senior high school, Faiz Noorrachman and Ridho Utomo completed the joy of going through the university life, who always broadened my Information Technology knowledge and most importantly who, whenever met, always made my day with their witty jokes reminiscing silly moments at school and dreaming about what the future holds on our lives. Let us not stop doing that and make the dreams come true!

A sincere gratitude to all friends of mine especially Abdil Muttaqin, Afryandi Christianto, Alexandria King, Budi Putra Santoso, Erynda Bitha Safira, Hafsa Hermala Sari, Laras Hening Basuki, Lia Marcello, Ni Putu Vanny Christina, Theresia Jessica Wongkalanujaya, Yenny Rahmawati, and others who have shared a great deal of moments and stories with me. Thank you.

Lastly but certainly not the least, the FMC (Factory Magang Committee) intern colleagues at PT Yasulor Indonesia – L’Oréal Manufacturing Indonesia who also shared the same struggle in multitasking: respecting the job descriptions and simultaneously finishing the skripsi, Angga Mahatma, Ardisa Pramudita, Icha Mar’atun Sholihah, Kristiantho Sulistiohadi, Luqman Nur Hakim, Muhammad Faizin Rissa, Tia Darlina, and Yusrina Husna, that the responsibilities did not seem to burden me too much with your presence at the office; along with supervisor and mentor of mine, Mr Erwin Mian Hutagalung SE and Mr Eben Osvaldo Silaen SE who had given the opportunity to learn some knowledge about cost controlling, and the ever funky Mr Okky Andrianto SE, the chair mate of mine who had given me so much knowledge about the standard business processes, too.

May the Almighty God abundantly bless all of you.
# TABLE OF CONTENTS

APPROVAL SHEET ............................................................................................................. i

RECOMMENDATION LETTER ....................................................................................... ii

DECLARATION OF ORIGINALITY .................................................................................. iii

ABSTRACT ....................................................................................................................... iv

ACKNOWLEDGEMENT ..................................................................................................... v

TABLE OF CONTENTS .................................................................................................... vii

LIST OF TABLE ............................................................................................................... xii

LIST OF FIGURE ............................................................................................................ xiii

LIST OF ACRONYMS ........................................................................................................ xiv

CHAPTER I – INTRODUCTION ......................................................................................... 1

1.1. Background of Study ............................................................................................... 1

1.2. Problem Identification ......................................................................................... 5

1.3. Statement of Problem ............................................................................................ 7

1.4. Research Objectives ............................................................................................. 7

1.5. Definition of Terms ............................................................................................... 8

1.6. Scope and Limitations .......................................................................................... 9

1.6.1. Scope .................................................................................................................. 9

1.6.2. Limitation ........................................................................................................... 9
CHAPTER II – LITERATURE REVIEW ........................................... 12

2.1. Theoretical Review ........................................................................................................... 12
  2.1.1. Bank ................................................................................................................................. 12
  2.1.2. Financial Statement ....................................................................................................... 14
  2.1.3. Financial Performance ................................................................................................. 16
  2.1.4. Financial Ratio .............................................................................................................. 17
  2.1.5. Gross Domestic Product .............................................................................................. 20
  2.1.6. Interest Rate .................................................................................................................. 24
  2.1.7. Exchange Rate .............................................................................................................. 27

2.2. Previous Research ............................................................................................................. 28

2.3. Influence of Independent Variables on Dependent Variable ......................................... 31
  2.3.1. The Influence of Size towards ROA ........................................................................... 31
  2.3.2. The Influence of Capital towards ROA ....................................................................... 31
2.3.3. The Influence of Loan towards ROA ................................. 32
2.3.4. The Influence of Gross Domestic Product towards ROA ........... 33
2.3.5. The Influence of Interest Rate towards ROA .......................... 34
2.3.6. The Influence of Exchange Rate towards ROA ....................... 34
2.4. Theoretical Framework ................................................................ 35
2.5. Hypothesis ............................................................................... 36

CHAPTER III — METHODOLOGY .............................................. 38

3.1. Research Design ........................................................................ 38
3.2. Research Framework ................................................................... 41
3.3. Sampling Design ........................................................................ 42
3.4. Research Instrument .................................................................... 44
3.5. Data Collection Procedure .......................................................... 45
3.6. Definition of Operational Variables .............................................. 46
3.7. Statistical Treatment .................................................................... 47
   3.7.1. Classical Assumption Test ....................................................... 47
   3.7.2. Hypothesis Testing ................................................................. 52

CHAPTER IV — INTERPRETATION ............................................. 58

4.1. Company Profile ........................................................................ 58
   4.4.1. BMRI – PT Bank Mandiri (Persero) Tbk ................................. 58
4.4.2. BBRI – PT Bank Rakyat Indonesia (Persero) Tbk .................... 59
4.4.3. BBCA – PT Bank Central Asia Tbk..................................... 61
4.4.4. BBNI – PT Bank Negera Indonesia Tbk .................................. 62
4.4.5. BNGA – PT Bank CIMB Niaga Tbk...................................... 64
4.4.6. BDMN – PT Bank Danamon Indonesia Tbk.......................... 66
4.4.7. BNLI – PT Bank Permata Tbk ........................................... 68
4.4.8. BBTN – PT Bank Tabungan Negara (Persero) Tbk............... 69
4.4.9. BNII – PT Bank International Indonesia Tbk ......................... 70
4.4.10. NISP – PT Bank OCBC NISP Tbk..................................... 71
4.4.11. MEGA – PT Bank Mega Tbk............................................ 72
4.4.12. BBKP – PT Bank Bukopin Tbk......................................... 74
4.4.13. INPC – PT Bank Artha Graha International Tbk .................. 75
4.4.14. MAYA – PT Bank Mayapada International Tbk.................. 77
4.4.15. BVIC – PT Bank Victoria International Tbk......................... 78
4.4.16. BCIC – PT Bank Mutiara Tbk........................................... 79
4.4.17. MCOR – PT Bank Windu Kentjana International Tbk.......... 80
4.4.18. BACA – PT Bank Capital Indonesia Tbk............................. 81

4.2. Data Analysis.............................................................................. 83
4.2.1. Overview of Research Objects ............................................. 83
4.2.2. Descriptive Statistics ..................................................................................... 83
4.2.3. Classical Assumption Test ............................................................................. 84
4.2.4. Multiple Regression Analysis ........................................................................ 89
4.3. Interpretation of Result ..................................................................................... 94
  4.3.1. Partial Influence of Size towards ROA ......................................................... 94
  4.3.2. Partial Influence of Capital towards ROA .................................................... 95
  4.3.3. Partial Influence of Loan towards ROA ....................................................... 96
  4.3.4. Partial Influence of GDP towards ROA ....................................................... 97
  4.3.5. Partial Influence of IR towards ROA ............................................................ 97
  4.3.6. Partial Influence of ER towards ROA ........................................................... 98
  4.3.7. Simultaneous Influencing Factors ............................................................... 98

CHAPTER V — CONCLUSION AND RECOMMENDATION .................. 100
5.1. Conclusion ....................................................................................................... 100
5.2. Recommendation ............................................................................................. 102

REFERENCES ......................................................................................................... 104

APPENDIX A .......................................................................................................... 114

APPENDIX B .......................................................................................................... 123
LIST OF TABLE

Table 2. 1 List of Previous Research ................................................................. 28

Table 3. 1 Characteristics of Qualitative and Quantitative Research .................39

Table 3. 2 List of Research Samples ..................................................................... 43

Table 3. 3 Sample Size Calculation ..................................................................... 44

Table 3. 4 Research Variables and Operational Definition ............................... 46

Table 4. 1 Descriptive Statistics ......................................................................... 84

Table 4. 2 Modified SPSS Result – Coefficients ................................................. 87

Table 4. 3 Modified SPPS Result for Durbin-Watson Test ............................... 88

Table 4. 4 Multiple Regression Model Result ....................................................... 89

Table 4. 5 T-Test Result ..................................................................................... 91

Table 4. 6 F-Test Result ..................................................................................... 93

Table 4. 7 Coefficient Determination (Adjusted R²) ......................................... 94
LIST OF FIGURE

Figure 1.1 Average Return on Asset................................................................. 6

Figure 2.1 Modified Theoretical Framework.................................................. 36

Figure 3.1 Research Framework................................................................. 42

Figure 3.2 Graph of Normal Histogram....................................................... 48

Figure 3.3 Graph of Normal P-Plot Distribution ........................................... 49

Figure 3.4 Graph of Heteroscedasticity Example......................................... 51

Figure 4.1 Histogram .................................................................................. 85

Figure 4.2 P-Plot Graph .............................................................................. 86

Figure 4.3 Scatterplot Graph....................................................................... 88

Figure 4.4 Durbin-Watson Test.................................................................... 89
LIST OF ACRONYMS

ER: Exchange Rate
GDP: Gross Domestic Product
IDX: Indonesia Stock Exchange
IR: Interest Rate
ROA: Return on Asset
BMRI: PT Bank Mandiri (Persero) Tbk
BBRI: PT Bank Rakyat Indonesia (Persero) Tbk
BBCA: PT Bank Central Asia Tbk
BBNI: PT Bank Negera Indonesia Tbk
BNGA: PT Bank CIMB Niaga Tbk
BDMN: PT Bank Danamon Indonesia Tbk
BNLI: PT Bank Permata Tbk
BBTN: PT Bank Tabungan Negara (Persero) Tbk
BNII: PT Bank International Indonesia Tbk
NISP: PT Bank OCBC NISP Tbk
MEGA: PT Bank Mega Tbk
BBKP: PT Bank Bukopin Tbk
INPC: PT Bank Artha Graha International Tbk
MAYA: PT Bank Mayapada International Tbk
BVIC: PT Bank Victoria International Tbk
BCIC: PT Bank Mutiara Tbk
MCOR: PT Bank Windu Kentjana International Tbk
BACA: PT Bank Capital Indonesia Tbk
CHAPTER I

INTRODUCTION

1.1. Background of Study

The existence of the banking sector has an important role in the economy. This is because the banking sector is an institution of financial intermediary between the parties which have the funds (surplus funds) with parties who need funding (deficit funds) as well as a functioning institution that facilitate the flow of traffic payment (Veithzal, 2007).

In conducting its business as financial institutions that sell trust and services, each bank tries as much as possible to attract new customers or investors, enlarge the funds and enlarge the lending and services. Thus the role of banking is very strategic. However, the health and the stability of the banks have been something very vital; where banks are healthy, good individually, as well as overall as a system, a necessity that an economy needs to grow and well developed. (Veithzal, 2007).

In creating and maintaining a healthy bank, a banking institution is needed which always monitors effectively in accordance with article 29 paragraph 2 of the Law of the Republic of Indonesia No. 10 1998, namely: Banks are required to maintain the health of banks in accordance with the provisions of the capital adequacy, quality assets, quality of management, liquidity, profitability, solvency, and other aspects related with bank business, and shall perform business activities in accordance with the principle of prudence, that banking institutions in Indonesia are able to function efficiently, healthy, fairly, and are able to protect entrusted community’s funds community entrusted to productive areas for the achievement of
development goals (Dito, 2011); where in the implementation of the function bank supervision in Indonesia is conducted by the central bank, that is Bank Indonesia.

According Adyani (2011), the financial performance of banks is a picture of the financial condition of banks in a given period either covering aspects of fund-raising or channeling funds. Depositors’ trust and loyalty are the factors which are very helpful and simplify the management of the bank to develop a good business strategy. Vice versa, it is very unfortunate for the bank concerned where the owners of the funds put less trust in the bank concerned where the loyalty is very thin because the owners of the funds at any time are able to withdraw their funds and move it to another bank.

Banks’ financial performance assessment is one of the important factors for the banks to see how well the banks have conducted the performance in the business. In addition, assessment can also be used to determine how much of profitability by comparing the results of the profit in a given year with previous years and also comparing the performance of the bank with another banks. In general, the assessment of a bank's financial performance can be seen from the financial statements derived from the calculation of financial ratios (Nugroho, 2011).

The main purpose of bank operations is to achieve the maximum level of profitability. Profitability is the bank’s ability to produce and/or to obtain profit effectively and efficiently. According to Brigham & Houston (2011) in order to measure the profitability of banks, it typically uses the profitability ratios it already includes the debt ratio, the ratio of activity and liquidity ratios which consists of ROE (Return On Equity), the ratio that describes the amount of return on capital to generate profits, and ROA (Return on Asset), the ratio that indicates the ability of the overall assets and are used to generate a profit. Moreover, in determining the soundness of a bank, Bank Indonesia is more concerned with the ROA rather than ROE because Bank Indonesia prefers the value of the profitability of a bank which
is measured by assets where most of the fund comes from public savings thus ROA represents more in measuring the level of bank profitability. The greater the ROA of a bank, the greater the level of the bank's profits achieved and the better the bank's position in terms of the use of the asset (Dendawijaya, 2005).

The poor quality of banking is reflected by the weakness of the internal condition of the banking sectors, poor management of the banks, low morale of the human resources, and the ineffectiveness of supervision by Bank Indonesia. The big quantity of banks creates increasingly a tight competition and as the result the performance of the bank is low due to the inability to compete well in the marketplace, thus there are many bank which actually are less healthy or even unhealthy financially. Healthy or not a company or a bank, can be seen from the financial performance, especially from the performance of the company's profitability. (Prastyaningtyas, 2010).

The performance of commercial banks can be affected by internal and external factors which can be classified into bank specific (internal) and macroeconomic variables (external) (Ongore, 2013).

The internal factors are individual bank characteristics which affect the bank's performance, these factors are basically influenced by the internal decisions of management and board. Financial information and/or ratios such as Total Asset (Size), Equity to Asset Ratio (Capital), and Loan to Asset Ratio (Loan) can help determine bank’s financial performance. The external factors are sector wide or country wide factors which are beyond the control of the company and affect the profitability of banks (Ongore, 2013).

Besides, the bank management also needs monitor continuously the external conditions such as GDP, IR, and ER so that appropriate business decisions could be made to protect the interest of various parties, particularly the depositors and the users of the funds (Hendrayanti & Muharam, 2013).
There have been several studies conducted in relation with the factors determining banks’ profitability which are varying from one to another researches. From the internal factors point of view, there are researches on the influence of *Size* (Total Asset), *Capital* (Equity to Asset Ratio), and *Loan* (Loan to Asset Ratio) towards profitability that is *Return on Asset*. Also, from the external factors point of view, there are researches on the influence of *GDP* (Gross Domestic Product), *IR* (Interest Rate), and *ER* (Exchange Rate) towards profitability which is *ROA* (Return on Asset).

The study conducted by Vijayakumar & Tamizh selvan (2010) and Khrawish (2011) revealed a result that there was a significant influence between *Size* and *ROA*. However, those researches are contrary to researches conducted by Pervan & Višić (2012) and Almumani (2013) which indicated an insignificant influence between *Size* and *ROA*.

The study conducted by Gul, Irshad & Zaman (2011) showed a result that there was an insignificant influence between *Capital* and *ROA*. However, the research is contrary to researches conducted by Hendrayanti & Muharam (2013) and (Zeitun, Determinants of Islamic and Conventional Banks Performance In GCC Countries Using Panel Data Analysis, 2012) resulted that there was a significant influence between *Capital* and *ROA*.

The study conducted by Alper & Anbar (2011) generated an insignificant influence between *Loan* and *ROA*. The research is contrary to the studies conducted by Gul, Irshad, & Zaman (2011), Sufian (2011) and Syafri (2012) that shows a significant influence between *Loan* and *ROA*.

It also happens to the researches concerning on the external factors variables which give varying results between one another researches. The studies conducted by Dietrich & Wanzenried (2009), Ali et al (2011) and Zhang & Dong (2011) showed a result that there is a positive and a significant influence of *GDP* towards *ROA*. However, the results slightly differ from the researchers conducted by Ramadan, Kilani, & Kaddumi (2011), Rao &
Lakew (2012), Syafri (2012), and Ongore (2013) showed that there is a positive but an insignificant influence between GDP towards ROA.

The researches conducted by Athanasoglou, Brissimis, & Delis (2005) and Anwar & Herwany (2006), Zhang & Dong (2011), Arpa, Guilini, Ittner, & Pauer (2011) and Jamal, Karim, & Hamidi (2012) showed that there is a positive and significant influence between IR towards ROA. However, a research conducted by Yuqi (2008) and Sayedi (2014), showed that IR has a negative and insignificant influence towards profitability, ROA. Also, a research conducted by Soyemi, Akinpelu, & Ogunleye (2013) revealed that IR has a positive but insignificant influence towards ROA.

The researches conducted by Molyneux & Thorton (1992), Babazadeh & Farrokhnejad (2012), and Kiganda (2014) showed a negative and insignificant influence between ER towards ROA. However, the researches conducted by Khrawish (2011), Aburime (2008) showed that there is positive and significant influence of ER towards ROA.

1.2. Problem Identification

The ROA of the banking industry in Indonesia have not been increasing nor decreasing constantly or in simple words that they are fluctuating over the last few years. This shows that the profitability in those banks have been also fluctuating over the years. These fluctuations might necessarily be caused by either the internal factors which may include Size, Capital, and Loan along with the external factors which also may include GDP, IR, and ER and/or even simultaneously by both the factors. The figure below is the average ROA of 18 commercial banks listed in IDX during period 2009 until 2013.
Over the last 5 years from 2009 until 2013, the profitability of 18 commercial banks listed in IDX was not constantly increasing, rather at the end of year 2013 the ROA dropped to the point which was lower than the first year observed. This means that there are factors influencing the ROA of the 18 commercial banks listed in IDX during period 2009 until 2013.

According to the above explanations, this research is conducted in purpose to find out more of empirical evidence of the relationship between internal factors (Size, Capital, Loan) and external factors (GDP, IR, ER) towards banks’ profitability, ROA.

This research is also conducted due to the existence of gaps between one research and another that the present study seeks to bridge, hence it is necessary to conduct the research concerning about ‘Analysis of the Influence of Size, Capital, Loan, GDP, IR, and ER towards ROA, A Case Study of Commercial Banks in Indonesia.’
1.3. **Statement of Problem**

Based on the previous explanation, this study aims to answer the following research questions:

1. Is there a significance influence of *Size* towards *ROA* of 18 commercial banks listed in IDX during period 2009 – 2013?
2. Is there a significance influence of *Capital* towards *ROA* of 18 commercial banks listed in IDX during period 2009 – 2013?
3. Is there a significance influence of *Loan* towards *ROA* of 18 commercial banks listed in IDX during period 2009 – 2013?
4. Is there a significance influence of *GDP* towards *ROA* of 18 commercial banks listed in IDX during period 2009 – 2013?
5. Is there a significance influence of *IR* towards *ROA* of 18 commercial banks listed in IDX during period 2009 – 2013?
6. Is there a significance influence of *ER* towards *ROA* of 18 commercial banks listed in IDX during period 2009 – 2013?
7. Is there a significance simultaneous influence of *Size, Capital, Loan, GDP, IR,* and *ER* towards *ROA* of 18 commercial banks listed in IDX during period 2009 – 2013?

1.4. **Research Objectives**

Based on preceding research questions, the research objectives of the study can be formulated as follows:

1. To analyse the influence of *Size* towards *ROA* of 18 commercial banks listed in IDX during period 2009 – 2013.
2. To analyse the influence of *Capital* towards *ROA* of 18 commercial banks listed in IDX during period 2009 – 2013.
3. To analyse the influence of Loan towards ROA of 18 commercial banks listed in IDX during period 2009 – 2013.

4. To analyse the influence of GDP towards ROA of 18 commercial banks listed in IDX during period 2009 – 2013.

5. To analyse the influence of IR towards ROA of 18 commercial banks listed in IDX during period 2009 – 2013.

6. To analyse the influence of ER towards ROA of 18 commercial banks listed in IDX during period 2009 – 2013.

7. To analyse the simultaneous influence of Size, Capital, Loan, GDP, IR, and ER towards ROA of 18 commercial banks listed in IDX during period 2009 – 2013.

1.5. Definition of Terms

1. Return on Asset (ROA) is a ratio calculated by dividing the net income over total assets and it measures the profit earned per IDR of assets and reflect how well bank management uses the bank’s real investments resources to generate profits.

2. Size accounts for the existence of economies or diseconomies of scale. In most of the finance literature, the total assets of the banks are used as a proxy for bank size. The variable is measured as the natural log of total assets.

3. Capital is an indicator that shows the availability of capital to maintain liquidity (protective function) and the continuity of its operations so as to protect the owners of capital of insolvency or bankruptcy. Capital is calculated as the ratio of equity to total assets.

4. Loan is used to measure the bank's ability to meet demand for credit through a collateral assets. This ratio is comparison of how much bank loan compared with the amount of total assets owned by banks.
5. *Gross Domestic Product (GDP)* is the monetary value of all the finished goods and services produced within a country's borders in a specific time period, though GDP is usually calculated on an annual basis. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory.

6. *Interest Rate (IR)* is the proportion of a loan that is charged as interest to the borrower, typically expressed as an annual percentage of the loan outstanding.

7. *Exchange Rate (ER)* is quoted as foreign currency per unit of domestic currency or domestic currency per unit of foreign currency. It is the value of one currency for the purpose of conversion to another.

1.6. **Scope and Limitations**

1.6.1. **Scope**

The study is conducted to analyse the influence of internal and external factors which are *Size, Capital, Loan, GDP, IR*, and *ER* towards profitability that is *ROA* of 18 commercial banks listed in IDX during period 2009 – 2013.

1.6.2. **Limitation**

The researcher has set the limitations in conducting the study which are as follows:

1. This research only discusses three factors each for internal (*Size, Capital, Loan*) and external (*GDP, IR, ER*) towards profitability, that is *ROA*.
2. The populations of the study are 18 commercial banks, which are four state-owned banks and other commercial banks listed
in IDX which present financial statements of five consecutive years from 2009 – 2013.

