THE EFFECT OF FINANCIAL RISK AND ENVIRONMENTAL RISK ON EARNINGS

(CASE STUDY OF PT BANK TABUNGAN NEGARA (PERSERO) TBK PERIOD 2006-2015)

UNDERGRADUATE THESIS

Submitted for Bachelor Exam at Faculty of Administrative Science Brawijaya University

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MALANG
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MOTTO

“Responsibility is Everything, Everything Needs Responsibility!”

(Adelia Damayanti)

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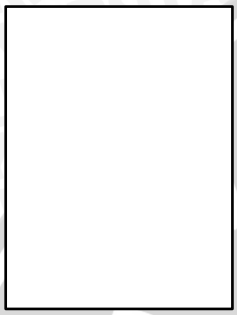

ORIGINALITY STATEMENT

I state honestly based on my understanding, this undergraduate thesis does not contain the research which was ever submitted by other parties to achieve creation or assumption which was ever written or published by other parties, except in write is cited in this document and is mentioned in the citations and references.

If in this undergraduate thesis can be proved that there is plagiarism element, I agree this undergraduate thesis is being undermined and academic degree that had been received (S-1) is being canceled, also be processed according to applicable law (UU) No 20 Year 2003, Article 25 No 2 and Article 70).

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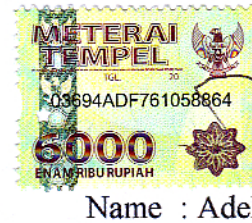

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SUMMARY

Adelia Damayanti, 2017, The Effect of Financial Risk and Environmental Risk on Earnings (Case Study of PT Bank Tabungan Negara (Persero) Tbk Period 2006-2015). Dr. Mochammad Al Musadieq, MBA. 145 Pages + xvii

Generally, banks are subjected to financial, operational, and environmental risks. The bank's capacity to manage those risks can impact on its income and earnings, therefore, banks should make an appropriate risk management decisions. Financial risks consist of capital adequacy and credit risk. Operational risk consists of business process, but it is not being analyzed in this research. Environmental risk consists of macroeconomic policy. The objective of this research was to explain the effect of Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate on Return on Equity (ROE) and Return on Asset (ROA) simultaneously and partially. CAR indicated the capital adequacy. NPL indicated credit risk. BI Rate indicated macroeconomic policy. ROE and ROA indicated the profitability. The object was PT Bank Tabungan Negara (Persero) Tbk.

This research type was explanatory research with quantitative approach and used multiple linier regression analysis method. The samples were 40 data for each independent and dependent variable. The data were the secondary data which consist of quarterly time series data from quarter I 2006 to quarter IV 2015.

The results explained that: 1) CAR, NPL, and BI Rate had significant effect on ROE simultaneously; 2) CAR, NPL, and BI Rate had significant effect on ROA simultaneously; 3) CAR had significant positive effect on ROE partially; 4) NPL had significant negative effect on ROE partially; 5) BI Rate had significant positive effect on ROE partially; 6) CAR had significant positive effect on ROA partially; 7) NPL had insignificant negative effect on ROA partially; 8) BI Rate had insignificant negative effect on ROA partially. This research results showed that to increase the profitability, Bank BTN should increase capital adequacy, decrease credit risk, and anticipate macroeconomic policy.

Keywords: Financial risk, environmental risk, earnings

RINGKASAN

Adelia Damayanti, 2017, Pengaruh Risiko Keuangan dan Risiko Lingkungan terhadap Laba (Studi Kasus PT Bank Tabungan Negara (Persero) Tbk Periode 2006-2015). Dr. Mochammad Al Musadieq, MBA, 145 Hal. + xvii

Secara umum, bank-bank dihadapkan pada risiko keuangan, risiko operasional, dan risiko lingkungan. Kemampuan bank untuk mengelola risiko-risiko tersebut dapat berdampak pada pendapatan dan labanya, oleh karena itu, bank perlu membuat keputusan manajemen risiko yang tepat. Risiko keuangan antara lain terdiri dari kecukupan modal dan risiko kredit. Risiko operasional antara lain terdiri dari proses binis, tetapi tidak dianalisa dalam penelitian ini. Risiko lingkungan antara lain terdiri dari kebijakan makroekonomi. Tujuan penelitian ini yaitu untuk menjelaskan pengaruh *Capital Adequacy Ratio* (CAR), *Non-Performing Loan Ratio* (NPL) dan *BI Rate* terhadap *Return on Equity* (ROE) dan *Return on Asset* (ROA). CAR menunjukkan kecukupan modal. NPL menunjukkan resiko kredit. BI Rate menunjukkan kebijakan makroekonomi. ROE dan ROA menunjukkan profitabilitas. Objek penelitian ini adalah PT Bank Tabungan Negara (Persero) Tbk.

Jenis penelitian ini yaitu penelitian eksplanatif dengan pendekatan kuantitatif dan menggunakan metode analisis regresi linier berganda. Sampel dalam penelitian ini berjumlah 40 data untuk setiap variabel bebas dan variabel terikat. Jenis data merupakan data sekunder yang terdiri dari data *time series* kuartalan dari kuartal I 2006 sampai kuartal IV 2015.