1.7. Research Benefits

This research is intentionally intended to present information to be knowledgeable and be able to provide solution for the followings:

1.7.1. For the Researcher

The researcher tries to find out and fulfil the curiosity of the influence of internal and external factors towards financial performance of banking sectors that is through Return on Asset of commercial banks listed in Indonesian Stock Exchange. Also, to apply the theories and knowledge gained during the study at President University.

1.7.2. For the Banking Industry

This research could be the medium to review the policies needed to implement in order to improve the bank’s financial performance, especially Return on Asset.

1.7.3. For the Investors

The result of this research could give information with regard to profitability and could become one of considerations prior to investing in the banks listed in IDX.

1.7.4. For the Students of President University

To provide beneficial information in relation with factors determining banks’ profitability by looking at the financial ratios and to become a reference in developing a research on factors determining banks’ Return on Asset.
1.7.5. **For the Academic Community**

To be a study resource, reference, baseline, and additional knowledge on the relationship of internal and external factors affecting profitability of banks listed in IDX should it be needed a further related research.
CHAPTER II

LITERATURE REVIEW

2.1. Theoretical Review

2.1.1. Bank

1. Definition

A bank is a business entity whose primary job as a financial intermediary (financial intermediaries), which channeled funds from the excess funds to the cash-strapped at the appointed time. (Dendawijaya, 2005).

According to the law No. 7 of 1992 as amended by law no 10 of 1998, article 1 paragraph 2, the bank is an entity that collects funds from the public in the form of savings and channeling them to the public in the form of loan or other forms in order to improve the living standards of many.

Definition above contains high philosophical. More technical understanding can be found on the Financial Accounting Standards (FAS). Understanding the bank according to Statement of Financial Accounting Standards No. 31, the Financial Accounting Standards (1999) bank is a financial institution that acts as a financial intermediary between the parties which have advantages and those that need funding, as well as the institutions that serve the traffic expedite payment.

While based on a Certificate of Finance of the Republic of Indonesia Number 792 of 1990, the bank is an entity whose activities in finance do the collection and distribution of funds to the public especially to finance the company's investment.
Based on the definitions above it can be concluded that the bank is a financial institution whose activities raise and distribute funds from and to the people who have the function of traffic expedite payment. In other words, the bank is a financial institution that engages in providing loan and services in payment traffic and circulation of money.

2. Function

As known that the function of banks in general are as follows (Susilo, Triandaru, & Santoso, 2000):

a. Agent of Trust

Banks is an institution whose foundations are based on trust, both in collecting funds and in the distribution of funds. People believe that banks are not misusing their money, and bank believes that the debtors will not abuse their loan and have good intentions to repay their loan along with other liability on the maturity date.

b. Agent of Development

The activities of banks in the form of collecting and distributing funds are indispensable for the economy fluency. The bank's activities enables people to make an investment, distribution and consumption of goods and services activities, considering these activities cannot be separated from the use of money. The fluency of investment, distribution and consumption activities is none other than the development activity of public economy.
c. **Agent of Services**

Banks are institutions that mobilize funds for economic development. Bank provides other banking services to the public, these services includes remittance services, custody marketable securities, provision of banks guarantee, and settlement of the bill.

### 2.1.2. Financial Statement

Financial report is basically the result of the accounting process that can be used as a tool for communication between financial data or the activity of a company with the parties concerned with the data or activities of the company (Munawir, 2010).

According to Hanafi & Halim (2009) financial statements are information that can be used for decision-making, ranging from investors or prospective investors to the management company itself. Financial statements will provide information on profitability, risk, and timing of cash flows, all of which will affect the expectations of the parties concerned.

As for Harahap (2004), financial statements describe the financial condition and results of operations of a company at a particular time or a certain period of time.

Meanwhile, according to Indonesian Institute of Accountants (2012), financial statements are part of the financial reporting process. Complete financial statements typically include a balance sheet, income statement, statement of changes in financial position (which can be expressed in various ways for example, as a statement of cash flows, or flows of funds), notes and other statements and explanatory material which are the integral part of the financial statements.
From the definitions above, it can be concluded that the financial statements are reports that provide information which will be used by the parties concerned of the financial position, performance of the company, changes in equity, cash flow and other information which is the result of the accounting process during the accounting period of a business entity.

1. **Forms of Financial Statements**

   Financial statements generally can be divided into three following reports:

   a. **Balance Sheet**

      According to Harahap (2004), balance sheet is also called the statement of financial position of the company. This report describes the position of the assets, liabilities and equity at a given moment. Balance sheet is a report that presents the economic resources of a company or an asset or debt obligations, and rights of the owners of companies that are embedded in the company or equity owner of a particular moment. Balance sheet must be systematically arranged so as to provide a picture of the financial position of the company. Therefore, the balance sheet is properly called statement of financial position. As the balance sheet is a portrait or picture of the condition at a certain moment, then balance sheet is a status report, not a flow report.

   b. **Income Statement**

      According to Halim (2009), income statement is a report on the activities of a company during a particular accounting period. Income statement shows revenues and operating expenses, interests, taxes, and net income achieved by an
enterprise. Income statement is an accounting product that is designed to demonstrate to shareholders and creditors, whether or not the company can make profits.

c. Cash Flow

Cash flow statement is a mixture between the income statement and the balance sheet (Subramanyam & Wild, 2010). Statement of cash flows can be expressed in company’s net profit associated with the value of the company so that if the cash flow increases, the profit of the company will increase and this will increase the value of the company and then also will raise the company's profit.

2.1.3. Financial Performance

Performance of the company is a formal business conducted by companies to evaluate efficiency and effectiveness of companies’ activities which have been implemented in a specific time period. According to Sucipto (2003) financial performance is the determination of the measures to a certain measure of success of an organisation or company in generating profits. Meanwhile, according to Indonesian Institute of Accountants (2012) financial performance is the company's ability to manage and control their resources.

According to Fahmi (2012) financial performance is an analysis to see the extent to which a company has implemented by using the good rules of financial performance. Performance of the company is a picture about the financial condition of a company that is analysed by means of financial analysis, thus it can be known about the good and bad of a company’s financial situation that reflects the
performance within a certain period. It is very important that resources are used optimally to face the environmental change.

Bank’s financial performance is picture of the financial condition in a given period time, which the information of financial position and performance in the past are often used as a basis for prediction financial the future. Bank’s financial performance can be assessed with the financial ratio analysis approach from all financial statement reported in the past (Febriyani & Zulfadin, 2003).

From the above understanding, it can be concluded that the financial performance is the formal activities that have been carried out by the company which can measure the success of the company to generate profits, thus is able see prospects, growth, and potential company development by relying on existing resources. An enterprise that can be stated to be successful is if it has reached the set standards and objectives.

2.1.4. Financial Ratio

Financial ratio is an analysis tool that can be used by companies in their business activities. The relation to the financial performance of a company can be based on the company's financial ratios to compare the financial statements, thus it will look upon achievement of the targets set by the companies and assist management in making decisions.

According to Harahap (2004), the financial ratio is numbers derived from the comparison of the financial statement items with other posts that have relevant and significant or meaningful relationship.

According to Wild, Subramanyam, and Halsey (2005), the ratio is a tool to provide a view of the underlying condition. The ratio is one of the starting point, not an end point. Ratios interpreted correctly
indicate areas requiring further investigation. From this definition the ratio can be used to determine whether there are deviations by comparing the previous years’ financial ratios.

Financial ratios show a systematic relationship in the form of a comparison between the estimates of the financial statements. In order for the calculation of financial ratios can be interpreted, estimates than should lead to important economic relationship. Examples of comparisons that cannot be interpreted is the ratio between the load supplies with the stock price due to the load equipment, it has nothing to do with the factors that affect the company's stock price (Syamsuddin, 2007).

This research uses financial ratios in order to assess banks’ financial performance. Financial ratio being used as the dependent variable is Return on Asset (ROA), a measurement of banks’ financial performance of how profitable a bank relative to its total assets. The financial ratio indicators used as the independent variables are Capital (Total Equity to Total Asset) and Loan (Total Loan to Total Asset).

1. Return on Asset (ROA)

Return on Asset (ROA) is a profitability ratio to measure the ability of management to generate profits by utilizing its total assets (Kasmir, 2008). The higher this ratio means that the company is more effective in using assets to generate a net profit after tax. It can be concluded that the higher ROA means the more effective the performance of the company, due to the greater level of return (Brigham & Houston, Fundamentals of Financial Management 9th Edition, 2001). This in turn will increase the attraction of investors to the company. The increasing of the attractiveness of the company makes the
company is more attractive to investors as it can provide a great return for them. The smaller this ratio can be seen in the lack of bank management’s ability in managing assets to increase revenue or reduce costs. So it can be interpreted the higher Return On Asset (ROA) performance means that the management is able to manage the assets in earning an income and reduce the use of cost (Dendawijaya, 2005).

2. **Size (Total Asset)**

   Size is usually used to examine the economies or diseconomies of scale in the banking sector. It is measured by taking the natural logarithm of overall assets of a bank. Size of bank is helpful to catch the possible economies of scale. By large size, banks can save their cost specially the fixed cost which might be research & development, banks whose size is large can pay less for their inputs. (Bilal, Saeed, Gull, & Akram, 2013)

3. **Capital (Total Equity to Total Asset)**

   Capital refers to the amount of own funds available to support a bank’s business and, therefore, bank capital acts as a safety net in the case of adverse development (Athanasoglou, Brissimis, & Delis, 2005). Capital is calculated as the ratio of equity to total assets. The ratio measures how much of the banks’ assets are funded with owners’ fund and is a proxy for capital adequacy of a bank by estimating the ability to absorb losses.

   This shows that how much participation of equity in total assets. Increase in capital ratio refers to the amount of own funds available to support a bank’s business and therefore bank capital act as safety net in the case of adverse development. Higher
bank’s capital ratio can take the advantage of higher profitability (Ommeren, 2011).

4. **Loan (Total Loan to Total Asset)**

*Loan to Total Asset* ratio is the ratio used to measure the bank’s ability to meet the demand for credit through a collateral assets (Abdullah F., 2003). This ratio is a comparison of how much of bank loan compared to the size of the total assets of the bank. The larger the outstanding loan, the lower the credit risk that may be encountered, due to outstanding loan are funded by the assets owned. The relationship between *Loan* and *ROA* is positive because of the higher credit given, the greater the interest income earned thus asset returns will be higher (Gul, Irshad, & Zaman, 2011).

2.1.5. **Gross Domestic Product**

Gross Domestic Product (*GDP*) is believed to be the best economic indicator in assessing the economic development of a country. The calculation of this national income has a major macro size of a country's conditions (Mankiw, 2009) and this indicator can be achieved if the country is able to produce quality materials which are marketable.

In general, the comparison condition between countries can be seen as an illustration of national income. In determining whether a country is in a group of developed or developing countries, the World Bank does so by grouping the magnitude of GDP, and the GDP of a country is equal to the total expenditure on goods and services in the economy (Todaro & Smith, 2008).

Todaro and Smith (2008) further say that GDP is an indicator that measures the amount of output of final goods and services generated
by the economy of a country, in the region of the country, both by citizens and non-citizens (for example, a foreign company), regardless of whether the production output will be allocated to the domestic market or overseas. Thus citizens working in another country, the earnings are not included in GDP. As a good illustration, Indonesian’s GDP is by Indonesian citizens and foreign citizens but the products of Indonesian citizens living overseas are not included (Sagir, 2009). Also, Mankiw (2009) defines GDP as the market value of all goods and services produced in the economy during a certain period of time.

To calculate GDP, it can be based on two fixed price markets (Mankiw, 2009), namely:

1. Nominal GDP

   GDP at current prices (nominal GDP) is the value of goods and services produced by a country in a given period by and/or based on the prices prevailing during the period.

2. Real GDP

   GDP at constant prices (real GDP) is the value of goods and services produced by a country in a given period, based on prices prevailing in a given year that is used as base year prices on the valuing goods and services resulted in the period of next year.

National income at constant prices can be obtained by:

\[
\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price Index}} \times 100
\]

Source: (Mankiw, 2009)
The price index used to deflate current price GDP is Implicit Price Deflator, where:

\[
\text{Implicit Price Deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100
\]

*Source:* (Mankiw, 2009)

Economists and policy makers are not only concerned with the total outputs of goods and services, but also the allocation of this output among various alternatives. The accounts of GDP are divided into four groups of expenditure GDP (Mankiw, 2009):

1. Consumption (C)
2. Investment (I)
3. Government Spending (G)
4. Net exports (NX)

To calculate GDP figures there are three approaches that can be used, namely (BPS, 2014):

1. **Production Approach**

   *GDP* is the total value added of goods and services produced by various production units in the territory of a country in a given period of time, usually one year. The production units in this publication are grouped into 9 business sectors which are:

   a. Agriculture, Livestock, Forestry and Fisheries,
   b. Mining and Quarrying,
   c. Manufacturing,
   d. Electricity, Gas and Water,
   e. Building,
f. Trade, Hotels and Restaurants,
g. Transportation and Communications,
h. Finance, Real Estate and Business Services and
i. Services include services provided by government.

2. Income Approach

GDP is the amount of remuneration received by the factors of production that participate in the production process in a country in a given period of time, usually one year. Remuneration of factors of production in question are wages and salaries, rent of land, capital and profits interest, all before the deduction of income tax and other direct taxes.

In this definition GDP includes depreciation and net indirect taxes (indirect taxes less subsidies).

3. Expenditure Approach

\( GDP \) is the final demand components consisting of:

a. The consumption expenditure of households and non-profit private institutions,
b. Consumption of government,
c. Gross domestic fixed capital formation,
d. Changes in stock, and
e. Net exports (net exports are exports minus imports).

In the concept, he three approaches will produce the same numbers. Thus, the amount of expenditure will be equal to the amount of final goods and services produced and must be equal to the total income of the factors of production. \( GDP \) is produced in this way is referred to as \( GDP \) is
generated on the basis of market prices, as already included net indirect taxes.

2.1.6. Interest Rate

1. Definition

According to Kasmir (2008) interest rates can be interpreted as fringe benefits provided by the bank based on the principle of conventional to customers who purchase or sell products.

Sadono Sukirno (2006) states that the interest rate is expressed as a percentage of capital.

In everyday banking activities there are 2 kinds of interests are given to customers, namely:

a. Deposit Interest

Deposit interest is interest that is given as a stimulus or remuneration for customers who keep money in the bank. Deposit is the price that must be paid to its customers. For example: current accounts, savings interest, and interest on deposits.

b. Loan Interest

Interest that is given to the borrower or the price paid by the borrower to the bank. For example: lending.

Both kinds of deposit and loan interest are a major component of cost and revenue for banks. Deposit interest is the cost of money that should be spent to customers while lending represents funds received from customers. Deposit and lending each affect each other. For example, if the saving interest is high
then it will automatically affect the loan which will go up and vice versa.

2. **Factors Affecting Interest Rate**

As explained above that to determine the size of interest rates on deposits and loan is strongly influenced by both. This means that both the interest and the loan in addition to the effect of the interplay of other factors. According to Kasmir (2008) the main factors that affect the size of the determination of the interest rate are:

a. **Fund Needs**

If banks are short of funds, while the loan application increases, thus what banks do is to increase the deposit rate. The increase in deposit rate will also automatically increase the interest on the loan. However, if deposit funds are much while the applicant for depositing is less, then the deposit rates will fall.

b. **Competition**

In the fight of acquiring deposits, then in addition to the promotion factor, the most important banks should pay attention is the competitors. In a sense if the average of savings rates is 16%, then if require quick funds, it suggested that the deposit interest is raised above the interest of the competitors. However, contrary to loan interest rates, it must be below the competitors.
c. **Government Policy**

In a sense both for deposits and loan interest banks must not exceed the rate set by the government.

d. **Desired Profit Target**

In accordance with the desired profit target, if desired profit is large then the loan interest will go higher and vice versa.

e. **Time Period**

The longer the term of the loan, the higher the interest, this is due to the magnitude of potential future risks. Likewise if it is a short-term loan, the interest is relatively lower.

f. **Good Relationship**

Usually banks classify the main customers (primary) and regular customers (secondary). This classification is based on the activity and the customer loyalty to the bank. Major customers usually have a good relationship with the bank, resulting in the determination of interest rate that is different from a regular customer.

3. **Types of Interest Rate**

According Kuncoro & Suhardjono (2002), the types of interest rates:

a. Interest rates on deposits, consisting of interest rate (counter) that is the interest rate stated on the notice board of each bank or publishers and rate negotiation. Negotiation rate is given to large clients with the intention that the
excess of the interest rate, would be saved in a bank concerned.

b. Savings interest rate, that is the interest rate savings designated as stimuli or remuneration for customers who save money in the bank.

2.1.7. Exchange Rate

1. Definition

Exchange rate is defined as the value of a currency against other currency (Mishkin, 2004). Changes in the exchange rate, according to Paul Krugman and Obstfeld (2000), can be divided into two, namely depreciation and appreciation. Depreciation is decline in the value of domestic currency against foreign currencies, while the appreciation is the increase in the value of domestic currency against foreign currencies. If other condition is fixed (ceteris paribus), the depreciation of the currency of a country makes the prices of goods cheaper for the state foreign parties while the price of foreign goods become more expensive for foreign parties. Also, conversely, the appreciation of a country's currency causes the price of goods expensive for foreign parties, while prices of foreign goods cheaper for the parties in the country.

Exchange rate can be divided into two, namely the nominal exchange rate and the real exchange rate. Nominal exchange rate is the relative price of currencies between the two countries. If the value of IDR against the US dollar is IDR 13,500 per USD then it can be exchanged as 1 USD to IDR 13,500 in the foreign exchange market. Whereas the real exchange rate is the relative price of an item between the two countries. Thus the real
exchange rate indicates an exchange of goods in a country with other countries. The real exchange rate is often referred to as the terms of trade.

2.2. Previous Research

Several studies have been conducted in determining factors that affect banks’ profitability, analysing about the effect of the independent variables towards the dependent variable. Review of previous research can be seen as covered in Table 2.1 below:

<table>
<thead>
<tr>
<th>No</th>
<th>Researcher</th>
<th>Title</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Syafri (2012)</td>
<td>Factors Affecting Bank Profitability in Indonesia</td>
<td>Loan, Equity, Inflation, Operational Efficiency, Size, and Credit Risk have significant influence towards ROA, but Economic Growth and Non-Interest Income have not significant influence on ROA.</td>
</tr>
<tr>
<td>2</td>
<td>Mohd Rahimie &amp; Abdul Kariem (2012)</td>
<td>Determinants of Commercial Banks’ Return on Asset: Panel Evidence from Malaysia</td>
<td>GDP, Inflation, and Interest Rate have positive significant influence towards ROA, while Stock Market Development shows negative significant influence.</td>
</tr>
<tr>
<td></td>
<td>Authors</td>
<td>Title</td>
<td>Findings</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>Mohammad Nayeem Abdullah, Kamruddin Parvez, Salma Ayreen (2014)</td>
<td>Bank Specific, Industry Specific and Macroeconomic Determinants of Commercial Bank Profitability: A Case of Bangladesh</td>
<td>Bank Size, Loan, Capitalization, Cost Efficiency, Labour Productivity have positive influence towards ROA, while Credit Risk, Inflation and Taxation is negatively related.</td>
</tr>
<tr>
<td>4</td>
<td>Qinhua Pan, Meiling Pan (2014)</td>
<td>The Impact of Macro Factors on the Profitability of China’s Commercial Banks in the Decade after WTO Accession</td>
<td>GDP, Inflation, Interest Rate, Money Supply Growth have a positive influence towards ROA, while Market Capitalization has negative influence.</td>
</tr>
<tr>
<td>5</td>
<td>Sehrish Gul, Faiza Irshad, Khalid Zaman (2011)</td>
<td>Factors Affecting Bank Profitability in Pakistan</td>
<td>Size, Loan, Deposits, Inflation, GDP have positive influence towards ROA, but negative influence of Capital and Market Capitalization.</td>
</tr>
<tr>
<td>6</td>
<td>Silvia Hendrayanti &amp; Harjum Muharam (2013)</td>
<td>Analysis Influence of Internal and External Factors Towards Bank Profitability (A Case Study of Commercial Banks in Indonesia Period January 2003 – February 2012)</td>
<td>EAR and Firm Size have positive significance influence towards ROA, while LAR, BOPO, and Volatility have negative significance influence, along with GDP and Inflation which have positive but insignificant influence.</td>
</tr>
<tr>
<td>No.</td>
<td>Author(s) and Year</td>
<td>Title</td>
<td>Summary</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>7</td>
<td>Evans Ovamba Kiganda (2014)</td>
<td>Effects of Macroeconomic Factors on Commercial Banks Profitability in Kenya: Case of Equity Bank Limited</td>
<td>GDP and Inflation have a positive and insignificant influence towards ROA, whereas Exchange Rate has a negative and insignificant influence.</td>
</tr>
<tr>
<td>8</td>
<td>Tomola Marshal Obamuyi (2013)</td>
<td>Determinants of Banks’ Profitability in A Developing Economy: Evidence from Nigeria</td>
<td>Bank Capital, Interest Rate, GDP have a positive significant influence towards ROA while Size, Expense Management, have a negative significant influence towards ROA.</td>
</tr>
<tr>
<td>9</td>
<td>M. Bilal, Asif Saeed, Ammar A. Gull, &amp; T. Akram (2013)</td>
<td>Influence of Bank Specific and Macroeconomic Factors on Profitability of Commercial Banks: A Case Study of Pakistan</td>
<td>Size, NIM, Industry Production Growth Rate, GDP have positive significant influence, insignificant for Deposit, Capital, Inflation, and negative for Non-performing Loan towards ROA.</td>
</tr>
</tbody>
</table>

Source: Adjusted by Researcher
2.3. Influence of Independent Variables on Dependent Variable

2.3.1. The Influence of Size towards ROA

*Size* is the total assets which is used to capture the fact that larger banks are better placed than smaller banks in harnessing economies of scale in transactions to the plain effect that they will tend to enjoy a higher level of profits. It accounts for the existence of economies or diseconomies of scale (Naceur & Goaied, 2008). The variable is measured as the natural log of total assets (Saona, 2011). Economic theory suggests that market structure affects firm performance (Haron, 1996) and that if an industry is subject to economies of scale, larger institutions would be more efficient and could provide service at a lower cost (Rasiah, 2010).

A large bank could create economies of scale which lower the average cost and has a positive impact on bank profits. Also, the theory of the banking firm asserts that a firm enjoys economies of scale up to a certain level, beyond which diseconomies of scale set in. This implies that profitability increases with increase in *Size*, and decreases as soon as there are diseconomies of scale. Alpper & Anbar (2011) and Gur, Irshad & Zaman (2011) found a direct relationship between the *Size* of the banks and profitability. Consequently, a positive relationship is expected between *Size* and profits. Bikker & Hu (2002) and Goddard, Molyneux, & Wilson (2004) found that *Size* has a positive influence towards profitability, account for *Size* related to economies and diseconomies of scale.

2.3.2. The Influence of Capital towards ROA

*Capital* is taken as the ratio of equity capital to total assets. It is interesting to note that higher the *Capital* level breeds higher profitability level since by having more *Capital*, a bank can easily
adhere to regulatory Capital standards so that excess Capital can be provided as loan (Berger, 1995). The Capital which is measured by total equity over total asset reveals Capital adequacy and should capture the general safety and soundness of the financial institution. It indicates the ability of a bank to absorb unexpected losses (Javaid, Anwar, Zaman, & Gaffor, 2011).

*Capital* is expected to have a positive and significant impact on ROA, because *Capital* as an indicator of the availability of *Capital* to maintain liquidity (protective function) and the continuity of its operations so as to protect the investors from bankruptcy. The role of the owner is able to encourage the management improve the efficiency of the performance which will impact on earnings, the company acquired, in addition to the existence of *Capital* can protect customers from losses and to maintain public confidence because of the available *Capital* to keep their funds. Theoretically it is said that the higher the value of the *Capital*, the better the investment spending budget in the bank so that the bank's ability to increase its profits become more optimal (Hendrayanti & Muharam, 2013). Gul, Irshad, & Zaman (2011), Zeitun (2012), and Trujilo-Ponce (2012) found a positive significance relationship between *Capital* and Return on Asset.

### 2.3.3. The Influence of Loan towards ROA

Activities of the bank are to raise funds from surplus units and lend them to deficit units. From these activities the bank will earn net interest margin. The larger the Loan, the greater the net interest margin, and the higher bank profits. Loan is the main source of income and is expected to have a positive impact on bank performance (Syafri, 2012).
Other things constant, the more deposits are transformed into Loan, the higher the interest margin and profits. However, if a bank needs to increase risk to have a higher Loan-to-Asset ratio, then profits may decrease. The relationship between Loan and ROA is positive because of the higher credit is given, the greater the interest income earned, so that the rate of Return on Asset will be higher (Gul, Irshad, & Zaman, 2011). Sufian (2011) and Sasrosuwito & Suzuki (2011) reported a positive and significant relationship between the Loan and profitability.

2.3.4. The Influence of Gross Domestic Product towards ROA

A country's economic growth reflects increased economic activity and incomes in the country. High economic growth also reflects good business prospect, including banking. Therefore, it can be expected that at a high rate of economic growth, bank profits are also high (Syafri, 2012). The GDP of a country is closely related to the welfare and prosperity that can be perceived by the population of the country. GDP is also a macro-economic indicator that may affect the profitability of the bank: if the GDP rises then it will be followed by an increase in people's income thus their ability to save is also increased. The increase this saving will affect the profitability of banks (Sukirno S., 2003).

The theory is reinforced by the results of the research conducted by Ali et al. (2011) conducted in commercial banks and Islamic Bank in Pakistan, where the results of the research concluded that the GDP has a significant positive correlation with the amount of savings collected by the Bank in Pakistan, along with researches conducted by Trujillo-Ponco (2012) and Zeitun (2012) which found a direct relationship between GDP and Return on Asset.
2.3.5. **The Influence of Interest Rate towards ROA**

A rising *IR* can give advantage to the banks by adjusting the spread between borrowing rates and savings rates. The banks’ revenue impact from increase in *IR* can be viewed in two ways. First, the impact towards banks’ newly acquired assets that further scale up the value of the property. Secondly, based on bank’s decision on which loan or securities they want to purchase. Rates on loan are usually higher than rates on marketable securities in time of rising *IR*, hence banks prefer go for loan to earn higher revenues instead of securities (Jamal, Karim, & Hamidi, 2012).

The bank lending rate is expected to have a positive impact on bank profitability. This is because *IR* directly impacts bank interest income and expenses, and the net result that further affects profitability (Obayumi, 2013). An environment of low *IR* coupled with fierce competition among banks could limit the possibilities for banks to establish appropriate prices for their loan and deposits, putting pressure on the operating margin and negatively affecting banks’ profitability (Trujillo-Ponco, 2012). Athanasoglou, Brissimis, & Delis (2005) and Anwar & Herwany (2006), Zhang & Dong (2011), Arpa, Guilini, Ittner, & Pauer (2011) and Jamal, Karim, & Hamidi (2012) found a positive and significant influence of *IR* towards ROA.

2.3.6. **The Influence of Exchange Rate towards ROA**

Currency *Exchange Rate* is the price at which a country's currency can be converted into other currencies (Downes & Goodman, 1994). The price of one currency in the form of foreign currency is called the exchange rate. The *Exchange Rate* of the currency affects the economy when the exchange rate appreciates or depreciates. Fluctuations on *Exchange Rate* changes are the center of attention of foreign exchange market (Manurung & Manurung, 2009).
Foreign currency *Exchange Rate* is one of indicators for banking profitability because in its activities, the bank provides foreign exchange trading services. In a normal situation, foreign exchange trading is basically very advantageous because the transaction generates profit in the form of foreign exchange. It happens due to the perpetrators of foreign exchange trading has always offered two exchange rates (Loen & Ericson, 2008). In the transaction, the exchange rate has become a concern as it is able to affect the profitability of the bank. A research conducted by Dwijayanthy & Naomi (2009) showed that there is a negative significant influence of *Exchange Rate* towards *Return on Asset*.

### 2.4. Theoretical Framework

The research analyses about the influence of internal factors which are *Size*, *Capital*, *Loan*, and external factors which are *GDP*, *IR*, and *ER* towards profitability *ROA* (A Case Study of Commercial Banks in Indonesia). The theoretical framework uses methods based on the independent variables (*X₁*, *X₂*, *X₃*, *X₄*, *X₅*, and *X₆*) that affect the dependent variable (*Y*). The independent variables in this research are *Size* (*X₁*), *Capital* (*X₂*), *Loan* (*X₃*), *GDP* (*X₄*), *IR* (*X₅*), and *ER* (*X₆*) while the dependent variable is *ROA* (*Y*). The theoretical framework could be simplified as follow:
2.5. Hypothesis

Hypothesis is a temporary allegation of the research that will be examined, based on the literature review above then hypotheses that can be submitted as a temporary answer to the problems of this study are as follows:

Hypothesis 1: Size has partial significant influence towards ROA of 18 commercials banks listed in IDX during period 2009 – 2013.

Hypothesis 2: Capital has partial significant influence towards ROA of 18 commercials banks listed in IDX during period 2009 – 2013.

Hypothesis 3: Loan has partial significant influence towards ROA of 18 commercials banks listed in IDX during period 2009 – 2013.
Hypothesis 4: GDP has partial significant influence towards ROA of 18 commercials banks listed in IDX during period 2009 – 2013.

Hypothesis 5: IR has partial significant influence towards ROA of 18 commercials banks listed in IDX during period 2009 – 2013.

Hypothesis 6: ER has partial significant influence towards ROA of 18 commercials banks listed in IDX during period 2009 – 2013.

Hypothesis 7: Size, Capital, Loan, GDP, IR, and ER have simultaneous significant influence towards ROA of 18 commercials banks listed in IDX during period 2009 – 2013.
CHAPTER III

METHODOLOGY

3.1. Research Design

There are two methods in doing a scientific research which are frequently used; they are qualitative and quantitative methods. The differences between qualitative and quantitative research are the type of data, research process, instrument in collecting data and the purpose of the research. According to Nkwi, Nyamongo, Ryan (2001) qualitative research involves any research that uses data that do not indicate ordinal values. Quantitative research according to Aliaga & Gunderson (2005) is explaining phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics). Quantitative research puts emphasis on collecting and analysing information in the form of numbers and on the procedures of comparing groups or relating factors about individual or groups in experiments, correlational studies, and surveys.

For this research, researcher use quantitative method since the purpose is to analyse the influence and significant relationship between the independent variables toward the dependent variable. Quantitative method use numbers to prove or disapprove a hypothesis of the research. It provides fundamental connection between empirical observation and mathematical expression of quantitative relationship (Castellan, 2010). To statically process the data, the researcher uses the prominent statistical software and the latest version of Statistical Package for Social Science; that is Statistical Package for Social Science Version 22. Table 3.1 below summarises the characteristics of qualitative and quantitative research:
Table 3.1 Characteristics of Qualitative and Quantitative Research

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Qualitative Research</th>
<th>Quantitative Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>To understand &amp; interpret social interactions</td>
<td>To test hypotheses, look at cause &amp; effect, &amp; make predictions</td>
</tr>
<tr>
<td>Group Studied</td>
<td>Smaller &amp; not randomly selected</td>
<td>Larger &amp; randomly selected</td>
</tr>
<tr>
<td>Variables</td>
<td>Study of the whole, not variables</td>
<td>Specific variables studied</td>
</tr>
<tr>
<td>Type of Data Collected</td>
<td>Words, images, or objects</td>
<td>Numbers and statistics</td>
</tr>
<tr>
<td>Form of Data Collected</td>
<td>Qualitative Data such as open-ended responses, interviews, participant observations, filed notes, &amp; reflections</td>
<td>Quantitative Data based on precise measurements using structured &amp; validated data-collection instruments</td>
</tr>
<tr>
<td>Type of Data Analysis</td>
<td>Identify patterns, features, themes</td>
<td>Identify statistical relationships</td>
</tr>
<tr>
<td>Objectivity and Subjectivity</td>
<td>Subjectivity is expected</td>
<td>Objectivity is critical</td>
</tr>
<tr>
<td>Role of Researcher</td>
<td>Researcher &amp; their biases may be known to participants in the study &amp; participant characteristics may be known to the researcher</td>
<td>Researcher &amp; their biases are not known to participants in the study &amp; participant characteristics are deliberately hidden from the researcher (double blind studies)</td>
</tr>
<tr>
<td>Results</td>
<td>Particular or specialized finding that is less generalizable</td>
<td>Generalizable findings that can be applied to other populations</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------------</td>
<td>-----------------------------------------------------------------</td>
</tr>
<tr>
<td>Scientific Method</td>
<td>Exploratory or bottom-up: the researcher generates a new hypothesis and theory from the data collected</td>
<td>Confirmatory or top-down: the researcher tests the hypothesis and theory with the data</td>
</tr>
<tr>
<td>View of Human Behaviour</td>
<td>Dynamic, situational, social &amp; personal</td>
<td>Regular &amp; predictable</td>
</tr>
<tr>
<td>Most Common Research Objectives</td>
<td>Explore, discover &amp; construct</td>
<td>Describe, explain &amp; predict</td>
</tr>
<tr>
<td>Focus</td>
<td>Wide-angle lens; examines the breadth &amp; depth of phenomena</td>
<td>Narrow-angle lens; tests a specific hypotheses</td>
</tr>
<tr>
<td>Nature of Observation</td>
<td>Study behavior in a natural environment</td>
<td>Study behavior under controlled conditions; isolate casual effects</td>
</tr>
<tr>
<td>Nature of Reality</td>
<td>Multiple realities; subjective</td>
<td>Single reality; objective</td>
</tr>
<tr>
<td>Final Report</td>
<td>Narrative report with contextual description &amp; direct quotations from research participants</td>
<td>Statistical report with correlations, comparisons of means &amp; statistical significance of findings</td>
</tr>
</tbody>
</table>

*Source: Xavier (2012)*
3.2. **Research Framework**

Research framework is the structure of the research that shows the process of the analysis in order to achieve the best results. This research begins with identifying the problem that occurs in and/or to the object of the study which is briefly described in a statement. Basic theories from the literature review are essential to grasp thus the fundamental knowledge for the research is built and constructed especially about the variables willing to be undertaken in the research. Then, the decision on the variables to be studied and undertaken in the research is made.

This leads to data collection taken from various sources which provide the secondary data where all of the data is to be tested using several tests i.e. multiple regression test in the statistical software. Results of the tests will be analysed where eventually the researcher will build a conclusion for the research based on the analysis that has been conducted.
3.3. Sampling Design

Sampling is the process of selecting an appropriate number of the right representative from the population, thus, generalization can be prepared based on the study of the sample and an understanding of its characteristics (Sekaran & Bougie, 2011). Sampling design is formed with the purpose of obtaining information from the sample concerning the population. A sample

Figure 3.1 Research Framework

Source: Constructed by the Research
is a part of population. A small group that is observed is sample, and the larger group about generalization is called as population (Ary, Jacobs, Razavieh, & Sorensen, 2009).

The researcher implements non-probability sampling to gather the information from the population. Non-probability sampling is the procedure which does not give any basis for estimating the opportunity that each item in the population has of being included in the sample (Kumar, 2008). The samples in this research are taken 18 commercial banks which are listed in IDX and provide the financial statements period 2009 – 2013.

**Table 3. 2 List of Research Samples**

<table>
<thead>
<tr>
<th>No.</th>
<th>BANK</th>
<th>No.</th>
<th>BANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bank Mandiri</td>
<td>10</td>
<td>Bank OCBC NISP</td>
</tr>
<tr>
<td>2</td>
<td>Bank Rakyat Indonesia</td>
<td>11</td>
<td>Bank Mega</td>
</tr>
<tr>
<td>3</td>
<td>Bank Central Asisa</td>
<td>12</td>
<td>Bank Bukopin</td>
</tr>
<tr>
<td>4</td>
<td>Bank Negara Indonesia</td>
<td>13</td>
<td>Bank Artha Graha Internasional</td>
</tr>
<tr>
<td>5</td>
<td>Bank CIMB Niaga</td>
<td>14</td>
<td>Bank Mayapada Internasional</td>
</tr>
<tr>
<td>6</td>
<td>Bank Danamon</td>
<td>15</td>
<td>Bank Victoria International</td>
</tr>
<tr>
<td>7</td>
<td>Bank Permata</td>
<td>16</td>
<td>Bank Mutiara</td>
</tr>
<tr>
<td>8</td>
<td>Bank Tabungan Negara</td>
<td>17</td>
<td>Bank Windu Kentjana International</td>
</tr>
<tr>
<td>9</td>
<td>Bank Internasional Indonesia</td>
<td>18</td>
<td>Bank Capital Indonesia</td>
</tr>
</tbody>
</table>

*Source: IDX, Constructed by Researcher*

There are three types of data in measuring variables Xn to Y which are time series, cross section, and panel data. Time series data are observations on a unit at a different time, while cross section data are observations of the predictor variables and the dependent variables at the same time. Panel data
is the combination of time series data and cross section data. Both time series and cross-section when combined, enhances the quality and quantity of data in ways that would be impossible using only one of these two dimensions (Gujarati D. N., 2004). This research uses panel data where the sample size will be based on the observations on a unit at a different time and variables observed at the same time. The sample size is calculated as shown in the table below.

**Table 3. 3 Sample Size Calculation**

<table>
<thead>
<tr>
<th>Year Observed</th>
<th>Banks Observed</th>
<th>Total Banks Observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>18 Indonesian Commercial Banks</td>
<td>18</td>
</tr>
<tr>
<td>2010</td>
<td>18 Indonesian Commercial Banks</td>
<td>18</td>
</tr>
<tr>
<td>2011</td>
<td>18 Indonesian Commercial Banks</td>
<td>18</td>
</tr>
<tr>
<td>2012</td>
<td>18 Indonesian Commercial Banks</td>
<td>18</td>
</tr>
<tr>
<td>2013</td>
<td>18 Indonesian Commercial Banks</td>
<td>18</td>
</tr>
<tr>
<td>Total Sample Size</td>
<td></td>
<td>90</td>
</tr>
</tbody>
</table>

*Source: Adjusted for Research Purpose*

3.4. **Research Instrument**

Research Instrument is the tool that used to answer the research questions stated in the previous chapter, which also used to gather, examine, investigate an issue or collecting, process, analyse, and present the data in a systematic and objective in order to solve the problem or to test a hypothesis. The researcher intention is to gather the data and/or information from as much various sources.

Data can be obtained from primary or secondary data. Primary data refers to information obtained first-hand by the researcher on the variables of
interest for specific purpose of the study and secondary data refer to information gathered from sources that already exist (Sekaran & Bougie, 2010). Based on the research framework, this research uses secondary data as its variables to be processed. Below is the table that will briefly explain the information.

In addition, this research uses IBM SPSS version 22 to calculate the data. It is most commonly used software by many researchers to obtain the relationship between variables in their research. In this research, SPSS is used to process the data statistically in order to obtain the output for this research such as multiple regression, hypothesis testing, and descriptive statistics. Furthermore, the researcher also uses Microsoft Excel 2013 to input and save the raw data obtained. In addition, in order to open some of the previous research in PDF form, the researcher uses Adobe Reader IX.

### 3.5. Data Collection Procedure

The data used in this research are internal factors which are the ratios from the banks’ annual financial reports and external factors which are macroeconomic variables. Below is the details of the data that are used with regard to conducting the research:


The internal factors data are obtained from the server of the IDX website which are annual financial reports of the observed 18 commercial banks which then are processed into ratios. The supporting data are the external factors which are macroeconomic variables; they are, GDP, taken from the
official website of Indonesian Statistical Bureau, and \( IR \) and \( ER \) which are obtained from the official website of Bank Indonesia. To organise the data more neatly, the researcher classified the data based on their nature, whether they belong to internal or external factors.

### 3.6. Definition of Operational Variables

Operational definition is the indication of how the variables are measured. Below is the summary of operational definition of variables in this research.

**Table 3.4 Research Variables and Operational Definition**

<table>
<thead>
<tr>
<th>Research Variables</th>
<th>Operational Definition</th>
<th>Unit</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Asset</td>
<td>ROA is a ratio of Net Income to Total Asset (Hendrayanti &amp; Muharam, 2013)</td>
<td>%</td>
<td>( ROA = \frac{Net\ Income}{Total\ Asset} \times 100% )</td>
</tr>
<tr>
<td>Size</td>
<td>Size is the total asset (Siahaan, Suhadak, Handayani, &amp; Solimun, 2014)</td>
<td>Million IDR</td>
<td>Total Value of Assets</td>
</tr>
<tr>
<td>Capital</td>
<td>Capital is the ratio of Total Equity to Total Asset (Hendrayanti &amp; Muharam, 2013)</td>
<td>%</td>
<td>( EAR = \frac{Total\ Equity}{Total\ Asset} \times 100% )</td>
</tr>
<tr>
<td>Loan</td>
<td>Loan is the ratio of Total Loan to Total Asset (Hendrayanti &amp; Muharam, 2013)</td>
<td>%</td>
<td>( LAR = \frac{Total\ Loans}{Total\ Asset} \times 100% )</td>
</tr>
<tr>
<td>GDP</td>
<td>Currency value of all final goods and services produced within a country’s borders (Investopedia, 2015)</td>
<td>Million IDR</td>
<td>Yearly GDP of Indonesia retrieved from Indonesian Statistical Bureau</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>Interest Rate</td>
<td>Interest Rate is the cost of borrowing (Mishkin, 2004)</td>
<td>%</td>
<td>Monthly Bank Indonesia Rates</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>Exchange Rate is The amount of a country's currency (Fabozzi &amp; Modigliani, 2009)</td>
<td>IDR</td>
<td>Monthly rate average of IDR/USD</td>
</tr>
</tbody>
</table>

Source: Adjusted by Researcher

3.7. Statistical Treatment

3.7.1. Classical Assumption Test

Gujarati (2014) states that it needs to avoid a deviation of classical assumption test to avoid problem in multiple linear regression analysis. Thus, the very first step to do in this research in processing the data is to conduct classical assumption test such as normality, multicolinearity, heteroscedasticity and auto-correlation tests.

a) Normality Test

The purpose of this assumption is to test whether the dependent and independent variables have a normal distribution or not in a regression model. A regression model is good if the distribution is normal or approaching normal (Santoso, 2013). The normality assumption could be analysed by:
1. **Histogram**

Testing in histogram model has provision that normal data show the bell shape figure. The good data is data that has normal distribution pattern. If the data is not showing a bell shape or deviated to the right or left, the data are not normal.

![A histogram of the absorbance values given in Table 1](image)

**Figure 3. 2 Graph of Normal Histogram**

*Source: www.xlstat.com*

However, somehow it could be confusing to only see the graph without any precision, especially for small sample size. Another method that can be used to look at look at is normal probability plot graph that compares the cumulative distribution from the normal distribution.

2. **Normality Probability Plot Graph**

In this testing, the terms used these requirements:

a. If the data spread around the diagonal line and follow the direction of diagonal line, the regression model has normal distribution.
b. If the data spread away from the diagonal line and follow the direction of diagonal line, the regression model has not normal distribution.