Hasil penelitian ini menjelaskan bahwa: 1) CAR, NPL, dan *BI Rate* berpengaruh signifikan terhadap ROE secara simultan; 2) CAR, NPL, dan *BI Rate* berpengaruh signifikan terhadap ROA secara simultan; 3) CAR berpengaruh positif signifikan terhadap ROE secara parsial; 4) NPL berpengaruh negatif signifikan terhadap ROE secara parsial; 5) *BI Rate* berpengaruh positif signifikan terhadap ROE secara parsial; 6) CAR berpengaruh positif signifikan terhadap ROA secara parsial; 7) NPL berpengaruh negatif tidak signifikan terhadap ROA secara parsial; 8) *BI Rate* berpengaruh negatif tidak signifikan terhadap ROA secara parsial. Hasil penelitian ini menunjukkan bahwa untuk meningkatkan profitabilitas, Bank BTN sebaiknya meningkatkan kecukupan modal, menurunkan resiko kredit, dan mengantisipasi kebijakan makroekonomi.

Kata kunci: Risiko keuangan, risiko lingkungan, laba

DEDICATION PAGE

THIS UNDERGRADUATE THESIS IS DEDICATED TO

ALLAH

MY BELOVED PARENTS

MY BELOVED BROTHERS AND SISTERS

MY ALL BEST FRIENDS

AND FACULTY OF ADMINISTRATIVE SCIENCE

BRAWIJAYA UNIVERSITY

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The researcher is grateful to Allah SWT who has mercy and blessing, so that, the researcher could finish the undergraduate thesis arrangement entitled **"The Effect of Financial Risk and Environmental Risk on Earnings (Case Study of PT Bank Tabungan Negara (Persero) Tbk Period 2006-2015)"**. This undergraduate thesis was written as requirement to obtain a bachelor's degree of Business Administrative Science in the Faculty of Administrative Science Brawijaya University Malang.

The researcher realizes that the arrangement of this undergraduate thesis would not be finished without the help and encouragement from various parties, therefore, on this occasion the researcher grateful to the honorable:

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3. Mr. Dr. Wilopo, M.AB. as the coordinator of Business Administrative Science Study Program of Faculty of Administrative Science;
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7. Mrs. Ferina Nurlaily, S.E., M.AB., MBA. as undergraduate thesis examiner who gives the best advices;
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16. The researcher's friends as Ambassador BPJS Ketenagakerjaan;
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For the completeness of this undergraduate thesis, suggestions and constructive critics are expected by the researcher. Hopefully, this undergraduate thesis can be useful and contribute significantly for all parties.

Malang, March 15, 2017

The Researcher

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CHAPTER I

INTRODUCTION

A. Background

The banking Industry in the world including Indonesia are experiencing slowdown. It is caused by global little economic crisis. Many banks terminate its employees and cut off the distribution of loans to the business units for billion until trillion rupiahs (Ariyanti, 2016, February 21). Economic crisis was ever happened in Indonesia in 1998 and 2008. In 1998, one factor that caused the economic crisis was the mismanagement of Indonesian banking industry. At that time, the government closed 16 banks (BI, 2016). The crisis has decreased the trust of society to the bank and gave a large impact to the overall economic condition in Indonesia. In 2008, the global economic crisis occurred because of the failure of large banks in United State (U.S.) which deliberately distributed the consumption credit for mortgages to the unqualified costumers. Then the policy impacted on the inability of many costumers to pay their loans assets (Koch & MacDonald, 2015:2). The failure of those large banks was not only take effect in the U.S. but also other countries including Indonesia.

Bank is defined as business entities that collects funds from society in the form of savings and distribute it again to society in the form of credits and or other forms in order to improve the living standard of people (Indonesian Law No 10 Year 1998). Bank serves as financial intermediary between people who have excess funds to people who need funds. It provides the investment funds and working capital for the business units to conduct its operations. Bank contributes

to the business and economic growth through that function, however, bank performance also very affected by the business and economic condition, so that, bank, business, and economic condition are dramatically interdependent.

Based on the type, banks are classified into Commercial Bank and Rural Bank. Commercial bank is bank that conducts its activities conventionally or by using Sharia principle and offers services in the payment transaction. In contrast, rural bank is bank that conducts its activities conventionally or by using Sharia principle but not offers services in the payment transaction (Indonesian Law No 10 Year 1998), therefore, activities of commercial bank are broader than rural bank. Based on ownership, commercial banks are distinguished into State Owned Bank, Foreign Exchange Private Bank, Non-Foreign Exchange Private Bank, Regional Development Bank, Joint Venture Bank, and Foreign Bank Branch Office (OJK, 2016). State owned bank is bank that the whole capital is derived from state assets which is set aside. Foreign exchange private bank is privately owned bank that established in the form of Limited Liability Company, which the whole shares are owned by Indonesian citizen or legal entities in Indonesia and permitted to buy and sell foreign exchange. Non-foreign exchange private bank is privately owned bank that established in the form of Limited Liability Company, which the whole shares are owned by Indonesian citizen or legal entities in Indonesia but not permitted to buy and sell foreign exchange. Regional development bank is bank that established by provincial regulation and largely shares are owned by city government and district government in its region and the capital is assets of local government which is set aside. Joint Venture

Bank is bank that portion of the shares are owned by foreign and private. Foreign Bank Branch Office is branch office of foreign bank which only permitted to operate in five big cities in Indonesia (Latumaerissa, 2014:5-6).

In Indonesia, bank activities are continually managed by Otoritas Jasa Keuangan (OJK). OJK was formed based on Indonesian Law No 21 Year 2011. OJK has a duty to perform its regulatory and supervisory duty over financial service activities in the baking, capital market, and non-bank financial industry sectors. Before OJK was formed, its duties were performed by Bank Indonesia (BI). After handed to OJK, BI is only responsible to construct macro prudential policies and create monetary stability, payment system stability, and overall financial system stability. Banking regulation of BI and OJK is applied through provision letter which updated continually based on economic condition and situation that influence the national banking industry. The regulation is applied to optimize the banking function as an institution of public trust in respect of funding and distribution of credits, as practitioner of monetary policy, and as institution that contributes to the economic growth and equality.

Generally, banks are subjected to financial, operational, and environmental risks. Financial risks are risks that are caused by financial decisions. The financial decisions can result in loss for bank if they are not properly managed and can result in a profit if they are well organized. Financial risks also are subject to complex interdependencies that may significantly increase its overall risk profile. Operational risks are risks which are related to the overall business process of banks and the potential impact thereon of compliance with

bank policies and procedures, internal system and technology, security of information, measures against mismanagement and fraud, and business sustainability concerns. Operational risk also encompasses the bank's strategic planning, governance, and organizational structure, management of staff careers and internal resources, product and knowledge development, and costumer acquisition approach. Environmental risks are risks which are caused by bank's business environment, including macroeconomic policy and policy concerns, legal and regulatory factors, and the overall financial sector infrastructure and payment systems of the jurisdictions in with location it operates. Environmental risks include all types of exogenous risks that could endanger a bank's operations or undermine its ability to continue the business operations. Financial risks consist of capital adequacy and credit risk. Capital adequacy can be measured by using Capital Adequacy Ratio (CAR). Credit risk can be measured by Non-Performing Loan Ratio (NPL). Environmental risk consists of Macroeconomic Policy. Macroeconomic policy can be measured by benchmark interest rate or in Indonesia is BI Rate. The bank's capacity in managing those risks can impact on its income and earnings (Greuning and Bratanovic, 2009:101-102). Overall understanding of profitability sources and changes in the income or profit structure for both an individual bank and the banking system as a whole is important to all key players in the risk management process. "Risk management is a continual process of corporate risk monitoring, control, reduction, and management" (Gupta: 2016:35). It is for this reason that banks must conduct effective risk management to create maximum earnings.

Earnings are the most important factor for a business entities include bank, because the main objective of business entities is to create earnings. The ability of entities to create earnings is referred to the profitability. The profitability is broadly measured by Return on Equity (ROE) and Return on Asset (ROA). If these measures show that the ROE and ROA are higher than other firms in the same industry, it indicates that the bank has the high performance. ROE measures the percentage return of shareholders equity, while ROA measures the ability of the company to create income and earnings by utilizing the assets (Koch & MacDonald, 2015:93)

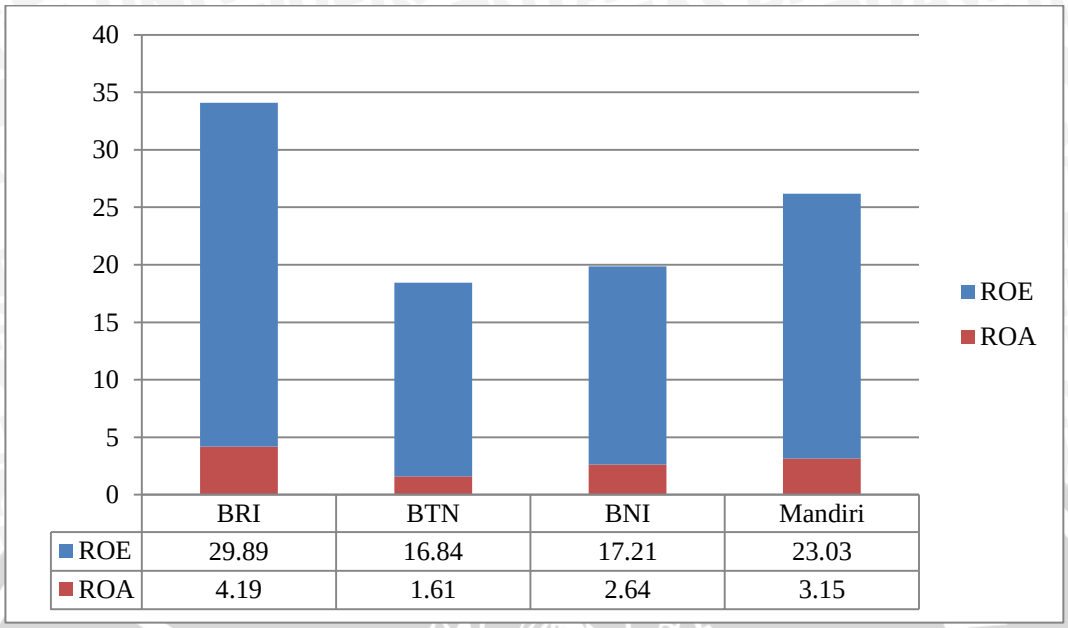
The number of commercial banks which conduct their activities in Indonesia is 118 banks. From those 118 banks, four of them are state owned banks which take a large effect to the financial sector in Indonesia. In the quarter IV of December 2015, the four state owned banks which consists of PT Bank Mandiri (Persero) Tbk or Bank Mandiri, PT Bank Rakyat Indonesia (Persero) Tbk or Bank BRI, PT Bank Negara Indonesia (Persero) Tbk or Bank BNI, and PT Bank Tabungan Negara (Persero) Tbk or Bank BTN were the first, the second, the fourth, and the seventh larger bank respectively in Indonesia based on total assets. Marta (2016, March, 14) stated that at that time, the total assets of those four state owned banks reached 40% from total assets of Indonesian banking industry.