Below is Figure 3.3 that shows the Normal P-Plot Distribution:

![Normal P-Plot Distribution](source.png)

**Figure 3.3 Graph of Normal P-Plot Distribution**

*Source: www.xlstat.com*

b) **Multicollinearity Test**

This assumption is used to find out any correlation between the independent variables in this regression. If there is any correlation, there is multicollinearity exist (Santoso, 2013). A good regression model should not have a correlation between the independent variables.

Multicollinearity is a condition when there is a linear relationship or high correlation between each independent variable in a regression model (Ariyoso, 2009). In this research, the method
to testing multicolinearity in regression model is from VIF (Variance Inflationary and tolerance value that looked in SPSS output. Ghozali (2006) define the multi co-linearity test consist of:

a. If tolerance value > 0.1 and VIF value < 10, so there are no multicolinearity between independence variables.

b. If tolerance value < 0.1 and VIF value > 10, so there are multicolinearity between independence variables.

c) **Heteroscedasticity Test**

According to Ghozali (2006), this testing tried to analyse whether multiple regression model have an unequal of variance from residual from one observation to another. The good multiple regression analysis shows homocedasticity model or there is no heteroscedasticity exist (Santoso, 2013). According to Santoso (2013), the indicators of heteroscedasticity assumption could be based on:

a. If there is any clear patterns consist of points which create a specific well-ordered pattern, there is heteroscedasticity exist.

b. If there is no well-ordered pattern, the points are spread on above and below point 0 in Y axis, then there is no heteroscedasticity exist.

An acceptable example of a good multiple regression model that has no heteroscedasticity problem is expected to look like points a, b, and c in the figure below:
d) Auto-correlation Test

Auto-correlation refers to the correlation of a time series with its own past and future values, and which refers to the correlation between members of a series of numbers arranged in time. It appears because the time-series observation data is correlated each other. This problem appears because the residual (intrusive error) on t period is correlated with the residual on t-1 period. A model regression is called a good model regression when there is no auto-correlation exist (Santoso, 2013).

To detect auto-correlation, there is a statistical test called Durbin-Watson (DW) test (Ghozali, 2006). DW test is conducted by creating a hypothesis:

1. Ho : There is no auto-correlation exist \( (r = 0) \)
2. Ha : There is an auto-correlation exist \( (r \neq 0) \)
The characteristic required to decide whether there is an auto-correlation exist or not are:

1. If the value of Durbin-Watson is located between upper bound (dU) and 4-dU, then auto-correlation coefficient = 0, means that there is no auto-correlation.
2. If the value of Durbin-Watson is lower than lower bound (dL), then auto-correlation coefficient > 0, means that there is a positive auto-correlation.
3. If the value of Durbin-Watson is higher than 4-dU, then correlation coefficient < 0, means there is a negative auto-correlation.
4. If the value of Durbin-Watson is located between dU and dL or between 4-dU and 4-dL, then the result cannot be concluded.

3.7.2. Hypothesis Testing

a) Multiple Regression Test

This research is using multiple linear regression analysis in analyzing the data. According to Santoso (2013), multiple regression is used to forecast dependent variable in the future by analyzing the empirical data of independent variables toward dependent variable in multiple linear regression model. It is used to show the influence between one variable to another. Multiple regression analysis is useful to determine which independent variable that has a tight relationship with the dependent variable. Multiple linear regression analysis in this study is calculated using SPSS v.22.0. Multiple linear regression method used in this research can be formulated as follow:
\[ Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e \]

Source: Berenson & Krehbiel, 2009

Where:

\( Y \) = Return on Asset
\( a \) = Constanta
\( b_n \) = Regression coefficient
\( X_1 \) = Size
\( X_2 \) = Capital
\( X_3 \) = Loan
\( X_4 \) = Gross Domestic Product
\( X_5 \) = Interest Rate
\( X_6 \) = Exchange Rate
\( e \) = Random error/intrusive factor in Return on Asset

Since this research is characterized in fundamental method, the value of regression coefficient is crucial as the basis of analysis. It means that if the coefficient \( b \) is valued positive (+) then it can be concluded that there is a unidirectional influence of independent variables toward dependent variable, every increasing number of independent variables will result to the increasing number of the dependent variable. Otherwise, if the coefficient \( b \) is valued negative (-) then it can be concluded that there is a negative influence, where the increasing number of independent variables will result to the decreasing number of the dependent variable.
b) Coefficient Partial Correlation Analysis (T-Test)

This analysis is used to find out the partial influence from the independent variables to the dependent variable. The significance number (α) that used for T-test is 0.05. The null hypothesis is rejected if the level of significance (p-value) obtained is less than α. In addition, researcher uses T-table analysis as the comparison to determine the significance level. To read the table, it is suggested to find the degrees of freedom (df) by equation $df = n - k$, or by find the value of df2 that is shown in the model summary result. Then match the df with the t-table to find the value of $T_{Table}$, and compare between the $T_{Count}$ with the $T_{Table}$ (Sarwono, 2012). Below are the null and alternative hypotheses for this research:

1. $H_{01}: \beta_1 = 0$ or if significant value $> \alpha$, do not reject $H_0$  
   (There is no significant partial influence of Size towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

   $H_{a1}: \beta_1 \neq 0$ or if significant value $< \alpha$, reject $H_0$  
   (There is a significant partial influence of Size towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

2. $H_{02}: \beta_2 = 0$ or if significant value $> \alpha$, do not reject $H_0$  
   (There is no significant partial influence of Capital towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

   $H_{a2}: \beta_2 \neq 0$ or if significant value $< \alpha$, reject $H_0$  
   (There is a significant partial influence of Capital towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).
3. \( H_03: \beta_3 = 0 \) or if significant value > \( \alpha \), do not reject \( H_0 \)

(There is no significant partial influence of Loan towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

\( H_{a3}: \beta_3 \neq 0 \) or if significant value < \( \alpha \), reject \( H_0 \)

(There is a significant partial influence of Loan towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

4. \( H_04: \beta_4 = 0 \) or if significant value > \( \alpha \), do not reject \( H_0 \)

(There is no significant partial influence of GDP towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

\( H_{a4}: \beta_4 \neq 0 \) or if significant value < \( \alpha \), reject \( H_0 \)

(There is a significant partial influence of GDP towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

5. \( H_05: \beta_5 = 0 \) or if significant value > \( \alpha \), do not reject \( H_0 \)

(There is no significant partial influence of IR towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

\( H_{a5}: \beta_5 \neq 0 \) or if significant value < \( \alpha \), reject \( H_0 \)

(There is a significant partial influence of IR towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

6. \( H_06: \beta_6 = 0 \) or if significant value > \( \alpha \), do not reject \( H_0 \)

(There is no significant partial influence of ER towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

\( H_{a6}: \beta_6 \neq 0 \) or if significant value < \( \alpha \), reject \( H_0 \)
(There is a significant partial influence of ER towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

c) **Coefficient Simultaneous Correlation Analysis (F-Test)**

This analysis is used to find out the simultaneously influence between the independent variables and the dependent variable. The significance level ($\alpha$) used is 0.05. The alternative hypothesis cannot be rejected if the F significant value is less than $\alpha$. In addition, researcher uses F-table analysis as the comparison to determine the significance level. The value of $F_{\text{Count}}$ in ANOVA table should be greater than the $F_{\text{Table}}$. To read the table, researcher needs to find the value for numerator degree of freedom (df1; $k-1$) and denominator degree of freedom (df2; $n-k$) and then compares the value between the $F_{\text{Count}}$ and the $F_{\text{Table}}$ value. If the value of the $F_{\text{Count}}$ greater than the $F_{\text{Table}}$ value means the independent variables give simultaneously influence to the dependent variable (Sarwono, 2012).

\[
H_{07} = \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0 \text{ or } F \text{ significance } > \alpha, \text{ accept } H_0
\]

(There is no simultaneous influence of Size, Capital, Loan, GDP, IR, and ER towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).

\[
H_{a7}: \text{at least there is one } \beta_i \neq 0, \text{ if } F \text{ significance } F < \alpha, \text{ reject } H_0
\]

(There is a simultaneous influence of Size, Capital, Loan, GDP, IR, and ER towards ROA of 18 commercial banks listed in IDX period 2009 – 2013).
d) **Coefficient of Determination Analysis (R²)**

Identification of determinant (R²) is used to find out the percentage how much the influence of independent variables to the dependent variable in this multiple regression model. Coefficient determinant indicates the contribution of independent variables (X) to the dependent variable (Y). The greater the value of the coefficient determinants, the better the ability of the dependent variable (Y). If the determinant (R²) greater (close to one) then it can be said that the significant effect of the independent variables *Size (X₁), Capital (X₂), Loan (X₃), GDP (X₄), IR (X₅)*, and *ER (X₆)* to the dependent variable *ROA (Y)* are large.

Conversely, if the determinant (R²) smaller (approaching zero) then it can be said that the significant effect of independent variables *Size (X₁), Capital (X₂), Loan (X₃), GDP (X₄), IR (X₅)*, and *ER (X₆)* to the dependent variable *ROA (Y)* is getting smaller. This means that the model used was not strong enough to explain the participant independent variables (X₁₋₆) to the dependent variable (Y).
CHAPTER IV

INTERPRETATION

4.1. Company Profile

4.4.1. BMRI – PT Bank Mandiri (Persero) Tbk

Bank Mandiri was established on 2 October 1998, as part of the bank restructuring programme of the Government of Indonesia. In July 1999, four state-owned banks - Bank Bumi Daya, Bank Dagang Negara, Bank Exim and Bapindo - were amalgamated into Bank Mandiri. The history of these four banks can be traced back to over 140 years, and together they had contributed to the beginning of the Indonesian banking sector.

As of December 2011, Bank Mandiri's total assets have reached IDR 551.9 trillion (equivalent to USD 60.86 billion), more than double of that in 2006 (IDR 267 trillion) - which is a growth of 15.6% (CAGR); making us the largest bank in Indonesia. Their loan also grew by 22% (CAGR) to IDR 314.4 trillion (equivalent to USD 34.67 billion) from IDR 118 trillion in 2006 while their net profit grew by 38.3% (CAGR) to IDR 12.2 trillion (equivalent to USD 1.35 billion) from IDR 2.4 trillion in 2006. Besides being the nation's largest lender (on a consolidated basis), Bank Mandiri is also the largest depository in the country with IDR 422.3 trillion (equivalent to USD 46.57 billion) in third party funds. In terms of asset quality, their gross and net NPL ratios stand at 2.21% and 0.52% respectively.
One of the key milestones towards realizing Bank Mandiri’s vision during the second stage of the transformation process was the successful completion of a rights issue in February 2011 that strengthened their capital base. With this, Bank Mandiri’s capital has reached IDR 62.7 trillion (equivalent to USD 6.9 billion), representing an increase of 48.9% year-on-year. Hence, they became the first bank in Indonesia to achieve the status of an international bank according to the Indonesian Banking Architecture (Arsitektur Perbankan Indonesia/API).

They are also supported by their subsidiaries which contribute significant income of approximately 12% to the total consolidated net profit of the Bank. Today, Bank Mandiri has the largest ATM network with 10,000 units throughout Indonesia. They have earned the distinction of being a most trusted company in Indonesia for corporate governance for 5 consecutive years. They are ready to become an anchor bank in Indonesia as they have fulfilled the criteria set by Bank Indonesia, and propelled ahead by their vision to be Indonesia's Most Admired and Progressive Financial Institution.

4.4.2. BBRI – PT Bank Rakyat Indonesia (Persero) Tbk

Bank Rakyat Indonesia (BRI) is one of the largest state-owned banks in Indonesia. Initially, Bank Rakyat Indonesia (BRI) was established in Purwokerto, Central Java by Raden Bei Aria Wirjaatmadja under the name of De Poerwokertosche Hulp en Spaarbank der Inlandsche Hoofden or "Help and Savings Bank of the Aristocrats in Purwokerto", a financial institution which served people of the Indonesian nationality (the natives). The institution was incorporated on December 16, 1895, which later becomes the anniversary of BRI.
In the period after the independence of the Republic of Indonesia, pursuant to Government Regulation No. 1 year 1946 Article 1, it is stated that BRI is the first State-Owned Bank in the Republic of Indonesia. During the period of war for defending the independence in 1948, BRI had temporarily ceased its activities and it just started to resume its activities only after the Renville agreement in 1949 by changing its name into Bank Rakyat Indonesia Serikat. At that time, through Government Regulation in Lieu of Law No. 41 year 1960, Bank Koperasi Tani and Nelayan (BKTN) was established as a result of the merger between BRI, Bank Tani Nelayan and Nederlandsche Maatschappij (NHM). Later, based on the Presidential Stipulation No. 9 year 1965, BKTN was integrated into Bank Indonesia under the name of Bank Indonesia Urusan Koperasi Tani and Nelayan.

After one month, the Presidential Stipulation No. 17 year 1965 concerning the establishment of a single bank under the name of Bank Negara Indonesia was issued. Under this new provision, Bank Indonesia Urusan Koperasi, Tani and Nelayan (ex-BKTN) was integrated under the name of Bank Negara Indonesia unit II for the Rural sector, while NHM became Bank Negara Indonesia unit II for the Export-Import (Exim) sector.

Law No. 14 year 1967 concerning Basic Banking Law and Law No. 13 year 1968 concerning the Central Bank Law essentially restored the function of Bank Indonesia as the Central Bank and separated Bank Negara Indonesia Unit II for the Rural Sector from the Export-Import Sector to become two Banks, namely Bank Rakyat Indonesia and Bank Ekspor Impor Indonesia, respectively. Subsequently, Law No. 21 year 1968 re-stipulated the basic tasks of BRI as a commercial bank.
Since August 1, 1992, under the Banking Law No. 7 year 1992 and Regulation of the Government of the Republic of Indonesia No. 21 year 1992, BRI’s status has been changed into a limited liabilities company. At that time, BRI’s ownership was still in the hand of the Government of the Republic of Indonesia for 100%. In 2003, the Indonesian Government decided to sell 30% of the bank’s shares, and therefore the bank became a public company under the official name of PT. Bank Rakyat Indonesia (Persero) Tbk., which is still used until now.

4.4.3. **BBCA – PT Bank Central Asia Tbk**

PT Bank Central Asia Tbk is an Indonesia-based company primarily engaged in banking sector. It operates its bank under the name Bank BCA or BCA. Besides conventional banking, it also offers Shariah-compliant banking services through its subsidiary, PT Bank BCA Syariah. Its other subsidiaries include PT BCA Finance, which is engaged in financing business; PT BCA Sekuritas, which provides securities underwriting and brokering services; PT Asuransi Umum BCA, which provides general insurance, and BCA Finance Ltd, which is engaged in money lending business.

BCA officially founded on 21 February 1957 with name Bank Central Asia NV. Lots of things has traversed since the bank was founded, and perhaps the most significant is the monetary crisis that occurred in 1997.

The crisis brings a tremendous impact at overall banking system in Indonesia. However, specifically, this condition affects cash flow in BCA and even had threatened the continuation. Many client panic and then abuzz withdrawn their cash. As a result, the bank
forced ask for help from Indonesian government. Indonesian Bank Restructuring Agency (BPPN) then take over BCA in 1998.

Thanks to wise business and decision-making, BCA successfully recovered in the same year. In December 1998, fund from was returned to the point before crisis. BCA’s asset reached Rp 67.93 trillion, whereas in December 1997 only Rp 53.36 trillion. Public confidence to BCA have fully recovered, and BCA submitted by BPPN to Bank Indonesia in 2000. PT Bank Negara Indonesia Tbk

4.4.4. **BBNI – PT Bank Negera Indonesia Tbk**

Founded on July 5, 1946, PT Bank Negara Indonesia (Persero) Tbk., (BNI) which has the total asset of IDR 386,654 billion in 2013 is the first state-owned bank established after Indonesia’s independence. During the struggle for Indonesia’s independence, BNI had once served as both the central bank and a commercial bank, as stipulated in Government Regulation in Lieu of Law No. 2/1946, before transitioning to a strictly commercial bank in 1955. Oeang Republic of Indonesia or ORI, which was the first legal tender issued by the Government of Indonesia on October 30, 1946, was printed and circulated by BNI.

Following the appointment of De Javasche Bank – a legacy of the Dutch Government – as central bank in 1949, the Government limited BNI’s role as a central bank. BNI was subsequently converted to a development bank, and in 1950 was granted the right to operate as a foreign-exchange bank with direct access to international transactions.

In 1955 BNI opened its first overseas branch, which was in Singapore. The role of BNI in developing Indonesia’s economy became increasingly strategic in the 1960s, when the Bank
expanded its coverage to cater to customers of all segments from Sabang to Merauke – by introducing services such as Floating Bank, Roving Bank, Children’s Bank and Sarinah Bank.

The Floating Bank aimed to serve the people living in the islands such as Riau or remote areas not easily accessible by land such as Kalimantan. The Roving Bank was a mobile banking service from a car – a proactive effort to encourage people to develop a saving habit. In accordance with Law No. 17 of 1968, BNI’s mission as a commercial bank under the name of Bank Negara Indonesia 1946, was to improve the people’s economic conditions and to participate in the development of the national economy.

Early on, BNI had already implemented customer segmentation by introducing Sarinah Bank a bank dedicated to female customers with the entire staff consisting of females; and the Children’s Bank that aimed to educate children to develop a saving habit at young age, also featuring children staff.

In 1963 BNI pioneered banking service in universities by opening an Auxiliary Cash Office at the University of North Sumatera (USU), Medan. Currently, BNI maintains branches at nearly all leading public and private universities in Indonesia.

Along the way BNI had repositioned its corporate identity to reflect the dynamics of the financial market. The first identity when BNI was first established was a red circle with lettering ‘BNI 1946’ printed in gold, signifying unity, bravery and patriotism reflecting BNI’s pioneering spirit.

In 1988 that identity was changed into a logo featuring a sailboat and waves, signifying BNI’s position as a state-owned bank ready to enter the global financial market with its overseas branches. The
waves signified BNI’s forward movement as a market-oriented commercial bank.

Following the Asian financial crisis in 1998 that shook the market confidence in the national banking industry, BNI embarked on a restructuring programme that included a rebranding campaign aimed at rebuilding and enhancing its reputation. The new identity featured ‘46’ before ‘BNI’.

The word ‘BNI’ in green reflected strength, uniqueness and robustness; while the number ‘46’ in orange was positioned diagonally to symbolize the new and modern BNI.

BNI once again achieved another milestone through its initial public offering on the Jakarta Stock Exchange and Surabaya Stock Exchange in 1996. In the national history of banking, BNI was the first state-owned bank to go public. In accordance with the divestment of the Government’s shares, BNI issued new shares in 2007 and 2010 through rights issue, subsequently increasing the public’s share to 40%.

With the public’s share now larger, BNI was challenged to deliver superior performance in order to deliver substantial return to the shareholders. Globalization also challenged the banking industry to consistently expand capabilities in providing banking solutions to customers. Historically BNI has focused on corporate banking, supported by a strong retail banking infrastructure. At present, BNI strives to expand the capabilities of both to become BNI’s core strength.

4.4.5. BNGA – PT Bank CIMB Niaga Tbk

Bank CIMB Niaga was incorporated on 26 September 1955 under the name of Bank Niaga. During the initial decades of its
operations, the Bank’s focus was on building core values and developing professionalism in banking. As a result, Bank CIMB Niaga soon came to be recognized as a trusted provider of quality products and services. In 1987, Bank Niaga distinguished itself in the local marketplace by becoming the first Indonesian bank to provide customers with access to their accounts through ATM access. In many ways this came to be recognized as Indonesia’s entry into the modern banking era. Bank CIMB Niaga’s leadership in the application of technology was further enhanced in 1991 when it became the first bank to provide on-line banking facilities.

Bank Niaga was listed on the Jakarta and Surabaya Stock Exchange (now the IDX) in 1989. The decision to become a publicly listed company was a key milestone for the Bank which enabled greater access to capital financing. In many respects this was the key catalyst that launched the Bank’s nationwide expansion.

The Government of Indonesia would temporarily secure a majority shareholding of Bank CIMB Niaga in the wake of the Financial Crisis in the late 1990s. In November 2002 Commerce Asset-Holding Berhad (CAHB), now known as CIMB Group Holdings Berhad (CIMB Group Holdings), acquired a majority control of Bank Niaga from the Indonesia Bank Restructuring Agency (IBRA). It subsequently transferred its shares in the Bank to CIMB Group in August 2007 as part of an internal reorganisation to consolidate all its operating subsidiaries under CIMB Group as the universal banking platform.

In an entirely separate transaction, Khazanah the majority shareholder of CIMB Group Holdings acquired majority ownership of LippoBank on 30 September 2005. It would subsequently transfer its shares to CIMB Group on 28 October 2008 as part of the same internal reorganisation.
Since 2007, Khazanah as the ultimate shareholder of Bank Niaga (via CIMB Group) and of LippoBank, had envisaged the merger as a means to secure the majority shareholders’ obligations toward Bank Indonesia’s Single Presence Policy. The union is the first merger to specifically fulfill these conditions. In May 2008, Bank Niaga changed its name to become Bank CIMB Niaga. Bank CIMB Niaga’s and LippoBank’s Merger Plan Agreement was signed in June 2008. This was subsequently followed by Merger Plan Approval from Bank Indonesia and the issuance of a Merger Notification’s Acceptance Letter from the Ministry of Justice and Human Rights in October 2008. LippoBank officially merged into Bank CIMB Niaga on November 1, 2008 (Legal day 1 or LD1) and launched the Bank’s new logo in recognition.

The merger of LippoBank into Bank CIMB Niaga represents the single greatest leap forward to occur in Southeast Asia’s banking sector in recent times. Bank CIMB Niaga now offers its customer the most comprehensive portfolio of universal banking services available in Indonesia, combining its strengths in retail, SME and corporate banking as well as payment services. The merger makes Bank CIMB Niaga the 5th largest bank in terms of assets, deposits, lending, and branch distribution network. Through its commitment to Integrity, perseverance to always place Customers first and passion for Excellence, Bank CIMB Niaga will continue to leverage its strengths to fully realize all of the synergies which the merger has to offer. These are the core values of Bank CIMB Niaga and are its obligations for the dynamic and promising road ahead.