Table 1 State Owned Banks in Indonesia 2015

No	Name	Establishment Date	Total Assets (x Rp 1 Million)
1.	PT Bank Rakyat Indonesia (Persero) Tbk	16 December 1895	878,426,312
2.	PT Bank Tabungan Negara (Persero) Tbk	1897	171,807,592
3.	PT Bank Negara Indonesia (Persero) Tbk	5 July 1946	508,595,288
4.	PT Bank Mandiri (Persero) Tbk	2 October 1998	910,063,409
	Total		2,468,892,601

Source: Indonesia Stock Exchange, 2016

Table 1 shows that Bank Mandiri is the state owned bank which was latest established in 1998, but its total assets was the highest for 910.063 trillion rupiahs in the end 2015. However, on the other side, Bank BTN which was established earlier rather than Bank Mandiri in 1897 had the lowest total assets for only 171.808 trillion rupiahs. International Accounting Standards Board (IASB) (2006) defined that an asset is a resource that is controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity, hence, although Bank BTN has been included on the seventh largest bank based on total assets, but it was less productive in managing their past activities compared with other three state owned banks. “In normal situations, the growth of a business’s assets is determined by an increase in the earnings base and access to stable external funding or investment, at a cost that is acceptable to the business (Greuning & Bratanovic, 2009:40). The total asset of Bank BTN is much lower than other three state owned banks so as the ROE and ROA of Bank BTN lower than other three state owned banks.



	BRI	BTN	BNI	Mandiri
ROE	29.89	16.84	17.21	23.03
ROA	4.19	1.61	2.64	3.15

Figure 1 Return on Equity and Return on Asset of State Owned Banks in Indonesia 2015
Source: Indonesia Stock Exchange, 2016

Figure 1 explains that in the end 2015, ROE of Bank Mandiri, Bank BTN, Bank BNI, and Bank Mandiri were 29.89, 16.84, 17.21, and 23.03 respectively, while ROA of Bank Mandiri, Bank BTN, Bank BNI, and Bank Mandiri were 4.19, 1.61, 2.64, and 3.15 respectively. Bank BRI had the highest ROE and ROA, while Bank BTN had the lowest ROE and ROA compared with the other three state owned banks.

Bank BTN was established under Postpaarbank and got many reforms. Now, it serves as the fully commercial bank which focuses on the housing finance and helps the government in implementing the public housing program. As of December 31, 2015, the Bank has 87 branches (including 22 sharia branches), 244 sub-branches (including 21 sharia sub-branches), 486 cash offices (including 7 sharia cash offices), and 2,951 SOPPs (System on-line Payment Point/on-line Post

office). Sharia bank of PT Bank Tabungan Negara (Persero) Tbk becomes business unit. Bank BTN as the bank which has main focus on the housing finance which facilitates the long term credit conducts activities which are complex and very risky, and, moreover, their target markets are middle low income society. That situation impacts on its income and earnings.

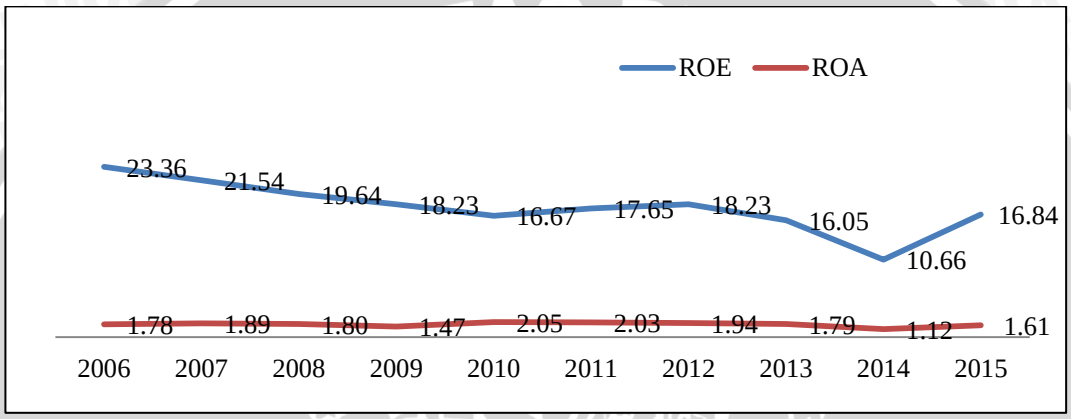


Figure 2 Return on Equity and Return on Asset of PT Bank Tabungan Negara (Persero) Tbk from 2006 to 2015
Source: Bank Tabungan Negara (Persero) Tbk, 2016

Figure 2 indicates that in the period 2006 until 2015, Bank BTN had the highest ROE 23.36% in 2006 with the lowest ROE 10.66% in 2014 and the highest ROA 2.05% with the lowest ROA 1.12%. The distance between the highest and the lowest are far enough. In overall, there was a declining trend of ROE and ROA for 10 latest years. The declining trend in both ROE and ROA can be caused by the economic condition that less support or management performance that less effective. If the condition of declining trend continues, the declining trend of ROE and ROA will decrease the trust and loyalty of clients, shareholders and other stakeholders. That can give a negative impact for the bank operations. Furthermore, the loss of trust from society to the bank will can also

cause the domino effect that can cause the society trust to other banks, so that it is important for Bank BTN to sustain or increase the profitability that is indicated by ROE and ROA of the bank. In increasing the ROE and ROA, Bank BTN should take notice to the other important ratios that indicate financial risk management of bank which consists of CAR and NPL.

Table 2 Capital Adequacy Ratio and Non-Performing Loan Ratio of PT Bank Tabungan Negara (Persero) Tbk from 2006 to 2015

Year	CAR (%)	NPL (%)
2006	17.52	3.91
2007	21.12	4.05
2008	16.14	3.20
2009	21.75	3.36
2010	16.74	3.26
2011	15.03	2.75
2012	17.69	4.09
2013	15.62	4.05
2014	14.64	4.01
2015	16.97	3.42
Mean	**17.32**	**3.61**

Source: Bank Tabungan Negara (Persero) Tbk, 2016

From 2006 to 2010, the average capital adequacy ratio (CAR) of Bank BTN which indicates capital condition was 17.32%. It has fulfilled the requirement of BI that was minimum 8% for bank. Average NPL of Bank BTN was 3.61%. NPL shows the credit risk of the bank. It was less than the BI provision for maximum 5%, but Bank BTN still should be aware to its NPL. Those ratio values are certainly affected by the past performance of Bank BTN and also will affect its future operations. Besides financial risks, there is environmental which is confronted by bank as like macroeconomic policy.

The macroeconomic policy can give a positive and negative effect to the bank. One of macroeconomic policies is the determination of benchmark interest rate by central bank or in Indonesia is BI Rate. Bank BTN as one of macroeconomic policy practitioners must be submissive to it policy, therefore, Bank BTN should develop an appropriate risk management decisions to anticipate financial, operational, and environmental risks. An appropriate decision can be constructed by knowing the risks that affect its earnings and understanding the relationship pattern between them, so that, the researcher conduct the research entitled "**The Effect of Financial Risk and Environmental Risk on Earnings (Case Study of PT Bank Tabungan Negara (Persero) Tbk Period 2006-2015)**.

There are three kinds of bank risks which consist of financial, operational, and environmental risks. Nevertheless, the effect of operational risk on earnings is not being analyzed in this research because it needs a different method with a method that is used to explain the effect of financial risk and environmental risk on earnings.

B. Research Problem

Based on the background, the research problems of this research are as follows:

1. Do Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate have significant effect on Return on Equity (ROE) simultaneously?

2. Do Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate have significant effect on Return on Asset (ROA) simultaneously?
3. Does Capital Adequacy Ratio (CAR) have significant effect on Return on Equity (ROE) partially?
4. Does Non-Performing Loan Ratio (NPL) have significant effect on Return on Equity (ROE) partially?
5. Does BI Rate have significant effect on Return on Equity (ROE) partially?
6. Does Capital Adequacy Ratio (CAR) have significant effect on Return on Asset (ROA) partially?
7. Does Non-Performing Loan Ratio (NPL) have significant effect on Return on Asset (ROA) partially?
8. Does BI Rate have significant effect on Return on Asset (ROA) partially?

C. Research Objective

Based on the research problems, the objectives of this research are as follows:

1. To explain the effect of Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate on Return on Equity (ROE) simultaneously.

2. To explain the effect of Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate on Return on Asset (ROA) simultaneously.
3. To explain the effect of Capital Adequacy Ratio (CAR) on Return on Equity (ROE) partially.
4. To explain the effect of Non-Performing Loan Ratio (NPL) on Return on Equity (ROE) partially.
5. To explain the effect of BI Rate on Return on Equity (ROE) partially.
6. To explain the effect of Capital Adequacy Ratio (CAR) on Return on Asset (ROA) partially.
7. To explain the effect of Non-Performing Loan Ratio (NPL) on Return on Asset (ROA) partially.
8. To explain the effect of BI Rate on Return on Asset (ROA) partially.

D. Research Contribution

This research can give the contributions both in theoretical and practical. These contributions are as follows:

1. **Theoretical Contribution**

   This research can deepen the empirical and theoretical studies about the effect of financial risk and environmental risk on earnings.

2. Practical Contribution

a. For PT Bank Tabungan Negara (Persero) Tbk

This research can be used by PT Bank Tabungan Negara (Persero) Tbk as consideration in the decision making process that related to its management in order to create maximum earnings, especially by managing its risks.

b. For Further Researcher

This research can be used by further researcher as empirical review in conducting research that related to this research topic.

E. Systematics Discussion

Systematics discussion is useful to describe the whole contents in this research. Systematics discussions in this research are as follows:

CHAPTER I: INTRODUCTION

This chapter discusses the background that becomes basic reasons to conduct this research, research problem that want to be answered, research objective, research contribution both in theoretical and practical contributions, and systematics discussion of this research.

CHAPTER II: LITERATURE REVIEW

This chapter discusses empirical review that related with research topic, theoretical review that contains theory and concept that related with problem and relationship between variable that will

be examined. This chapter also describes conceptual model and hypothesis model of this research.

CHAPTER III: RESEARCH METHOD

This chapter discusses the systematic procedure to answer the research problem of the research. Research method consists of research type, research location, variable and measurement, population and sample, data collection technique, and data analysis technique of this research.

CHAPTER IV: RESEARCH RESULT AND ANALYSIS

This chapter discusses the research general overview of research object, descriptive statistical analysis, classical assumption test, and inferential statistical analysis. Besides that, this chapter also explains the interpretation of research result and identifies research limitation.