4.4.6. BDMN – PT Bank Danamon Indonesia Tbk

PT Bank Danamon Indonesia Tbk. was established in 1956. The name Bank Danamon, which was derived from ‘dana moneter’,
meaning monetary fund, was first used in 1976 in place of its original name, Bank Kopra.

In 1988, Bank Indonesia enacted a package of major banking reforms known as the ‘October 1988 Package’ or PAKTO 88. The main aim of PAKTO 88 was to encourage competition in the banking sector by lowering the barrier to entry, including the liberalization of the requirements for the establishment of new private domestic banks and joint-venture banks. As a result of this, Bank Danamon became among the first foreign exchange banks in Indonesia, and became a public company listed on the Jakarta Stock Exchange.

Danamon has set its sights on being ‘The Leading Financial Institution in Indonesia’ with a significant market presence. It aims to achieve this position by being a customer centric organisation covering all customer segments, each with a unique value proposition, centred on sales and service excellence and supported by world class technology. In line with this effort, Danamon aspires to be an employer of choice, respected by all of its stakeholders, while embracing 5 of its values: caring, honesty, passion to excel, teamwork and disciplined professionalism.

Danamon’s focus on fulfilling all of its customers’ needs is reflected in its business approach. Implemented in 2003, a universal banking focus pivoted Danamon’s business expansion ahead. By the end of 2004, Danamon had completed its array of business segments, spanning from mass market, SME & Commercial banking, retail banking, cards business, syariah banking, corporate banking, treasury, capital markets & financial institutions, in addition to Adira Finance. 2004 also marked Danamon establishing a solid entry into the insurance and household financing businesses through Adira Insurance and Adira
Kredit (formerly Adira Quantum). Danamon’s acquisition of American Express card business in Indonesia in 2006 made the bank one of the largest card issuers in the country.

A surviving entity in a merger of 9 Bank Taken Over (BTO) during the Asian financial crisis which began in the late 1990s, Danamon has emerged as one of the largest and strongest financial institutions in the region. With over 50 years of experience, Danamon continues to strive to be a bank that ’make things happen’ for its customers – it’s brand promise.

Danamon is the brand name of one of Indonesia’s largest financial institution by number of employees – approximately 60,681 permanent and non-permanent employees (including subsidiaries) at the end of December 2014; one which focuses on realizing its vision: “We Care and Enable Millions to Prosper”.

Danamon currently ranks as the sixth largest bank by asset size in Indonesia, and operates a network of around 2,125 as of December 2014, including among others conventional branches, Danamon Simpan Pinjam (DSP) outlets and subsidiary units. Danamon is also supported by a comprehensive array of electronic banking conveniences.

4.4.7. **BNLI – PT Bank Permata Tbk**

PT Bank Permata Tbk (PermataBank) is the result of a merger of 5 (five) banks, PT. Bank Bali Tbk, PT. Bank Universal Tbk, PT. Bank Prima Express, PT. Bank Artamedia and PT Bank Patriot in 2002, and today has grown into a major private bank that offers products and services, innovative and comprehensive delivery channels including Internet Banking and Mobile Banking.
PermataBank has aspirations to become a leading financial services provider in Indonesia, with a focus on Consumer and Commercial segment. Serving approximately 2 million customers in 60 cities in Indonesia, as per July 2014 the Bank has 329 branches (16 sharia & 313 conventional branches), 20 Mobile Branches, tree Payment Point, 940 ATM with additional access at more than 69,000 ATMs (VisaPlus, Visa Electron, MasterCard, Alto, ATM Bersama and ATM Prima) and millions of ATMs around the world are connected to the network Visa, Mastercard, Cirrus.

4.4.8. BBTN – PT Bank Tabungan Negara (Persero) Tbk

PT Bank Tabungan Negara (Persero) Tbk provides various commercial banking products and services in Indonesia. Bank BTN has assets of more than IDR 130 trillion and the number of employees reached more than 8000 people. BTN is owned by several shareholders that the majority is the Government of the Republic of Indonesia by 60%. While the remaining 39% owned by the public with a composition of 36% domestic and 63% owned by foreign investors. Its fund products include savings accounts, fixed deposit accounts, and clearing accounts; and credit products comprise individual and general/corporation credit.

The company also provides safe deposit box, real time gross settlement, payroll, money change, and money transfer services, as well as offers credit cards. As of December 31, 2013, it had 87 branches, including 22 sharia branches; 247 sub-branches comprising 21 sharia sub-branches; 486 cash offices, including 7 sharia cash offices; and 2,922 system on-line payment point/on-line post offices. The company was formerly known as Bank Tabungan Pos and changed its name to PT Bank Tabungan Negara (Persero) Tbk in 1963. PT Bank Tabungan Negara (Persero) Tbk
was founded in 1897 and is headquartered in Central Jakarta, Indonesia.

4.4.9. **BNII – PT Bank International Indonesia Tbk**

PT Bank Internasional Indonesia Tbk (“BII”) was established on 15 May 1959. After obtaining a license as a foreign exchange bank in 1988, BII had its shares listed on the Jakarta stock Exchange and Surabaya stock Exchange (now merged as IDX) in 1989. As a publicly listed company, BII has grown to become one of leading private banks in Indonesia.

In 2008, the largest bank in Malaysia that is also one of the leading financial groups in ASEAN, Malayan Banking Berhad (Maybank), acquired BII through its entirely owned subsidiary, Maybank Offshore Corporate Services (Labuan) Sdn. Bhd. (MOCS). Since then, Maybank has become the majority shareholder of BII through two of its subsidiaries, Sorak Financial Holdings Pte. Ltd. (Sorak) and MOCS.

BII is one of the largest banks in Indonesia with an international network and branches spread across all provinces in Indonesia and two overseas branches in Mauritius and Mumbai. BII has also developed e-banking services with its BII Mobile Banking, BII Internet Banking, ATM and CDM which are all connected to more than 20,000 ATMs of the ATM PRIMA, ATM BERSAMA, ALTO, and CIRRUS networks and to 3,500 Maybank ATMs in Singapore and Malaysia through MEPS network.

BII provides a comprehensive range of products and services to individual and corporate customers through Retail Banking, Business Banking and Global Banking as well as auto financing
business through its subsidiaries WOM Finance for two-wheel vehicles and BII Finance for four-wheel vehicles.

4.4.10. NISP – PT Bank OCBC NISP Tbk

Bank OCBC NISP (formerly known as Bank NISP) is the fourth oldest bank in Indonesia, which was founded in April 4th 1941 in Bandung under the name of NV Nederlandsch Indische Spaar En Deposito Bank.

Bank OCBC NISP then grown to be a solid and dependable bank, especially in providing service for small business segments. It officially became a commercial bank in 1967, Foreign exchange bank in 1990 and public corporate in IDX in 1994.

In the end of 1990, Bank OCBC NISP managed to pass the Asia monetary crisis and the fall of banking industry without any recapitalization obligation aid from the government. Bank OCBC NISP became one of the first few banks to resume lending during the crisis. This initiative enabled the Bank to note a high growth.

Bank OCBC NISP good reputation and its promising growth has attracted the interest of International Finance Corporation (IFC), a part of World Bank Group, which then became a shareholder in 2001-2010 and from OCBC Singapore which then became the shareholder Bank OCBC NISP. OCBC Singapore finally became the stakeholder after going through several acquisitions and tender offers since 2004. OCBC Singapore Bank currently holds 85.06% of the stock in OCBC NISP.

With the support from OCBC Bank-Singapore, OCBC NISP has implemented aggressive programmes to strengthen the infrastructure, human resources, information and technology, as well as office networking. This programme was the foundation of
the relocation of the main office of OCBC NISP Tower to the central Jakarta that enables OCBC NISP Bank to gain access to the business centre in Indonesia.

Bank OCBC NISP currently employs more than 6,500 employees. That number spreads over 330 branch offices. With high motivation, Bank OCBC NISP is ready to serve the customers who are in 59 cities in Indonesia.

4.4.11. MEGA – PT Bank Mega Tbk

Starting from a family-owned business called PT. Karman bank founded in 1969 and based in Surabaya, then in 1992 changed its name to PT. Mega Bank and relocating headquarters to Jakarta which in 2013 has a total asset of IDR 66,476 billion.

Along with the development of PT. Mega Bank in 1996 was taken over by THE GROUP (PT. The Global Investindo and PT. The Fellow Investama) a holding company belonging to national employers - Chairul. Further THE GROUP changed its name to CT Corpora.

To further enhance the image of PT. Mega Bank, in June 1997 to change the logo of Bank Mega form of writing the letter M blue yellow with the aim that as public confidence in financial institutions, will be more easily recognized by the new company logo. Then in 2000 made changes to the name of PT. Mega Bank to PT. Bank Mega.

In order to strengthen the capital structure, the same year PT. Bank Mega carry out an Initial Public Offering and listed on the JSE and BES. Thus some of the shares of PT. Mega Bank is owned by the public and changed its name to PT. Bank Mega Tbk.
At the time of economic crisis, Bank Mega sticking out as one of the banks that are not affected by the crisis and continue to grow without the help of government together with Citibank, Deutsche Bank and HSBC.

PT. Bank Mega Tbk. with the motto "Mega Tujuan Anda" or “Your Mega Destination” is growing by leaps and bounds and controlled as well as being capable of leading financial institutions aligned with the leading banks in the Asia Pacific region and has received numerous awards and achievements at national, regional and international levels. In an effort to realize the performance matches the name it bears, PT. Bank Mega Tbk. adhering to the principles of professionalism, transparency and prudence with a strong capital structure as well as the latest products and banking facilities.

Each of the stages through which the business of Bank Mega sometimes challenged. But armed with conviction and passion to continue to be the best, so as to provide the best also for the nation, all elements of the Bank agreed to further reinforce these ideals. The new logo of Bank Mega transformation into a new form be a reflection of the spirit of all elements of Mega Bank in realizing the ideals of Indonesia.

The new logo of Bank Mega transformation performed in 2013, is a deep reflection on the expectations of Bank Mega to start working to build Indonesia into a nation which has advantages and unyielding so always able to bring prosperity and a better life continues.

The assertion symbol "M", which is already widely known, the representation of aspiration, optimism, opportunity and ideals of Indonesian society and the desire to build a future family and nation better and more prosperous.
The series of warm colors symbolize the energy and spirit of Bank Mega, new thinking and comprehensive financial solutions for customers and Bank Mega man. In order to further reinforce their pinning yellow color depicting intelligence and expectations, combined with gray color that symbolizes the sophisticated processes and systems. Orange color illustrates optimism and energetic which shows that the Bank Mega always look and do something positive and thus always struggling to get positive results as well.

4.4.12. BBKP – PT Bank Bukopin Tbk

Bukopin that since the establishment of July 10, 1970 focusing on MSME segment (Micro, Small and Medium Enterprises and Cooperatives), today it has grown and developed into a group of banks that enter into intermediate bank in Indonesia in terms of assets. Along with the opening of opportunities and increased ability to serve the needs of the wider community, Bukopin has expanded its business to commercial and consumer segments, with the total assets of IDR 69,457 billion in 2013 alone.

The third segment is a business pillar Bukopin, with conventional and Islamic services, supported by an optimal fund management systems, reliability of information technology, human resource competencies and practices of good corporate governance. This foundation allows Bukopin stepped forward and placed a credible bank. Operational Bukopin now supported by more than 280 offices in 22 provinces in Indonesia are connected in real-time online. Bukopin also has built a network of micro-banking, named "Swamitra", which now numbered 543 outlets, as a form of partnership with cooperatives and microfinance institutions.
With a more robust capital structure as a result of the implementation of the Initial Public Offering (IPO) in July 2006, Bukopin continue to develop operational programmes by applying appropriate priority short-term strategy that has been prepared with ripe. Implementation of the strategy is intended to ensure compliance with comprehensive banking services to customers through a network connected nationally and internationally, a diverse product and service quality with a high standard.

Overall the activities and programmes carried out in the end led to the creation of the image of the target Bukopin as banking institutions are reliable with a solid financial structure, healthy and efficient. The success of building trust will be able to make Bukopin continued to grow in a sustainable manner to give the best results.

4.4.13. INPC – PT Bank Artha Graha International Tbk

PT. Bank Artha Graha Internasional, Tbk. which has the total asset of IDR 21,188 billion in 2013, domiciled in South Jakarta, originally established under the name PT Inter-Pacific Financial Corporation based on Deed No. 12 dated 7 September 1973, drawn up before Bagijo, S.H., substitute for Eliza Pondaag, S.H., Notary in Jakarta, as nonbanking financial institution, which Deed was approved by the Minister of Justice as per his Decree No. Y.A.5/2/12 dated 3 January 1975, and announced in the State Gazette of Republic of Indonesia No. 6 dated 21 January 1975 Supplement No. 47.

On 10 July 1990, PT Inter-Pacific Financial Corporation listed its shares at the Jakarta Stock Exchange and Surabaya Stock Exchange. Based on Deed No. 67 dated 19 May 1992, drawn up before Adam Kasdarmadji, S.H., Notary in Jakarta, and announced
in the State Gazette of Republic of Indonesia No. 10 dated 2 February 1993 Supplement No. 591, PT. Inter-Pacific Financial Corporation changed its name to PT Inter-Pacific Bank. On 24 February 1993, PT Inter-Pacific Bank obtained the business license as commercial bank under the Decree of Minister of Finance of Republic of Indonesia No. 176/KMK.017/1993.

Under Deed No. 44 dated 13 June 1997 juncto Deed No. 8 dated 15 January 1998, both were drawn up before Sri Nanning, S.H., Notary in Jakarta, and announced in the State Gazette of Republic of Indonesia No. 70 dated 1 September 1998 Supplement No. 5056, the name PT. Inter-Pacific Bank was changed to PT. Bank Inter-Pacific Tbk.

On 9 April 1999 PT. Bank Inter-Pacific Tbk applied for delisting of shares at Surabaya Stock Exchange, and on 19 April 1999, the Board of Directors of Surabaya Stock Exchange approved the application for delisting of shares at Surabaya Stock Exchange.


By virtue of Deed No. 27 dated 12 July 2005, made before Imas Fatimah, S.H., Notary in Jakarta, and license from Governor of Bank Indonesia No. 7/49/KEP.GBI/2005 dated 16 August 2005, PT Bank Inter-Pacific Tbk changed its name to PT. Bank Artha Graha Internasional, Tbk. such change was announced in the State Gazette No. 101 dated 19 December 2006 Supplement No. 13128.
PT. Bank Artha Graha Internasional, Tbk. is committed to be a leading financial institution and always provides the best by giving excellent service as a form of concern towards humanitarian, social and culture.

4.4.14. MAYA – PT Bank Mayapada International Tbk

Mayapada Bank Internasional Tbk (MAYA) was established September 7, 1989 and began commercial operations on March 16, 1990. The head office is located in Mayapada Tower MAYA Lt. 2, Jl. Sudirman Kav. 28 - Jakarta. Currently, MAYA has 34 Domestic Branches, 63 Branch Offices, Cash Office 13 and Office 68 Functional.

Shareholders who own 5% or more shares MAYA, among others: PT Mayapada gift (control) (26.03%), Summertime Ltd. (22.43%), Brilliant Bazaar Pte, Ltd. (17.57%), SCB SG S/A Hong Leong Bank A/C Jtrust Asia Pte Ltd (10.00%), and Unity Rise Limited (7.31%).

MAYA obtain a license as a commercial bank of the Ministry of Finance on March 16, 1990 and obtained a license as a foreign exchange bank business activities of Bank Indonesia on June 3, 1993. Based on the Company's Articles of Association, the scope of activities of MAYA is running the business activities in the field of banking and other financial services.

On August 7, 1997, MAYA obtain an effective statement from Bapepam-LK to perform MAYA Initial Public Offering (IPO) to the public as much as 65,000,000 with a nominal value of IDR 500, - per share at an offering price of IDR 800, - per share. These shares were listed in the IDX on August 29, 1997. PT Bank Mayapada International Tbk began operating as a commercial bank since 23
March 1990. Founded by deed Misahardi Wilamarta SH (No. 196 dated September 7, 1989). Statutes PT Bank Internasional Tbk approved Mayapada Department of Justice (Decree No. C2-25 HT.01.01 Th 90, January 10, 1990) and was given permission by the Minister of Finance operations (Decision No. 342/KMK.013/1990, March 16, 1990).

PT Bank Internasional Tbk Mayapada obtained a permission to be a foreign exchange bank based on Bank Indonesia Decree No. 26/26/KEP/DIR dated June 3, 1993, and since 1997 PT Bank Internasional Tbk Mayapada has become a public bank.

4.4.15. BVIC – PT Bank Victoria International Tbk

PT Bank Victoria International Tbk (Bank Victoria) was first established in Jakarta on 5 October 1992 as a private commercial bank. Currently, the majority of the Bank’s stocks are owned by Victoria Investama with the percentage of 34.86%. The Bank’s operational activities’ derived from the mission to provide the best quality service to its customers consistently, whilst maintaining the principles of prudence.

In line with its effort to continuously improve its risk management and finances, the Bank continues to move aggressively in developing professional human resources with high loyalty towards the company, investing in information and technology and its office network, upholding the principles and dedication to improve its capabilities through the implementation of its Good Corporate Governance principles.

In 1999, Bank Victoria listed its stocks on the Jakarta and Surabaya Stock Exchange. Since then, the Bank has actively carried out a number of corporate actions, including limited public offerings and
bond issuance. In 2007, the Bank issued Bonds II and New Subordinated bonds I, amounting IDR 200 billion. In the year 2008, the Bank executed a Right Issue IV in the amount of IDR 116.75 billion followed by the issuance of warrant series V in the amount of IDR 66.97 billion.

In the year 2011, the Bank executed Right Issue without preemptive rights of IDR 58 billion, Right Issue of IDR 195 billion, Exercise Warrant of IDR 8 billion. In the year 2012, the total number of the Bank’s shares is 6.6 billion.

By the end of 2013, the Banks has the total asset amounting IDR 19,171 billion resulting that the Bank has 100 Operational Office Network consisting of 1 head office, 4 branch offices, 63 supporting branches and 32 cashier offices spread across the area of Jakarta, Depok, Tangerang and Bekasi. Supported by 1,286 employees, the Bank continued to expand its business through a number of integrated financial services.

4.4.16. BCIC – PT Bank Mutiara Tbk

PT Bank Mutiara Tbk is an Indonesian company engaged in the field of banking and financial services. The Bank's vision is to be the bank's best focus to people's choice. The Bank focuses on the retail segment, without forgetting the other segments and is able to provide quality service standards. From the vision, Bank Mutiara strives to be the bank of choice and be a community that is safe and reliable investment for their customers and investors. Also, the Bank's mission to achieve is to give the best to prioritize service, convenience and customer satisfaction for maximum results.

Takeover of the company by the Deposit Insurance Agency (LPS) is based on the decision of the Financial System Stability
Committee (KSSK) No. 04/KSSK.03/2008 on November 21, 2008 the rescue of national economic health of PT Bank Mutiara Tbk. Then on October 3, 2009 conducted rebranding with SK BI governor by letter No. 11/47/KEP.GBI/2009 dated 16 September 2009 was the beginning of management in re-developing PT Bank Mutiara Tbk.

Because of financial problems to the law, the Bank Mutiara will be sold. The process of selling the bank formerly known as Bank Century until July 2013 has reached the second stage, namely the selection of document files investors by the Deposit Insurance Corporation (LPS). LPS itself already offered the bank's local and foreign investors since 2010 ago. The year 2013, where the bank had a total asset of IDR 14.576 billion was the last year bank's offer of salvation according to the price of IDR 6.7 trillion. If not sold, the Bank will be released by auction to the best bidder.

4.4.17. MCOR – PT Bank Windu Kentjana International Tbk

PT Bank Windu Kentjana International Tbk ("Bank Windu") is a foreign exchange bank whose shares have been listed in the IDX, with a change in the company's articles of association of the past based on the certificate No. 189 dated June 24, 2010 which has been approved by the Minister of Law and Human Rights No. AHU39470.AH.01.02. Year 2010 dated August 10, 2010.

Bank Windu in 2013 has a total asset of IDR 7,917 billion and to date, the Bank Windu has had 72 (seventy two) offices spread throughout the city of Jakarta, Bekasi, Depok, Tangerang, Bogor, Bandung, Semarang, Solo, Surabaya, Palembang, Pontianak, Batam, Riau Islands Tanjung Pinang, Denpasar, Pekanbaru, Yogyakarta, Lampung, and Sukabumi. As an institution engaged in the financial services sector, the Bank Windu is committed to
serving its customers, both in order to raise funds and disbursement of funds, as well as serving a variety of banking services, particularly to support small and medium business sector. In carrying out its business activities, Bank Windu always uphold the principle of prudence (prudential banking) and is always trying to implement good corporate governance.

4.4.18. BACA – PT Bank Capital Indonesia Tbk

PT Bank Capital Indonesia, Tbk (hereinafter called the "Bank"), formerly known as PT Bank Credit Lyonnais Indonesia was established on April 20, 1989, as a joint venture banks (JV) between Credit Lyonnais SA, France (called "CL") with PT Bank International Indonesia, Tbk., Jakarta (called "BII"). Articles of Association of the Bank approved by the Minister of Justice and Minister of Finance in a row on May 27, 1989 and October 25, 1989, and published in the Official Gazette dated June 5, 1990.

The Bank has obtained a license to operate as a commercial bank from the Minister of Finance pursuant to Decree No. 119/KMK.013/1989 dated October 25, 1989.