CHAPTER IV: CONCLUSION AND RECOMMENDATION

This chapter discusses the conclusion and recommendation from this research results.

CHAPTER II

LITERATURE REVIEW

A. Empirical Review

1. Putri (2013)

Putri was conducted the research entitled *The Effect of Credit Risk and Capital Adequacy on Profitability in the Banking Companies Listed on the Indonesia Stock Exchange*. This research was conducted to examine the effect of credit risk which was measured by Non-Performing Loan Ratio (NPL) and capital adequacy which was measured by the Capital Adequacy Ratio (CAR) to the level of profitability which was measured by Return on Asset (ROA) in the banking companies listed on the Indonesia Stock Exchange. Putri determined two independent variables which consist of Credit Risk (X_1) and Capital Adequacy (X_2), and one dependent variable which consists of Profitability (Y).

This research explained that: a) NPL had significant negative effect on ROA; b) CAR had significant positive effect on ROA.

Similarity between the research of Putri and the researcher is the use of NPL, CAR, and ROA in the both research. Putri and the researcher also use the same analysis namely multiple linier regression to analyze the data. The differentiation is the researcher also uses BI Rate as dependent variable and uses ROE as dependent variable.

2. Alim (2014)

Alim was conducted the research entitled *Analysis the Effect of Inflation and BI Rate on Return on Asset (ROA) of Sharia Bank in Indonesia*. This research was conducted to explain the effect of inflation and BI Rate on ROA of Sharia bank. Alim determined two independent variables which consist of Inflation (X_1) and BI Rate (X_2) and one dependent variable which consists of Return on Asset (ROA) (Y).

This research explained that: a) Inflation had insignificant positive effect on ROA; b) BI Rate had insignificant negative effect on ROA.

Similarity between the research of Alim and the researcher is the use of Interest Rate and ROA as variables in the both research. Alim and the researcher also use the same analysis method namely multiple linier regression to analyze the data. The differentiation is Alim also used Inflation as dependent variable, while the researcher also used CAR and NPL as independent variables and ROE as dependent variable.

3. Gizaw, Kabede, and Selvaraj (2014)

Gizaw, Kabede, and Selvaraj were conducted the research entitled *The Impact of Credit Risk on Profitability Performance of Commercial Banks in Ethiopia*. This research was conducted to empirically examine the impact of credit risk on profitability of commercial banks in Ethiopia. Gizaw, et al. determined four independent variables which consist of Non-Performing Loan Ratio (NPL) (X_1), Capital Adequacy Ratio (CAR) (X_2), Loan and Advance to Deposit Ratio (LTD) (X_3), Loan Loss Provision Ratio (LLPR)

(X_4), and two dependent variables which consist of Return on Asset (ROA) (Y_1) and Return on Equity (ROE) (Y_2).

This research explained that: a) NPL had significant negative effect on ROA; b) CAR had insignificant positive effect on ROA; c) LTD had insignificant negative effect on ROA; d) LLPR had significant positive effect on ROA; e) NPL had significant positive effect on ROE; f) CAR had significant negative effect on ROE; g) LTD had insignificant negative effect on ROE; h) LLPR had significant positive effect on ROE.

Similarity between the research of Gizaw et al. and the researcher is the use of NPL, CAR, ROA, and ROE as variables in the both research. Gizaw et al. and the researcher also use the same analysis method namely multiple linier regression to analyze the data. The differentiation is Gizaw et al. also used LTD and LLPR as independent variables, while the researcher also used BI Rate as independent variable.

4. Zaman, Arslan, Sohail, and Malik (2014)

Zaman, Arslan, Sohail, and Malik were conducted the research entitled *Monetary Policy on Financial Performance: Evidence from Banking Sector of Pakistan*. This research was conducted to enlighten the monetary policy effect on banking sector stability and performance by investigating causal relationship between interest rate imposed by state bank of Pakistan and bank financial performance taken as Return on Asset (ROA) and Return on Equity (ROE). Zaman et al. determined one independent variable which consists of Monetary Policy (X) with Interest Rate to measure monetary

policy and one dependent variable which consists of Firm Performance (Y) with ROA and ROE to measure firm performance, and Firm Size as control variable.

This research explained that: a) Interest Rate had significant negative effect on ROA; b) Interest Rate had significant negative effect on ROE.

Similarity between the research of Zaman et al. and the researcher is the use of Interest Rate, ROA and ROE as variables in the both research. The differentiation is Zaman et al. also used Firm Size as control variable, while the researcher also used CAR and NPL as independent variables. Zaman et al. used simple linier regression analysis method to analyze the data, while the researcher used multiple linier regression analysis.

5. Badan and Lestari (2015)

Badan and Lestari were conducted the research entitled *Factors that Affect Profitability of Bank Listed in Indonesia Stock Exchange*. This research was conducted to analyze the factors that affect profitability of bank. Badan and Lestari determined four independent variables which consist of Asset Size (X_1), Credit Risk (X_2), Total Deposits (X_3), and Interest Rate (X_4) and two dependent variables which consist of Return on Equity (ROE) (Y_1) and Return on Asset (ROA) (Y_2), also three control variables which consist of Total Loan, Gross Domestic Product (GDP), and Costumer Price Index (CPI).

This research explained that: a) Asset Size had significant positive effect on ROE; b) Credit Risk had significant negative effect on ROE; c)

Total Deposits had significant positive effect on ROE; d) Interest Rate had significant positive effect on ROE; e) Operating Efficiency had insignificant negative effect on ROE; f) Total Loan had insignificant negative effect on ROE; g) GDP had significant positive effect on ROE; h) CPI had insignificant negative effect on ROE; i) Asset Size had significant positive effect on ROA; j) Credit Risk had significant negative effect on ROA; k) Total Deposits had insignificant positive effect on ROA; l) Interest Rate had significant positive effect on ROA; m) Operating Efficiency had insignificant negative effect on ROA; n) Total Loan had insignificant positive effect on ROA; o) GDP had significant positive effect on ROA; p) CPI had insignificant positive effect on ROA;

Similarity between the research of Badan and Lestari and the researcher is the use of Credit Risk, Interest Rate, ROA and ROE as variables in the both research. Badan and Lestari and the researcher also use the same analysis method namely multiple linier regression to analyze the data. The differentiation is Badan and Lestari also used Asset Size, Total Deposits as independent variables and Operating Efficiency, Total Loan, GDP, and CPI as control variables, while the researcher also used CAR and NPL as independent variables.

6. Maria (2015)

Maria was conducted the research entitled *The Influence of Capital Adequacy Ratio, Operating Expenses to Operating Income, Net Interest Margin, Loan Deposit Ratio to Return on Asset: Case Study in the Top 10*

Bank in Indonesia Period 2007-2011. This research was conducted to identify the influence of Capital Adequacy Ratio, Operating Expenses to Operating Income, Net Interest Margin, and Loan to Deposit Ratio to Return on Asset: Case Study on the top 10 banks 2013 in Indonesia. Maria determined three independent variables which consist of Capital Adequacy Ratio (CAR) (X_1), Operating Expenses to Operating Income (OER) (X_2), Net Interest Margin (NIM) (X_3), and Loan to Deposit Ratio (LDR) (X_4), and one dependent variable which consists of Return on Asset (ROA) (Y).

This research indicated that: a) OER had significant negative influence on ROA; b) NIM had significant positive influence on ROA; c) CAR had insignificant positive influence on ROA; d) LDR had insignificant positive influence on ROA; e) NPL had insignificant negative influence on ROA.

Similarity between the research of Maria and the researcher is the use of CAR, NPL and ROA as variables in the both research. Maria and the researcher also use the same analysis method namely multiple linier regression to analyze the data. The differentiation is Maria also used OER, NIM, and LDR as independent variables, while the researcher used CAR and NPL as independent variables and ROE as dependent variable.

7. Saputri and Oetomo (2016)

Saputri and Oetomo were conducted the research entitled *The Influence of CAR, OER, NPL, and FDR on ROE of Foreign Exchange Bank*. This research was conducted to find out the influence of CAR, OER, NPL,

and LDR to the Return on Equity (ROE). Saputri and Oetomo determined four independent variables which consist of Capital Adequacy Ratio (CAR) (X_1), Operational Expense Revenue (OER) (X_2), Non-Performing Loan Ratio (NPL) (X_3), and Loan to Deposit Ratio (LDR) (X_4), and one dependent variable which consists of Return on Equity (ROE) (Y).

This research explained that: a) CAR had significant positive influence on ROE; c) OER had significant negative influence on ROE; d) NPL had significant negative influence on ROE; LDR had significant positive influence on ROE.

Similarity between the research of Saputri and Oetomo and the researcher is the use of CAR, NPL, and ROE as variables in the both research. Saputri and Oetomo and the researcher also use the same analysis method namely multiple linier regression to analyze the data. The differentiation is Saputri and Oetomo also used OER and LDR as independent variables, while the researcher also used BI Rate as independent variable and ROA as dependent variable.

8. Mapping of Empirical Review

Table 3 Mapping of Empirical Review

No	Name (Year) and Title	Analysis Technique and Variable	Result	Similarity	Difference
1.	Putri (2010) The Effect of Credit Risk and Capital Adequacy on Profitability in the Banking Companies Listed on the Indonesia Stock Exchange	Multiple Linier Regression analysis Independent variables: X_1: Credit Risk (NPL) X_2: Capital Adequacy (CAR) Dependent variable: Y: Profitability (ROA)	a) NPL had significant negative effect on ROA; b) CAR had significant positive effect on ROA.	The use of NPL, CAR, and ROA in the both research. Putri and the researcher also use the same analysis namely multiple linier regression to analyze the data.	The researcher also uses BI Rate as dependent variable and uses ROE as dependent variable.

Table 3 (Continued)

No	Name (Year) and Title	Analysis Technique and Variable	Result	Similarity	Difference
2.	Alim (2014) Analysis the Effect of Inflation and BI Rate on Return on Asset (ROA) of Sharia Bank in Indonesia	Multiple linier regression Independent Variables: X_1: Inflation X_2: BI Rate Dependent variable: Y: ROA	a) Inflation had insignificant positive effect on ROA; b) BI Rate had insignificant negative effect on ROA.	The use of Interest Rate and ROA as variables in the both research. Alim and the researcher also use the same analysis method namely multiple linier regression to analyze the data.	Alim also used Inflation as dependent variable, while the researcher also used CAR and NPL as independent variables and ROE as dependent variable.