After obtaining approval from Bank Indonesia in accordance with the letter No. 6/2/DpG/DPIP/Secrets March 3, 2004, at the General Meeting Extraordinary Shareholders (AGM) held on August 31, 2004 officially Credit Lyonnais shares have been acquired by Mr. Danny Nugroho

In the above-mentioned AGM, it was decided that the Bank's name was changed from PT Bank Credit Lyonnais Indonesia to PT Bank Capital Indonesia, Tbk. The name change was approved by the Minister of Justice and Human Rights in accordance with Decree No. C-24 209 HT.01.04.TH.2004 September 29, 2004 and Bank
Indonesia in accordance with the Decree of the Governor of Bank Indonesia No. 6/79/KEP.GBI/2004 dated October 19, 2004 concerning the change of name of PT Bank Credit Lyonnais Indonesia to PT Bank Capital Indonesia, Tbk.

In line with the change in the majority shareholder of the Bank with the approval of Bank Indonesia under letter No. 6/619/DPIP/Prz September 22, 2004, addresses the Operational Headquarters Bank has moved from Suite 2311 Noble Tower, Jl. General Gatot Subroto Kav. 9-11, Jakarta to Sona Topas Tower (formerly Tower BCD) 16th floor, Jl. Sudirman Kav. 26, Jakarta

To improve service to customers and tailor the product development banking services, Bank Capital is always trying to find new systems and upgrade its information technology by collaborating with professional IT provider. This means that the Bank requires professional employees who always follow the changes in the banking system. Capital Bank provide banking services are complete, especially for small and medium enterprises in all economic sectors. Capital Bank branch network spread across the Greater Jakarta and will expand to all major cities in Indonesia gradually and as for 2013, the bank has a total asset of IDR 7,139 billion.
4.2. Data Analysis

4.2.1. Overview of Research Objects

Samples of the research are 18 Indonesian commercial banks that are listed in IDX which provide the audited financial statements period 2009 – 2013. In total, the amount of data used for the research is 90, taken from 18 banks multiplied by the number of research period which is 5 years.

Financial ratios data used for the research are processed from each respective bank’s audited annual report, obtained from the official website of IDX. Meanwhile, the external factors data which are \( GDP \), \( IR \), and \( ER \) of IDR/USD are obtained from the official website of Indonesian Statistical Bureau and Bank Indonesia, respectively.

4.2.2. Descriptive Statistics

Descriptive statistics are data that describe or sketch the object had been researched. It contains several general information about the number of data that also shows the mean and standard deviation of variables, which in this research are from internal factors (\( Size \), \( Capital \), and \( Loan \)) and external factors (\( GDP \), \( IR \), and \( ER \) of IDR/USD) and the dependent variable which is \( ROA \). Below is the descriptive statistics for each variable:
Table 4. 1 Descriptive Statistics

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>.2813</td>
<td>.55324</td>
<td>90</td>
</tr>
<tr>
<td>SIZE</td>
<td>17.8969</td>
<td>1.49099</td>
<td>90</td>
</tr>
<tr>
<td>CAPITAL</td>
<td>2.3197</td>
<td>.24027</td>
<td>90</td>
</tr>
<tr>
<td>LOAN</td>
<td>4.0655</td>
<td>.23330</td>
<td>90</td>
</tr>
<tr>
<td>GDP</td>
<td>8.8889</td>
<td>.17263</td>
<td>90</td>
</tr>
<tr>
<td>IR</td>
<td>1.7118</td>
<td>.22831</td>
<td>90</td>
</tr>
<tr>
<td>ER</td>
<td>9.1690</td>
<td>.07151</td>
<td>90</td>
</tr>
</tbody>
</table>

Source: SPSS 22 Output

The computation in the table above shows that the number of data from the banks observed is 90 during the observation period (2009 – 2013). Based on the calculation above the result explains that:

a. The number of rounded mean of ROA is 0.2813, Size is 17.8969, Capital is 2.3197, Loan is 4.0655, GDP is 8.8889, Interest Rate is 1.17118, and Exchange Rate is 9.1690.

b. The number of standard deviation of ROA is 0.55324, Size is 1.49099, Capital is 0.24027, Loan is .23330, GDP is 0.17263, Interest Rate is .22831, and Exchange Rate is 0.7151.

4.2.3. Classical Assumption Test

An acceptable result of hypothesis testing is a test that does not violate classical assumption that underlying the multiple linear regression models. Classical assumptions in this study include the Normality, Multicollinearity, Autocorrelation and Heteroscedasticity tests.
a) Normality Test

The purpose of this assumption is to test whether or not the dependent and the independent variables have a normal distribution in a regression model. The good of regression linear model is to have a normal data distribution or close to normal. The following are the tests used to see the normality of the data:

1. Histogram

![Histogram](image)

**Figure 4.1 Histogram**

*Source: SPSS 22 Output*

The figure 4.1 above has a curve that its shape is a bell which means that the data have a normal distribution or the data being used for the test which are the *Size, Capital, Loan, GDP, IR, and ER* are normally distributed.
2. Probability Plot Diagram

P-P Plot graph provides the information about the distribution surrounding the diagonal line. Figure 4.2 shows the probability plot diagram resulted by the data of Size, Capital, Loan, GDP, IR and ER.

![Normal P-P Plot of Regression Standardized Residual](image)

**Figure 4.2 P-Plot Graph**

*Source: SPPS 22 Output*

The P-P plot graph above shows the distribution is surrounding the diagonal line and following the direction of the diagonal line or P-Plot graph. Therefore, it can be concluded that the data that consist of internal factors and external factors or independent variables along with the dependent variable are normally distributed.
b) Multicolinearity Test

Table 4. 2 Modified SPSS Result – Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.954</td>
<td>1.048</td>
</tr>
<tr>
<td>SIZE</td>
<td>.908</td>
<td>1.102</td>
</tr>
<tr>
<td>CAPITAL</td>
<td>.886</td>
<td>1.128</td>
</tr>
<tr>
<td>LOAN</td>
<td>.524</td>
<td>1.908</td>
</tr>
<tr>
<td>GDP</td>
<td>.299</td>
<td>3.345</td>
</tr>
<tr>
<td>IR</td>
<td>.383</td>
<td>2.612</td>
</tr>
<tr>
<td>ER</td>
<td>.299</td>
<td>3.345</td>
</tr>
</tbody>
</table>

Source: SPSS 22 Output

The table above shows the values of tolerance and VIF for each independent variables. It can be seen that the values of VIF for Size is 1.048, Capital is 1.102, Loan is 1.128, GDP is 1.908, IR 3.345, and ER is 2.612. Since all the values of VIF for every single one of the independent variables are less than 10, thus no multi co-linearity exists between them. The test also shows the Tolerance, where Size is 0.954, Capital is 0.908, Loan is 0.886, GDP is 0.524, IR is 0.299, and ER is 0.383. All the values of Tolerance are more than 0.10, thus no multi co-linearity exists between them. Therefore, it can be concluded that multi co-linearity is non-existence between each of the independent variable in this regression model.
c) **Heteroscedasticity Test**

![Scatterplot Graph](image)

**Figure 4. 3 Scatterplot Graph**

*Source: SPSS 22 Output*

The graph above shows the distribution of data which do not form any specific shape and/or pattern, where the dots are spread between above and below the 0 point in Y axle. Hence, heteroscedasticity is non-existence in this linear regression model.

d) **Autocorrelation Test**

**Table 4. 3 Modified SPPS Result for Durbin-Watson Test**

<table>
<thead>
<tr>
<th>Model</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.146</td>
</tr>
</tbody>
</table>

b. Dependent Variable: ROA

*Source: SPPS 22 Output*
Based on the regression result, the value of Durbin-Watson test is at 2.146. The value of Durbin-Watson test for lower bound (dL) is at 1.518 whilst the value of the upper bound (dU) is at 1.801, taken from the Table of Durbin Watson value of “k” = 6 and N = 90, hence 4 − dL = 2.482 and 4 − dU = 2.199. Therefore, the value of Durbin Watson from the regression analysis is located in the area of free auto-correlation. This calculation can be seen in the Figure 4.4 below.

![Figure 4.4 Durbin-Watson Test](Source: Adjusted by Researcher)

4.2.4. Multiple Regression Analysis

a) Multiple Regression Model

Table 4.4 Multiple Regression Model Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>-3.629</td>
<td>9.970</td>
<td></td>
<td>-3.64</td>
</tr>
<tr>
<td>SIZE</td>
<td>.226</td>
<td>.029</td>
<td>.610</td>
<td>7.329</td>
</tr>
<tr>
<td>CAPITAL</td>
<td>.396</td>
<td>.184</td>
<td>.173</td>
<td>2.102</td>
</tr>
<tr>
<td>LOAN</td>
<td>-.444</td>
<td>.192</td>
<td>-.187</td>
<td>-2.319</td>
</tr>
<tr>
<td>GDP</td>
<td>.450</td>
<td>.337</td>
<td>.140</td>
<td>1.336</td>
</tr>
<tr>
<td>IR</td>
<td>-.029</td>
<td>.337</td>
<td>-.012</td>
<td>-.087</td>
</tr>
<tr>
<td>ER</td>
<td>-.350</td>
<td>.951</td>
<td>-.048</td>
<td>-.367</td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROA

Source: SPSS 22 Output
Based on the result in the table 4.4 above, the multiple linear regression model can be composed as follows:

\[
ROA = -3.629 + 0.226 (S) + 0.398 (C) - 0.444 (L) + 0.450 (GDP) - 0.029 (IR) - 0.350 (ER)
\]

Source: Adjusted by Researcher

The multiple linear regression equation above explains that:

a. Regression coefficient of Size is 0.226. The value is positive and a positive coefficient value gives a positive influence towards ROA of 18 commercial banks listed in IDX period 2009 – 2013. Every single increase of 1 Million IDR in Size (Total Asset) leads to the increase of ROA by 0.226 point.

b. Regression coefficient of Capital is 0.398. The value is positive and a positive coefficient value gives a positive influence towards ROA of 18 commercial banks listed in IDX period 2009 – 2013. Every 1% increase in Capital leads to the increase of ROA by 0.398 point.

c. Regression coefficient of Loan is -0.444. The value is negative and a negative coefficient value gives a negative influence towards ROA of 18 commercial banks listed in IDX period 2009 – 2013. Every 1% increase in Loan leads to the decrease of ROA by 0.444 point.

d. Regression coefficient of GDP is 0.450. The value is positive and a positive coefficient value gives a positive influence towards ROA of 18 commercial banks listed in IDX period 2009 – 2013. Every single increase of 1 Million IDR of GDP leads to the increase of ROA by 0.450 point.
e. Regression coefficient of \( IR \) is -0.029. The value is negative and a negative coefficient value gives a negative influence towards \( ROA \) of 18 commercial banks listed in IDX period 2009 – 2013. Every 1% increase in \( IR \) leads to the decrease of \( ROA \) by 0.029 point.

f. Regression coefficient of \( ER \) is -0.350. The value is negative and a negative coefficient value gives a negative influence towards \( ROA \) of 18 commercial banks listed in IDX period 2009 – 2013. Every increase of USD by 1 IDR in \( ER \) leads to the decrease of \( ROA \) by 0.350 point.

b) T-Test

The result of the T-Test for this research can be seen from the following Table 4.5:

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>-3.629</td>
<td>9.970</td>
<td></td>
<td>-3.64</td>
</tr>
<tr>
<td>SIZE</td>
<td>.226</td>
<td>.029</td>
<td>.610</td>
<td>7.929</td>
</tr>
<tr>
<td>CAPITAL</td>
<td>.398</td>
<td>.184</td>
<td>.173</td>
<td>2.102</td>
</tr>
<tr>
<td>LOAN</td>
<td>-.444</td>
<td>.192</td>
<td>-.187</td>
<td>-2.319</td>
</tr>
<tr>
<td>GDP</td>
<td>.450</td>
<td>.337</td>
<td>.140</td>
<td>1.336</td>
</tr>
<tr>
<td>IR</td>
<td>-.029</td>
<td>.337</td>
<td>-.012</td>
<td>-.087</td>
</tr>
<tr>
<td>ER</td>
<td>-.350</td>
<td>.951</td>
<td>-.045</td>
<td>-.367</td>
</tr>
</tbody>
</table>

Source: SPSS 22 Output

The significance value of \( Size \) is 0.000, lower than 0.05. Furthermore, the \( T_{Count} \) is 7.829 which is higher than the \( T_{Table} \) of 1.996. Therefore, the researcher accepts the alternative hypothesis (\( H_{a1} \)) and rejects the null hypothesis (\( H_{01} \)) which
means partially there is a significance influence of Size towards ROA.

The significance value of Capital is 0.033, lower than 0.05. Furthermore, the T\text{Count} is 2.162 which is higher than the T\text{Table} of 1.996. Therefore, the researcher accepts the alternative hypothesis (H\text{a2}) and rejects the null hypothesis (H\text{02}) which means that Capital has partially a significance influence of Size towards ROA.

The significance value of Loan is 0.023, lower than 0.05. Furthermore, the \(-T\text{Count}\) is -2.319 which is lower than the \(-T\text{Table}\) of -1.996. Therefore, the researcher accepts the alternative hypothesis (H\text{a3}) and rejects the null hypothesis (H\text{03}) which means that Loan has partially a significance influence towards ROA.

The significance value of GDP is 0.185, higher than 0.05. Furthermore, the T\text{Count} is 1.336, lower than the T\text{Table} of 1.996. Therefore, the researcher accepts the null hypothesis (H\text{04}) and rejects the alternative hypothesis (H\text{a4}) which means that GDP has partially no significance influence towards ROA.

The significance value of IR is 0.931, higher than 0.05. Furthermore, the \(-T\text{Count}\) is -0.087 making it lower than the value of T\text{Table} -1.996. Therefore, the researcher accepts the null hypothesis (H\text{05}) and rejects the alternative hypothesis (H\text{a5}) which means that IR has partially no significance influence towards ROA.

The significance value of ER is 0.714, higher than 0.05. Furthermore, the \(-T\text{Count}\) is -0.367, making it lower than the value of the \(-T\text{Table}\) -1.996. Therefore, the researcher accepts the
null hypothesis ($H_{06}$) and rejects the alternative hypothesis ($H_{a6}$) which means that $ER$ has partially no significance influence towards $ROA$.

Based on the partial influence test, it is found that the variables $GDP$, $IR$, and $ER$ do not significantly influence $ROA$. Hence, the previously stated multiple linear regression equation could be reconstructed by eliminating regression coefficients of $GDP$, $IR$, and $ER$. Therefore, the newly formulated equation is as follows:

$$ROA = -3.629 + 0.226 (S) + 0.398 (C) - 0.444 (L)$$

*Source: Adjusted by Researcher*

c) F-Test

**Table 4.6 F-Test Result**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>14.149</td>
<td>6</td>
<td>2.358</td>
<td>14.951</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>13.061</td>
<td>83</td>
<td>.158</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>27.240</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: SPSS 22 Output

The level of significance ($\alpha$) in this research is 0.05. The value of df1 is 6, taken from deducting ‘k’ which is the number of variables used by 1. The value of df2 in this research is 83, taken from the formula n-k, which is 90 deducted by 7 (Sarwono, 2012). According to the critical value for F table, the $F_{\text{Table}}$ is 2.21. The result can be determined by comparing the $F_{\text{Count}}$ and the $F_{\text{Table}}$ with the following condition:
1. \( H_0 \) is accepted and \( H_a \) is rejected if \( F_{\text{Count}} < F_{\text{Table}} \)
2. \( H_a \) is accepted and \( H_0 \) is rejected if \( F_{\text{Count}} > F_{\text{Table}} \)

Based on the table 4.6 above, the significance value is 0.000, lower than 0.05. Furthermore, the \( F_{\text{Count}} \) 14.951 which is higher than the \( F_{\text{Table}} \) of 2.21. Therefore, the researcher rejects the null hypothesis (\( H_0 \)) and accepts the alternative hypothesis (\( H_a \)) which means that \( Size, Capital, Loan, GDP, IR \) and \( ER \) have simultaneously significant influence towards \( ROA \).

d) Coefficient of Determination Analysis (Adjusted \( R^2 \))

Table 4.7 Coefficient Determination (Adjusted \( R^2 \))

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.721(^a)</td>
<td>.519</td>
<td>.485</td>
<td>39715</td>
</tr>
</tbody>
</table>

\(^a\) Predictors: (Constant), ER, SIZE, LOAN, CAPITAL, GDP, IR
\(^b\) Dependent Variable: ROA

Source: SPSS 22 Output

Based on the result above, it can be seen that the value of Adjusted R Square is 0.485. The value states that in this research \( ROA \) is influenced by the factors of \( Size, Capital, Loan, GDP, IR \), and \( ER \) as much as 48.5%, whilst the other 51.5% is influenced by other variables which are not developed in this research.

4.3. Interpretation of Result

4.3.1. Partial Influence of Size towards ROA

Based on the regression analysis, it exists a positive regression coefficient of \( Size \) at 0.226 points towards \( ROA \). It means that the increase of \( Size \) by 1 Million IDR leads to the increase of \( ROA \) by
0.226 point. In addition, the T_{Count} is higher than the T_{Table} (T_{Count} = 7.289 > T_{Table} = 1.996) and the significance value 0.000 which is lower than 0.05, which then indicates a significant influence towards ROA. Therefore, it can be concluded that Size has significant influence towards ROA of 18 commercial banks listed in IDX period 2009 – 2013.

This conclusion is supported by the previous researches which generated the same results. The research conducted by Syafri (2012) showed that Size has a positive significant influence towards ROA. In addition, the result is of the same that Size has a positive significant influence towards ROA, a study conducted by Abdullah, Parvez, and Ayreen (2014). Also, the same result was obtained by Gul, Irshad, and Zaman (2011), stating that Bank Size has a positive significant influence towards ROA. This generally means that the changes in level of the Size of the bank will affect the level of the ROA.

4.3.2. Partial Influence of Capital towards ROA

Based on the regression analysis, it exists a positive regression coefficient of Capital at 0.398 points towards ROA. It means that the increase of Capital by 1% leads to the increase of ROA by 0.398 points. In addition, the T_{Count} is higher than the T_{Table} (T_{Count} = 2.162 > T_{Table} = 1.996) and the significance value 0.033 which is lower than 0.05, which then indicates a significant influence towards ROA. Therefore, it can be concluded that Capital has significant influence towards ROA of 18 commercial banks listed in IDX period 2009 – 2013.

This conclusion is supported by the previous researches which generated the same result. The research by Hendrayani & Muharam (2013) showed that Capital has a positive significance influence
towards ROA, and so did the result of the research conducted by Syafri (2012) concluding that Capital has a positive significance influence towards ROA. This means that the higher level of Capital a bank has, the easier the bank can adhere to regulatory capital standards thus that excess capital can be provided as loan.

**4.3.3. Partial Influence of Loan towards ROA**

Based on the regression analysis, it exists a negative regression coefficient of Loan at 0.444 points towards ROA. It means that the increase of Loan by 1% leads to the decrease of ROA by 0.444 points. In addition, the $-T_{\text{Count}}$ is lower than the $-T_{\text{Table}}$ ($-T_{\text{Count}} = -0.0087 < -T_{\text{Table}} = -1.996$) and the significance value is 0.023 which is lower than 0.05, which then indicates a significant influence towards ROA. Therefore, it can be concluded that Loan has significant influence towards ROA of 18 commercial banks listed in IDX period 2009 – 2013.

Loan is obtained by comparing the Total Loan to Total Asset. Loan indicates a significant negative influence towards ROA as Loan can reduce the level of profitability. In lending the money, banks require higher vigilance. Banks will most likely improve the quality of their employees by means of employing technicians or management experts to evaluate the business project the money being lent to more thoroughly and observant. Consequently this will increase the costs incurred by the banks to maintain the efficiency of banking performance. This conclusion is supported by the previous researches which generated the same result. These researches conducted by Hendrayanti & Muharam (2013) and Alper & Anbar (2011) stated that Loan has a negative significant influence towards ROA. This indicates that the changes in level of the Loan will affect the ROA.
4.3.4. **Partial Influence of GDP towards ROA**

Based on the regression analysis, it exists a positive regression coefficient of \( GDP \) at 0.450 points. It means that the increase of \( GDP \) by 1 Million IDR leads to the increase of \( ROA \) by 0.450 points. In addition, the \( T_{\text{Count}} \) is lower than the \( T_{\text{Table}} \) (\( T_{\text{Count}} = 1.336 < T_{\text{Table}} = 1.996 \)) and the significance value is 0.185 which is higher than 0.05, which then indicates that \( GDP \) has an insignificant influence towards \( ROA \). Therefore, it can be concluded that \( GDP \) has a positive but not significant influence towards \( ROA \) of 18 commercial banks listed in IDX period 2009 – 2013.

This conclusion is supported by the previous researches which generated the same result. Three studies conducted by (Gul, Irshad, & Zaman, 2011), (Pan & Pan, 2014), and (Hendrayanti & Muharam, 2013) generally stated that \( GDP \) has a positive influence, but the influence is not significant. This indicates that the changes in level of \( GDP \) will not affect \( ROA \).

4.3.5. **Partial Influence of IR towards ROA**

Based on the regression analysis, it exists a negative regression coefficient of \( IR \) at 0.029 points. It means that the increase of \( IR \) by 1% leads to the decrease of \( ROA \) by 0.029 points. In addition, the \( -T_{\text{Count}} \) is higher than the \( -T_{\text{Table}} \) (\( -T_{\text{Count}} = -0.087 > -T_{\text{Table}} = -1.996 \)) and the significance value is 0.931 which is higher than 0.05, which then indicates that \( IR \) has no significant influence towards \( ROA \). Therefore, it can be concluded that \( IR \) has an insignificant influence towards \( ROA \) of 18 commercial banks listed in IDX period 2009 – 2013.

This conclusion is supported by the previous researches which generated the same result. The studies conducted by (Pan & Pan,
2014) and (Jamal, Karim, & Hamidi, 2012) showed that IR has a negative and not significance influence towards ROA. This indicates that the changes in level of IR will not affect ROA.

4.3.6. Partial Influence of ER towards ROA

Based on the regression analysis, it exists a negative regression coefficient of ER at 0.350 points. It means that the increase of ER by 1 IDR leads to the decrease of ROA by 0.350 points. In addition, the $-T_{\text{count}}$ is higher than the $-T_{\text{table}}$ ($-T_{\text{count}} = 0.087 > -T_{\text{table}} = 1.996$) and the significance value is 0.714 which is higher than 0.05, which then indicates that ER has a not significant influence towards ROA. Therefore, it can be concluded that ER has insignificant influence towards ROA of 18 commercial banks listed in IDX period 2009 – 2013.

This conclusion is supported by the previous researches which generated the same result. The study conducted by Kiganda (2014) and (Dwijayanthy & Naomi, 2009) showed that ER has insignificant influence towards ROA. This indicates that the changes in ER will not affect ROA.

4.3.7. Simultaneous Influencing Factors

From the F-Test, the significance value is 0.000, meaning that all of the independent variables either it is the internal factors (Size, Capital, and Loan) or the external factors (GDP, IR, and ER) have a high significance level in influencing profitability, ROA. The value of Adjusted R Square is 0.485 which means that Size, Capital, Loan, GDP, IR, and ER are able to influence the ROA by 48.5%. The other 51.5% that influence ROA can be explained by other factors that are not mentioned or observed in this study.
However, the results are different when internal factors and external factors are separated in the multiple regression. From the F-Test, the significance value is 0.000 when internal factors are run in the multiple regression with value of Adjusted R Square 0.484, which means that Size, Capital, and Loan can influence ROA by 48.4%.

When external factors, without any of internal factors, are put in the multiple regression analysis, the result shows from the F-Test that the significance value is 0.187 with the value of Adjusted R Square 0.021 which means that GDP, IR, and ER can only influence ROA by only 2.1%.

This indicates that the factors that could influence with higher percentage towards ROA is the internal factors which are Size, Capital, and Loan as much as 48.4% while external factors which are GDP, IR, and ER could only affect the profitability of the banks observed in a very small number of percentage by 2.1%.
CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1. Conclusion

This study attempts to examine the influence of internal factors which are Size, Capital, and Loan along with the external factors which are GDP, IR, and ER towards the proxy of profitability that is ROA of 18 commercial banks listed in IDX period 2009 – 2013. Based on the results of the multiple regression analysis, it shows that there is a balance between the accepted and rejected hypotheses where most accepted hypotheses are from the internal factors.

Based on the analysis and interpretation that have been in process of finishing this research, the researcher sums up that:

1. Size has a positive significant influence towards ROA. The result of multiple regression model shows that its $T_{\text{Count}}$ is higher than the $T_{\text{Table}}$ ($T_{\text{Count}} = 7.289 > T_{\text{Table}} = 1.996$) and the significance value is 0.000, lower than 0.05, which then indicates a significant influence towards ROA. It indicates that the changes in level of Size will affect ROA of 18 commercial banks listed in IDX during period 2009 – 2013.

2. Capital has a positive significant influence towards ROA. The result of multiple regression model shows that its $T_{\text{Count}}$ is higher than the $T_{\text{Table}}$ ($T_{\text{Count}} = 2.162 > T_{\text{Table}} = 1.996$) and the significance value 0.033, lower than 0.05, which then indicates a significant influence towards ROA. It indicates that the changes in level of Capital will affect ROA of 18 commercial banks listed in IDX during period 2009 – 2013.

3. Loan has a negative significant influence towards ROA. The result of multiple regression model shows that its $-T_{\text{Count}}$ is lower than the $-T_{\text{Table}}$
(-T_Count = -0.0087 < -T_Table = -1.996) and the significance value is 0.023, lower than 0.05, which then indicates a significant influence towards ROA. It indicates that the changes in level of Loan will affect ROA of 18 commercial banks listed in IDX during period 2009 – 2013 due to higher costs incurred by the banks to improve and/or employ technicians or management experts in thoroughly observe the business project that the money being lent to.

4. GDP has insignificant influence towards ROA. The result of multiple regression model shows that its T_Count is lower than the T_Table (T_Count = 1.336 < T_Table = 1.996) and the significance value is 0.185, higher than 0.05, which then indicates that GDP has an insignificant influence towards ROA. It indicates that the changes in level of GDP will insignificantly affect ROA of 18 commercial banks listed in IDX during period 2009 – 2013.

5. IR has significant influence towards ROA. The result of multiple regression model shows that its the –T_Count is higher than the –T_Table (-T_Count = -0.087 > -T_Table = -1.996) and the significance value is 0.931, higher than 0.05, which then indicates that IR has a not significance influence towards ROA. It indicates that IR has a negative and not significant influence towards ROA of 18 commercial banks listed in IDX period 2009 – 2013.

6. Exchange Rate has insignificant influence towards ROA. The result of multiple regression model shows that its –T_Count is higher than the – T_Table (-T_Count = -0.087 > -T_Table = -1.996) and the significance value is 0.714, higher than 0.05, which then indicates that ER has a not significant influence towards ROA. It indicates that ER has a negative and not significant influence towards ROA of 18 commercial banks listed in IDX period 2009 – 2013.

7. Size, Capital, Loan, GDP, IR, and ER have simultaneous significant influence towards ROA of 18 commercial banks listed in IDX period
2009 – 2013 with the value of Adjusted R Square is 0.485 which means that internal factors (*Size, Capital, Loan*) and external factors (*GDP, IR, ER*) influence towards *ROA* by 48.5%, while the 51.5% influence towards *ROA* can be explained by other variables which are not included in this research.

Based on the results above, it can be concluded that factors that influence positively and significantly towards profitability, that is *ROA*, are the internal factors which in this research are *Size* (Total Asset), *Capital* (Equity to Total Asset), and *Loan* (Loan to Total Asset), while external factors which are *GDP, IR, and ER* only contribute a small amount of positive influence towards *ROA*.

5.2. **Recommendation**

From the conclusion that has been drawn, the researcher can give some recommendation with regard to this research which could be useful for the following parties:

1. **For the Banking Industry**
   
   It is of paramount importance to be concerned about factors affecting banks’ profitability. When analysed, in fact, the internal factors play a great role in generating a great *ROA*. Therefore, it will be wise for banking industry to put more concern on internal factors rather than the external factors.

2. **For the Investors**
   
   Investors are required to analyse the financial statement through financial ratios of a bank company, where it can help investors to know the level of banks’ health.
3. **For the Students of President University**

President University students especially who find it interesting to conduct a further study about this particular research, it is recommended to analyse more factors or variables and more banks along with the longer period that might affect or explain the variability of *ROA*.

4. **For the Academics Community**

The application of strategy that each bank has determines the profitability thus it is suggested to look from other perspectives and not to mention to peruse the financial statements and/or ratios more carefully.
REFERENCES


105


APPENDIX A

RAW DATA
## RETURN ON ASSET (%)

**18 COMMERCIAL BANKS LISTED IN IDX**

**PERIOD 2009 - 2013**

<table>
<thead>
<tr>
<th>Banks</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMRI</td>
<td>1.82</td>
<td>2.08</td>
<td>2.30</td>
<td>2.52</td>
<td>2.57</td>
<td>2.26</td>
</tr>
<tr>
<td>BBRI</td>
<td>2.31</td>
<td>2.84</td>
<td>3.21</td>
<td>3.39</td>
<td>3.41</td>
<td>3.03</td>
</tr>
<tr>
<td>BBCA</td>
<td>2.41</td>
<td>2.61</td>
<td>2.83</td>
<td>2.65</td>
<td>2.87</td>
<td>2.67</td>
</tr>
<tr>
<td>BNI</td>
<td>1.09</td>
<td>1.65</td>
<td>1.94</td>
<td>2.11</td>
<td>2.34</td>
<td>1.83</td>
</tr>
<tr>
<td>BNGA</td>
<td>1.47</td>
<td>1.78</td>
<td>1.90</td>
<td>2.15</td>
<td>1.96</td>
<td>1.86</td>
</tr>
<tr>
<td>BDMN</td>
<td>1.55</td>
<td>2.52</td>
<td>2.43</td>
<td>2.64</td>
<td>2.26</td>
<td>2.28</td>
</tr>
<tr>
<td>BNLI</td>
<td>0.87</td>
<td>1.36</td>
<td>1.14</td>
<td>1.04</td>
<td>1.04</td>
<td>1.09</td>
</tr>
<tr>
<td>BBTN</td>
<td>0.84</td>
<td>1.34</td>
<td>1.26</td>
<td>1.22</td>
<td>1.19</td>
<td>1.17</td>
</tr>
<tr>
<td>BNII</td>
<td>-0.02</td>
<td>0.71</td>
<td>0.71</td>
<td>1.05</td>
<td>1.12</td>
<td>0.71</td>
</tr>
<tr>
<td>NISP</td>
<td>1.18</td>
<td>0.72</td>
<td>1.26</td>
<td>1.16</td>
<td>1.17</td>
<td>1.10</td>
</tr>
<tr>
<td>MEGA</td>
<td>1.35</td>
<td>1.84</td>
<td>1.73</td>
<td>2.11</td>
<td>0.79</td>
<td>1.57</td>
</tr>
<tr>
<td>BBKP</td>
<td>0.97</td>
<td>1.04</td>
<td>1.30</td>
<td>1.27</td>
<td>1.35</td>
<td>1.19</td>
</tr>
<tr>
<td>INPC</td>
<td>0.27</td>
<td>0.49</td>
<td>0.52</td>
<td>0.31</td>
<td>1.36</td>
<td>0.59</td>
</tr>
<tr>
<td>MAYA</td>
<td>0.54</td>
<td>0.76</td>
<td>1.32</td>
<td>1.53</td>
<td>1.53</td>
<td>1.14</td>
</tr>
<tr>
<td>BVIC</td>
<td>0.63</td>
<td>1.04</td>
<td>1.59</td>
<td>1.43</td>
<td>1.37</td>
<td>1.21</td>
</tr>
<tr>
<td>BCIC</td>
<td>3.53</td>
<td>2.02</td>
<td>1.98</td>
<td>0.96</td>
<td>-7.79</td>
<td>0.14</td>
</tr>
<tr>
<td>MCOR</td>
<td>0.57</td>
<td>0.65</td>
<td>0.56</td>
<td>1.45</td>
<td>0.99</td>
<td>0.84</td>
</tr>
<tr>
<td>BACA</td>
<td>0.65</td>
<td>0.53</td>
<td>0.59</td>
<td>0.84</td>
<td>0.99</td>
<td>0.72</td>
</tr>
</tbody>
</table>

*Source: IDX*
### TOTAL ASSETS (BILLION IDR)

18 COMMERCIAL BANKS LISTED IN IDX

**PERIOD 2009 - 2013**

<table>
<thead>
<tr>
<th>Banks</th>
<th>Period</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
<td>2010</td>
</tr>
<tr>
<td>BMRI</td>
<td>394,616</td>
<td>449,774</td>
</tr>
<tr>
<td>BBRI</td>
<td>316,947</td>
<td>404,285</td>
</tr>
<tr>
<td>BBCA</td>
<td>282,392</td>
<td>324,419</td>
</tr>
<tr>
<td>BBNI</td>
<td>227,496</td>
<td>248,580</td>
</tr>
<tr>
<td>BNGA</td>
<td>107,104</td>
<td>143,652</td>
</tr>
<tr>
<td>BDMN</td>
<td>98,597</td>
<td>118,206</td>
</tr>
<tr>
<td>BNLI</td>
<td>56,009</td>
<td>73,813</td>
</tr>
<tr>
<td>BBTN</td>
<td>58,447</td>
<td>68,385</td>
</tr>
<tr>
<td>BNII</td>
<td>60,965</td>
<td>75,130</td>
</tr>
<tr>
<td>NISP</td>
<td>37,052</td>
<td>44,474</td>
</tr>
<tr>
<td>MEGA</td>
<td>39,684</td>
<td>51,596</td>
</tr>
<tr>
<td>BBKP</td>
<td>37,173</td>
<td>47,489</td>
</tr>
<tr>
<td>INPC</td>
<td>15,432</td>
<td>17,063</td>
</tr>
<tr>
<td>MAYA</td>
<td>7,629</td>
<td>10,102</td>
</tr>
<tr>
<td>BVIC</td>
<td>7,359</td>
<td>10,304</td>
</tr>
<tr>
<td>BCIC</td>
<td>7,531</td>
<td>10,783</td>
</tr>
<tr>
<td>MCOR</td>
<td>2,798</td>
<td>4,354</td>
</tr>
<tr>
<td>BACA</td>
<td>3,459</td>
<td>4,399</td>
</tr>
</tbody>
</table>

*Source: IDX*
### TOTAL EQUITY (BILLION IDR)

#### 18 COMMERCIAL BANKS LISTED IN IDX

#### PERIOD 2009 – 2013

<table>
<thead>
<tr>
<th>Banks</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMRI</td>
<td>35,108</td>
<td>41,54</td>
<td>62,654</td>
<td>76,532</td>
<td>88,790</td>
<td>60,925</td>
</tr>
<tr>
<td>BBRI</td>
<td>27,257</td>
<td>36,673</td>
<td>49,820</td>
<td>64,881</td>
<td>79,327</td>
<td>51,592</td>
</tr>
<tr>
<td>BBCA</td>
<td>27,856</td>
<td>34,107</td>
<td>42,027</td>
<td>51,897</td>
<td>63,966</td>
<td>43,971</td>
</tr>
<tr>
<td>BBNI</td>
<td>19,143</td>
<td>33,119</td>
<td>37,843</td>
<td>43,525</td>
<td>47,683</td>
<td>36,263</td>
</tr>
<tr>
<td>BNGA</td>
<td>11,210</td>
<td>13,767</td>
<td>18,369</td>
<td>22,651</td>
<td>25,886</td>
<td>18,377</td>
</tr>
<tr>
<td>BDMN</td>
<td>15,805</td>
<td>18,449</td>
<td>25,836</td>
<td>28,733</td>
<td>31,552</td>
<td>24,075</td>
</tr>
<tr>
<td>BNLI</td>
<td>4,835</td>
<td>7,917</td>
<td>9,136</td>
<td>12,495</td>
<td>14,126</td>
<td>9,702</td>
</tr>
<tr>
<td>BBTN</td>
<td>5,393</td>
<td>6,447</td>
<td>7,321</td>
<td>10,278</td>
<td>11,556</td>
<td>8,199</td>
</tr>
<tr>
<td>BNII</td>
<td>19,143</td>
<td>33,119</td>
<td>37,843</td>
<td>43,525</td>
<td>47,683</td>
<td>36,263</td>
</tr>
<tr>
<td>NISP</td>
<td>4,137</td>
<td>4,532</td>
<td>6,590</td>
<td>8,951</td>
<td>13,496</td>
<td>7,541</td>
</tr>
<tr>
<td>MEGA</td>
<td>3,403</td>
<td>4,366</td>
<td>4,876</td>
<td>6,262</td>
<td>6,118</td>
<td>5,005</td>
</tr>
<tr>
<td>BBKP</td>
<td>2,536</td>
<td>2,886</td>
<td>4,374</td>
<td>4,996</td>
<td>6,213</td>
<td>4,201</td>
</tr>
<tr>
<td>INPC</td>
<td>963</td>
<td>1,054</td>
<td>1,154</td>
<td>1,937</td>
<td>2,661</td>
<td>1,554</td>
</tr>
<tr>
<td>MAYA</td>
<td>993</td>
<td>1,483</td>
<td>1,663</td>
<td>1,845</td>
<td>2,412</td>
<td>1,679</td>
</tr>
<tr>
<td>BVIC</td>
<td>629</td>
<td>742</td>
<td>1,212</td>
<td>1,469</td>
<td>1,664</td>
<td>1,143</td>
</tr>
<tr>
<td>BCIC</td>
<td>569</td>
<td>774</td>
<td>1,001</td>
<td>1,243</td>
<td>1,375</td>
<td>992</td>
</tr>
<tr>
<td>MCOR</td>
<td>301</td>
<td>521</td>
<td>557</td>
<td>755</td>
<td>1,035</td>
<td>634</td>
</tr>
<tr>
<td>BACA</td>
<td>504</td>
<td>543</td>
<td>608</td>
<td>657</td>
<td>906</td>
<td>644</td>
</tr>
</tbody>
</table>

*Source: IDX*
TOTAL LOAN (BILLION IDR)
18 COMMERCIAL BANKS LISTED IN IDX
PERIOD 2009 – 2013

<table>
<thead>
<tr>
<th>Banks</th>
<th>Period</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
<td>2010</td>
</tr>
<tr>
<td>BMRI</td>
<td>119,595</td>
<td>150,016</td>
</tr>
<tr>
<td>BBRI</td>
<td>194,242</td>
<td>232,972</td>
</tr>
<tr>
<td>BBCA</td>
<td>119,595</td>
<td>150,016</td>
</tr>
<tr>
<td>BBNI</td>
<td>113,922</td>
<td>129,399</td>
</tr>
<tr>
<td>BNGA</td>
<td>80,114</td>
<td>100,350</td>
</tr>
<tr>
<td>BDMN</td>
<td>58,367</td>
<td>73,268</td>
</tr>
<tr>
<td>BNLI</td>
<td>39,585</td>
<td>51,253</td>
</tr>
<tr>
<td>BBTN</td>
<td>38,117</td>
<td>47,977</td>
</tr>
<tr>
<td>BNII</td>
<td>39,585</td>
<td>51,253</td>
</tr>
<tr>
<td>NISP</td>
<td>21,283</td>
<td>27,360</td>
</tr>
<tr>
<td>MEGA</td>
<td>18,352</td>
<td>23,613</td>
</tr>
<tr>
<td>BBKP</td>
<td>24,013</td>
<td>29,398</td>
</tr>
<tr>
<td>INPC</td>
<td>10,787</td>
<td>10,985</td>
</tr>
<tr>
<td>MAYA</td>
<td>4,961</td>
<td>5,931</td>
</tr>
<tr>
<td>BVIC</td>
<td>2,713</td>
<td>3,187</td>
</tr>
<tr>
<td>BCIC</td>
<td>3,418</td>
<td>5,012</td>
</tr>
<tr>
<td>MCOR</td>
<td>1,560</td>
<td>2,905</td>
</tr>
<tr>
<td>BACA</td>
<td>119,595</td>
<td>150,016</td>
</tr>
</tbody>
</table>

Source: IDX
## CAPITAL, EQUITY-TO-ASSET (%)
### 18 COMMERCIAL BANKS LISTED IN IDX
#### PERIOD 2009 – 2013

<table>
<thead>
<tr>
<th>Banks</th>
<th>Period</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
<td>2010</td>
</tr>
<tr>
<td>BMRI</td>
<td>8.90</td>
<td>9.24</td>
</tr>
<tr>
<td>BBRI</td>
<td>8.60</td>
<td>9.07</td>
</tr>
<tr>
<td>BBCA</td>
<td>9.86</td>
<td>10.51</td>
</tr>
<tr>
<td>BBNI</td>
<td>8.41</td>
<td>13.32</td>
</tr>
<tr>
<td>BNGA</td>
<td>10.47</td>
<td>9.58</td>
</tr>
<tr>
<td>BDMN</td>
<td>16.03</td>
<td>15.61</td>
</tr>
<tr>
<td>BNLI</td>
<td>8.63</td>
<td>10.73</td>
</tr>
<tr>
<td>BBTN</td>
<td>9.23</td>
<td>9.43</td>
</tr>
<tr>
<td>BNII</td>
<td>8.63</td>
<td>9.62</td>
</tr>
<tr>
<td>NISP</td>
<td>11.17</td>
<td>10.19</td>
</tr>
<tr>
<td>MEGA</td>
<td>8.58</td>
<td>8.46</td>
</tr>
<tr>
<td>BBKP</td>
<td>6.82</td>
<td>6.08</td>
</tr>
<tr>
<td>INPC</td>
<td>6.24</td>
<td>6.18</td>
</tr>
<tr>
<td>MAYA</td>
<td>13.02</td>
<td>14.68</td>
</tr>
<tr>
<td>BVIC</td>
<td>8.55</td>
<td>7.21</td>
</tr>
<tr>
<td>BCIC</td>
<td>7.56</td>
<td>7.18</td>
</tr>
<tr>
<td>MCOR</td>
<td>10.77</td>
<td>11.97</td>
</tr>
<tr>
<td>BACA</td>
<td>9.86</td>
<td>10.51</td>
</tr>
</tbody>
</table>

*Source: IDX*
## LOAN, LOAN-TO-ASSET (%)

**18 COMMERCIAL BANKS LISTED IN IDX**

**PERIOD 2009 – 2013**

<table>
<thead>
<tr>
<th>Banks</th>
<th>Period</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
<td>2010</td>
</tr>
<tr>
<td>BMRI</td>
<td>30.31</td>
<td>33.35</td>
</tr>
<tr>
<td>BBRI</td>
<td>61.29</td>
<td>57.63</td>
</tr>
<tr>
<td>BBCA</td>
<td>42.35</td>
<td>46.24</td>
</tr>
<tr>
<td>BBNI</td>
<td>50.08</td>
<td>52.06</td>
</tr>
<tr>
<td>BNGA</td>
<td>74.80</td>
<td>69.86</td>
</tr>
<tr>
<td>BDMN</td>
<td>59.20</td>
<td>61.98</td>
</tr>
<tr>
<td>BNLI</td>
<td>70.68</td>
<td>69.44</td>
</tr>
<tr>
<td>BBTN</td>
<td>65.22</td>
<td>70.16</td>
</tr>
<tr>
<td>BNII</td>
<td>59.87</td>
<td>66.79</td>
</tr>
<tr>
<td>NISP</td>
<td>57.44</td>
<td>61.52</td>
</tr>
<tr>
<td>MEGA</td>
<td>46.24</td>
<td>45.76</td>
</tr>
<tr>
<td>BBKP</td>
<td>64.60</td>
<td>61.91</td>
</tr>
<tr>
<td>INPC</td>
<td>69.90</td>
<td>64.38</td>
</tr>
<tr>
<td>MAYA</td>
<td>65.03</td>
<td>58.72</td>
</tr>
<tr>
<td>BVIC</td>
<td>36.87</td>
<td>30.93</td>
</tr>
<tr>
<td>BCIC</td>
<td>45.39</td>
<td>46.49</td>
</tr>
<tr>
<td>MCOR</td>
<td>55.74</td>
<td>66.72</td>
</tr>
<tr>
<td>BACA</td>
<td>34.87</td>
<td>41.32</td>
</tr>
</tbody>
</table>

*Source: IDX*
ANNUAL INDONESIAN GROWTH DOMESTIC PRODUCT (MILLION IDR)

<table>
<thead>
<tr>
<th>Period</th>
<th>Growth Domestic Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>5,606.20</td>
</tr>
<tr>
<td>2010</td>
<td>6,446.85</td>
</tr>
<tr>
<td>2011</td>
<td>7,419.19</td>
</tr>
<tr>
<td>2012</td>
<td>8,229.44</td>
</tr>
<tr>
<td>2013</td>
<td>9,083.97</td>
</tr>
</tbody>
</table>

*Source: Indonesian Statistical Bureau*

INTEREST RATE (%)

<table>
<thead>
<tr>
<th>Monthly BI Rate</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>8.75</td>
<td>6.50</td>
<td>6.50</td>
<td>6.00</td>
<td>5.75</td>
</tr>
<tr>
<td>February</td>
<td>8.25</td>
<td>6.50</td>
<td>6.75</td>
<td>5.75</td>
<td>5.75</td>
</tr>
<tr>
<td>March</td>
<td>7.75</td>
<td>6.50</td>
<td>6.75</td>
<td>5.75</td>
<td>5.75</td>
</tr>
<tr>
<td>April</td>
<td>7.50</td>
<td>6.50</td>
<td>6.75</td>
<td>5.75</td>
<td>5.75</td>
</tr>
<tr>
<td>May</td>
<td>7.25</td>
<td>6.50</td>
<td>6.75</td>
<td>5.75</td>
<td>5.75</td>
</tr>
<tr>
<td>June</td>
<td>7.00</td>
<td>6.50</td>
<td>6.75</td>
<td>5.75</td>
<td>6.00</td>
</tr>
<tr>
<td>July</td>
<td>6.75</td>
<td>6.50</td>
<td>6.75</td>
<td>5.75</td>
<td>6.50</td>
</tr>
<tr>
<td>August</td>
<td>6.50</td>
<td>6.50</td>
<td>6.75</td>
<td>5.75</td>
<td>6.75</td>
</tr>
<tr>
<td>September</td>
<td>6.50</td>
<td>6.50</td>
<td>6.75</td>
<td>5.75</td>
<td>7.25</td>
</tr>
<tr>
<td>October</td>
<td>6.50</td>
<td>6.50</td>
<td>6.50</td>
<td>5.75</td>
<td>7.25</td>
</tr>
<tr>
<td>November</td>
<td>6.50</td>
<td>6.50</td>
<td>6.00</td>
<td>5.75</td>
<td>7.50</td>
</tr>
<tr>
<td>December</td>
<td>6.50</td>
<td>6.50</td>
<td>6.00</td>
<td>5.75</td>
<td>7.50</td>
</tr>
<tr>
<td>Average</td>
<td>7.15</td>
<td>6.50</td>
<td>6.58</td>
<td>5.77</td>
<td>6.48</td>
</tr>
</tbody>
</table>

*Source: Bank Indonesia*
## EXCHANGE RATE

<table>
<thead>
<tr>
<th>Period</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>11,167.21</td>
<td>9,275.45</td>
<td>9,037.38</td>
<td>9,109.14</td>
<td>9,687.33</td>
</tr>
<tr>
<td>February</td>
<td>11,852.75</td>
<td>9,348.21</td>
<td>8,912.56</td>
<td>9,025.76</td>
<td>9,686.65</td>
</tr>
<tr>
<td>March</td>
<td>11,849.55</td>
<td>9,173.73</td>
<td>8,761.48</td>
<td>9,165.33</td>
<td>9,709.42</td>
</tr>
<tr>
<td>April</td>
<td>11,025.10</td>
<td>9,027.33</td>
<td>8,651.30</td>
<td>9,175.50</td>
<td>9,724.14</td>
</tr>
<tr>
<td>May</td>
<td>10,392.65</td>
<td>9,183.21</td>
<td>8,555.80</td>
<td>9,290.24</td>
<td>9,760.91</td>
</tr>
<tr>
<td>June</td>
<td>10,206.64</td>
<td>9,148.36</td>
<td>8,564.00</td>
<td>9,451.14</td>
<td>9,881.53</td>
</tr>
<tr>
<td>July</td>
<td>10,111.33</td>
<td>9,049.45</td>
<td>8,533.24</td>
<td>9,456.59</td>
<td>10,073.39</td>
</tr>
<tr>
<td>August</td>
<td>9,977.60</td>
<td>8,971.76</td>
<td>8,532.00</td>
<td>9,499.84</td>
<td>10,572.50</td>
</tr>
<tr>
<td>September</td>
<td>9,900.72</td>
<td>8,975.84</td>
<td>8,765.50</td>
<td>9,566.35</td>
<td>11,346.24</td>
</tr>
<tr>
<td>October</td>
<td>9,462.73</td>
<td>8,927.90</td>
<td>8,895.24</td>
<td>9,597.14</td>
<td>11,366.90</td>
</tr>
<tr>
<td>November</td>
<td>9,469.95</td>
<td>8,938.38</td>
<td>9,015.18</td>
<td>9,627.95</td>
<td>11,613.10</td>
</tr>
<tr>
<td>December</td>
<td>9,457.75</td>
<td>9,022.62</td>
<td>9,088.48</td>
<td>9,645.89</td>
<td>12,087.10</td>
</tr>
<tr>
<td>Average</td>
<td><strong>10,407.83</strong></td>
<td><strong>9,086.85</strong></td>
<td><strong>8,776.01</strong></td>
<td><strong>9,384.24</strong></td>
<td><strong>10,459.10</strong></td>
</tr>
</tbody>
</table>

*Source: World Bank*
APPENDIX B

STATISTICAL TABLE
<table>
<thead>
<tr>
<th>df</th>
<th>Pr</th>
<th>0.25</th>
<th>0.10</th>
<th>0.05</th>
<th>0.025</th>
<th>0.01</th>
<th>0.005</th>
<th>0.002</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>0.67934</td>
<td>1.29944</td>
<td>1.67722</td>
<td>2.01063</td>
<td>2.40658</td>
<td>2.86220</td>
<td>3.26691</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>0.67933</td>
<td>1.29907</td>
<td>1.67655</td>
<td>2.00558</td>
<td>2.40489</td>
<td>2.86296</td>
<td>3.26308</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>0.67933</td>
<td>1.29871</td>
<td>1.67591</td>
<td>2.00065</td>
<td>2.40327</td>
<td>2.85977</td>
<td>3.25931</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>0.67933</td>
<td>1.29837</td>
<td>1.67528</td>
<td>1.99587</td>
<td>2.40172</td>
<td>2.85672</td>
<td>3.25560</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>0.67933</td>
<td>1.29805</td>
<td>1.67469</td>
<td>1.99121</td>
<td>2.40022</td>
<td>2.85373</td>
<td>3.25191</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>0.67933</td>
<td>1.29773</td>
<td>1.67412</td>
<td>1.98664</td>
<td>2.39879</td>
<td>2.85087</td>
<td>3.24825</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>0.67933</td>
<td>1.29743</td>
<td>1.67356</td>
<td>1.98220</td>
<td>2.39741</td>
<td>2.84809</td>
<td>3.24463</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>0.67933</td>
<td>1.29713</td>
<td>1.67303</td>
<td>1.97787</td>
<td>2.39616</td>
<td>2.84540</td>
<td>3.24105</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>0.67933</td>
<td>1.29685</td>
<td>1.67252</td>
<td>1.97365</td>
<td>2.39493</td>
<td>2.84283</td>
<td>3.23750</td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>0.67933</td>
<td>1.29658</td>
<td>1.67203</td>
<td>1.96954</td>
<td>2.39373</td>
<td>2.84030</td>
<td>3.23397</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>0.67933</td>
<td>1.29632</td>
<td>1.67155</td>
<td>1.96554</td>
<td>2.39255</td>
<td>2.83780</td>
<td>3.23047</td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>0.67933</td>
<td>1.29607</td>
<td>1.67109</td>
<td>1.96165</td>
<td>2.39140</td>
<td>2.83533</td>
<td>3.22700</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>0.67933</td>
<td>1.29582</td>
<td>1.67065</td>
<td>1.95786</td>
<td>2.39036</td>
<td>2.83290</td>
<td>3.22356</td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>0.67933</td>
<td>1.29558</td>
<td>1.67022</td>
<td>1.95418</td>
<td>2.38933</td>
<td>2.83050</td>
<td>3.22014</td>
<td></td>
</tr>
<tr>
<td>62</td>
<td>0.67933</td>
<td>1.29536</td>
<td>1.66980</td>
<td>1.95051</td>
<td>2.38833</td>
<td>2.82814</td>
<td>3.21675</td>
<td></td>
</tr>
<tr>
<td>63</td>
<td>0.67934</td>
<td>1.29513</td>
<td>1.66940</td>
<td>1.94686</td>
<td>2.38734</td>
<td>2.82580</td>
<td>3.21340</td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>0.67934</td>
<td>1.29492</td>
<td>1.66901</td>
<td>1.94324</td>
<td>2.38637</td>
<td>2.82350</td>
<td>3.21008</td>
<td></td>
</tr>
<tr>
<td>65</td>
<td>0.67934</td>
<td>1.29471</td>
<td>1.66864</td>
<td>1.93965</td>
<td>2.38542</td>
<td>2.82123</td>
<td>3.20677</td>
<td></td>
</tr>
<tr>
<td>66</td>
<td>0.67935</td>
<td>1.29451</td>
<td>1.66827</td>
<td>1.93608</td>
<td>2.38450</td>
<td>2.81900</td>
<td>3.20350</td>
<td></td>
</tr>
<tr>
<td>67</td>
<td>0.67935</td>
<td>1.29432</td>
<td>1.66792</td>
<td>1.93253</td>
<td>2.38360</td>
<td>2.81680</td>
<td>3.20024</td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>0.67935</td>
<td>1.29413</td>
<td>1.66757</td>
<td>1.92900</td>
<td>2.38273</td>
<td>2.81462</td>
<td>3.19701</td>
<td></td>
</tr>
<tr>
<td>69</td>
<td>0.67936</td>
<td>1.29394</td>
<td>1.66724</td>
<td>1.92547</td>
<td>2.38188</td>
<td>2.81247</td>
<td>3.19380</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>0.67936</td>
<td>1.29376</td>
<td>1.66691</td>
<td>1.92197</td>
<td>2.38105</td>
<td>2.81035</td>
<td>3.19061</td>
<td></td>
</tr>
<tr>
<td>71</td>
<td>0.67936</td>
<td>1.29359</td>
<td>1.66660</td>
<td>1.91850</td>
<td>2.38023</td>
<td>2.80826</td>
<td>3.18744</td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>0.67937</td>
<td>1.29342</td>
<td>1.66629</td>
<td>1.91505</td>
<td>2.37943</td>
<td>2.80620</td>
<td>3.18430</td>
<td></td>
</tr>
<tr>
<td>73</td>
<td>0.67937</td>
<td>1.29326</td>
<td>1.66600</td>
<td>1.91162</td>
<td>2.37864</td>
<td>2.80417</td>
<td>3.18120</td>
<td></td>
</tr>
<tr>
<td>74</td>
<td>0.67937</td>
<td>1.29310</td>
<td>1.66571</td>
<td>1.90821</td>
<td>2.37788</td>
<td>2.80216</td>
<td>3.17813</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>0.67938</td>
<td>1.29294</td>
<td>1.66543</td>
<td>1.90484</td>
<td>2.37711</td>
<td>2.80018</td>
<td>3.17510</td>
<td></td>
</tr>
<tr>
<td>76</td>
<td>0.67938</td>
<td>1.29279</td>
<td>1.66515</td>
<td>1.90150</td>
<td>2.37636</td>
<td>2.79823</td>
<td>3.17210</td>
<td></td>
</tr>
<tr>
<td>77</td>
<td>0.67938</td>
<td>1.29264</td>
<td>1.66488</td>
<td>1.89819</td>
<td>2.37564</td>
<td>2.79630</td>
<td>3.16913</td>
<td></td>
</tr>
<tr>
<td>78</td>
<td>0.67938</td>
<td>1.29250</td>
<td>1.66462</td>
<td>1.89490</td>
<td>2.37494</td>
<td>2.79439</td>
<td>3.16620</td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>0.67939</td>
<td>1.29236</td>
<td>1.66437</td>
<td>1.89163</td>
<td>2.37425</td>
<td>2.79250</td>
<td>3.16330</td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>0.67939</td>
<td>1.29222</td>
<td>1.66412</td>
<td>1.88840</td>
<td>2.37357</td>
<td>2.79063</td>
<td>3.16043</td>
<td></td>
</tr>
</tbody>
</table>

Source: www.juniadichaniago.wordpress.com
<table>
<thead>
<tr>
<th>df2/df1</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>10.13</td>
<td>9.55</td>
<td>9.28</td>
<td>9.12</td>
<td>9.01</td>
<td>8.94</td>
<td>8.89</td>
<td>8.85</td>
<td>8.81</td>
<td>8.79</td>
</tr>
<tr>
<td>5</td>
<td>6.61</td>
<td>5.79</td>
<td>5.41</td>
<td>5.19</td>
<td>5.05</td>
<td>4.95</td>
<td>4.88</td>
<td>4.82</td>
<td>4.77</td>
<td>4.74</td>
</tr>
<tr>
<td>6</td>
<td>5.99</td>
<td>5.14</td>
<td>4.76</td>
<td>4.53</td>
<td>4.39</td>
<td>4.28</td>
<td>4.21</td>
<td>4.15</td>
<td>4.1</td>
<td>4.06</td>
</tr>
<tr>
<td>7</td>
<td>5.59</td>
<td>4.74</td>
<td>4.35</td>
<td>4.12</td>
<td>3.97</td>
<td>3.87</td>
<td>3.79</td>
<td>3.73</td>
<td>3.68</td>
<td>3.64</td>
</tr>
<tr>
<td>8</td>
<td>5.32</td>
<td>4.46</td>
<td>4.07</td>
<td>3.84</td>
<td>3.69</td>
<td>3.58</td>
<td>3.5</td>
<td>3.44</td>
<td>3.39</td>
<td>3.35</td>
</tr>
<tr>
<td>9</td>
<td>5.12</td>
<td>4.26</td>
<td>3.86</td>
<td>3.63</td>
<td>3.48</td>
<td>3.37</td>
<td>3.29</td>
<td>3.23</td>
<td>3.18</td>
<td>3.14</td>
</tr>
<tr>
<td>10</td>
<td>4.84</td>
<td>3.98</td>
<td>3.59</td>
<td>3.36</td>
<td>3.2</td>
<td>3.09</td>
<td>3.01</td>
<td>2.95</td>
<td>2.9</td>
<td>2.85</td>
</tr>
<tr>
<td>11</td>
<td>4.75</td>
<td>3.89</td>
<td>3.49</td>
<td>3.26</td>
<td>3.11</td>
<td>3</td>
<td>2.91</td>
<td>2.85</td>
<td>2.8</td>
<td>2.75</td>
</tr>
<tr>
<td>12</td>
<td>4.67</td>
<td>3.81</td>
<td>3.41</td>
<td>3.18</td>
<td>3.03</td>
<td>2.92</td>
<td>2.83</td>
<td>2.77</td>
<td>2.71</td>
<td>2.67</td>
</tr>
<tr>
<td>13</td>
<td>4.6</td>
<td>3.74</td>
<td>3.34</td>
<td>3.11</td>
<td>2.96</td>
<td>2.82</td>
<td>2.75</td>
<td>2.7</td>
<td>2.65</td>
<td>2.6</td>
</tr>
<tr>
<td>14</td>
<td>4.54</td>
<td>3.68</td>
<td>3.2</td>
<td>3.06</td>
<td>2.9</td>
<td>2.79</td>
<td>2.71</td>
<td>2.64</td>
<td>2.59</td>
<td>2.54</td>
</tr>
<tr>
<td>15</td>
<td>4.49</td>
<td>3.63</td>
<td>3.24</td>
<td>3.01</td>
<td>2.85</td>
<td>2.74</td>
<td>2.66</td>
<td>2.59</td>
<td>2.54</td>
<td>2.49</td>
</tr>
<tr>
<td>16</td>
<td>4.45</td>
<td>3.59</td>
<td>3.2</td>
<td>2.96</td>
<td>2.8</td>
<td>2.61</td>
<td>2.55</td>
<td>2.49</td>
<td>2.45</td>
<td>2.45</td>
</tr>
<tr>
<td>17</td>
<td>4.41</td>
<td>3.55</td>
<td>3.16</td>
<td>2.93</td>
<td>2.77</td>
<td>2.66</td>
<td>2.58</td>
<td>2.51</td>
<td>2.46</td>
<td>2.41</td>
</tr>
<tr>
<td>18</td>
<td>4.38</td>
<td>3.52</td>
<td>3.13</td>
<td>2.9</td>
<td>2.74</td>
<td>2.63</td>
<td>2.54</td>
<td>2.48</td>
<td>2.42</td>
<td>2.38</td>
</tr>
<tr>
<td>19</td>
<td>4.35</td>
<td>3.49</td>
<td>3.1</td>
<td>2.87</td>
<td>2.71</td>
<td>2.6</td>
<td>2.51</td>
<td>2.45</td>
<td>2.39</td>
<td>2.35</td>
</tr>
<tr>
<td>20</td>
<td>4.23</td>
<td>3.37</td>
<td>2.98</td>
<td>2.74</td>
<td>2.59</td>
<td>2.47</td>
<td>2.39</td>
<td>2.32</td>
<td>2.27</td>
<td>2.22</td>
</tr>
<tr>
<td>26</td>
<td>4.17</td>
<td>3.32</td>
<td>2.92</td>
<td>2.69</td>
<td>2.53</td>
<td>2.42</td>
<td>2.33</td>
<td>2.27</td>
<td>2.21</td>
<td>2.16</td>
</tr>
<tr>
<td>30</td>
<td>4.08</td>
<td>3.23</td>
<td>2.84</td>
<td>2.61</td>
<td>2.45</td>
<td>2.34</td>
<td>2.25</td>
<td>2.18</td>
<td>2.12</td>
<td>2.08</td>
</tr>
<tr>
<td>40</td>
<td>4.03</td>
<td>3.18</td>
<td>2.79</td>
<td>2.56</td>
<td>2.4</td>
<td>2.29</td>
<td>2.2</td>
<td>2.13</td>
<td>2.07</td>
<td>2.03</td>
</tr>
<tr>
<td>50</td>
<td>4</td>
<td>3.15</td>
<td>2.76</td>
<td>2.53</td>
<td>2.37</td>
<td>2.25</td>
<td>2.17</td>
<td>2.1</td>
<td>2.04</td>
<td>1.99</td>
</tr>
<tr>
<td>60</td>
<td>3.98</td>
<td>3.13</td>
<td>2.74</td>
<td>2.5</td>
<td>2.35</td>
<td>2.23</td>
<td>2.14</td>
<td>2.07</td>
<td>2.02</td>
<td>1.97</td>
</tr>
<tr>
<td>70</td>
<td>3.96</td>
<td>3.11</td>
<td>2.72</td>
<td>2.49</td>
<td>2.33</td>
<td>2.23</td>
<td>2.13</td>
<td>2.06</td>
<td>2</td>
<td>1.95</td>
</tr>
<tr>
<td>80</td>
<td>3.94</td>
<td>3.09</td>
<td>2.7</td>
<td>2.46</td>
<td>2.31</td>
<td>2.19</td>
<td>2.1</td>
<td>2.03</td>
<td>1.97</td>
<td>1.93</td>
</tr>
<tr>
<td>100</td>
<td>3.89</td>
<td>3.04</td>
<td>2.65</td>
<td>2.42</td>
<td>2.26</td>
<td>2.14</td>
<td>2.06</td>
<td>1.98</td>
<td>1.93</td>
<td>1.88</td>
</tr>
<tr>
<td>200</td>
<td>3.86</td>
<td>3.01</td>
<td>2.62</td>
<td>2.39</td>
<td>2.23</td>
<td>2.12</td>
<td>2.03</td>
<td>1.96</td>
<td>1.9</td>
<td>1.85</td>
</tr>
<tr>
<td>500</td>
<td>3.85</td>
<td>3</td>
<td>2.61</td>
<td>2.38</td>
<td>2.22</td>
<td>2.11</td>
<td>2.02</td>
<td>1.95</td>
<td>1.89</td>
<td>1.84</td>
</tr>
<tr>
<td>1000</td>
<td>3.85</td>
<td>3</td>
<td>2.61</td>
<td>2.37</td>
<td>2.21</td>
<td>2.1</td>
<td>2.01</td>
<td>1.94</td>
<td>1.88</td>
<td>1.83</td>
</tr>
<tr>
<td>df2/df1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: https://home.comcast.net