Table 3 (Continued)

No	Name (Year) and Title	Analysis Technique and Variable	Result	Similarity	Difference
3.	Gizaw, Kabede, and Selvaraj (2014) The Impact of Credit Risk on Profitability Performance of Commercial Banks in Ethiopia	STATA 11 software and panel data regression Independent Variables: $X_{1:}$ NPL $X_{2:}$ CAR $X_{3:}$ LTD $X_{4:}$ LLPR Dependent variables: $Y_{1:}$ ROA $Y_{2:}$ ROE	a) NPL had significant negative effect on ROA; b) CAR had insignificant positive effect on ROA; c) LTD had insignificant negative effect on ROA; d) LLPR had significant positive effect on ROA; e) NPL had significant positive effect on ROE; f) CAR had significant negative effect on ROE; g) LTD had insignificant negative effect on ROE; h) LLPR had significant positive effect on ROE.	The use of NPL, CAR, ROA, and ROE as variables in the both research. Gizaw et al. and the researcher also use the same analysis method namely multiple linier regression to analyze the data.	Gizaw et al. also used LTD and LLPR as independent variables, while the researcher also used BI Rate as independent variable.

Table 3 (Continued)

No	Name (Year) and Title	Analysis Technique and Variable	Result	Similarity	Difference
4.	Zaman, Arslan, Sohail, and Malik (2014) Monetary Policy on Financial Performance: Evidence from Banking Sector of Pakistan	Simple linier regression analysis technique Independent Variable: X: Monetary Policy (Interest Rate) Dependent variable: Y: Financial Performance (ROA and ROE) Control variable: Firm Size	a) Interest Rate had significant negative effect on ROA; b) Interest Rate had significant negative effect on ROE.	The use of Interest Rate, ROA and ROE as variables in the both research.	Zaman et al. also used Firm Size as control variable, while the researcher also used CAR and NPL as independent variables. Zaman et al. used simple linier regression analysis method to analyze the data, while the researcher used multiple linier regression analysis.

Table 3 (Continued)

No	Name (Year) and Title	Analysis Technique and Variable	Result	Similarity	Difference
5.	Badan and Lestari (2015) Factors that Affect Profitability of Bank Listed in Indonesia Stock Exhange	Multiple linier regression analysis technique Independent Variable: $X_{1:}$ Asset Size $X_{2:}$ Credit Risk $X_{3:}$ Total deposits $X_{4:}$ Interest Rate Dependent variable: $Y_{1:}$ ROA $Y_{2:}$ ROE Control variable: Operating Efficiency Total Loan GDP CPI	a) Asset Size, Total Deposits, Interest Rate, and GDP had significant positive effect on ROE; b) Credit Risk had significant negative effect on ROE; c) Operating Efficiency, Total Loan, and CPI had insignificant negative effect on ROE; d) Asset Size, Interest Rate, and GDP had significant positive effect on ROA; e) Total Deposits , Total Loan, and CPI had insignificant positive effect on ROA; f) Credit Risk and Operating Efficiency had insignificant negative effect on ROA;	The use of Credit Risk, Interest Rate, ROA and ROE as variables in the both research. Badan and Lestari and the researcher also use the same analysis method namely multiple linier regression to analyze the data.	Badan and Lestari also used Asset Size, Total Deposits as independent variables and Operating Efficiency, Total Loan, GDP, and CPI as control variables, while the researcher also used CAR and NPL as independent variables.

Table 3 (Continued)

No	Name (Year) and Title	Analysis Technique and Variable	Result	Similarity	Difference
6.	Maria (2015) The Influence of Capital Adequacy Ratio, Operating Expenses to Operating Income, Net Interest Margin, Loan Deposit Ratio to Return on Asset: Case Study in the Top 10 Bank in Indonesia Period 2007-2011	Multiple linier regression analysis Independent variables: X_1: CAR X_2: OER X_3: NIM X_4: LDR Dependent variable: Y: ROA	a) OER had significant negative influence on ROA; b) NIM had significant positive influence on ROA; c) CAR had insignificant positive influence on ROA; d) LDR had insignificant positive influence on ROA; e) NPL had insignificant negative influence on ROA.	The use of CAR, NPL and ROA as variables in the both research. Maria and the researcher also use the same analysis method namely multiple linier regression to analyze the data.	Maria also used OER, NIM, and LDR as independent variables, while the researcher used CAR and NPL as independent variables and ROE as dependent variable.

Table 3 (Continued)

No	Name (Year) and Title	Analysis Technique and Variable	Result	Similarity	Difference
7.	Saputri and Oetomo (2016) The Influence of CAR, OER, NPL, and FDR on ROE of Foreign Exchange Bank.	Multiple linier regression analysis Independent variables: X_1: CAR X_2: OER X_3: NPL X_4: LDR Dependent variable: Y: ROE	a) CAR had significant positive influence on ROE; b) OER had significant negative influence on ROE; c) NPL had significant negative influence on ROE; d) LDR had significant positive influence on ROE.	The use of CAR, NPL, and ROE as variables in the both research. Saputri and Oetomo and the researcher also use the same analysis method namely multiple linier regression to analyze the data.	Saputri and Oetomo also used OER and LDR as independent variables, while the researcher also used BI Rate as independent variable and ROA as dependent variable.

Source: Empirical Review, 2017

B. Theoretical Review

1. Financial Risk

a. Definition of Financial Risk

Risk is defined as the probability of an unwanted event that results in negative consequences (Ostrom & Wilhelmsem, 2012:4). Financial risks are risks that are caused by financial decisions. The financial decisions can result in loss for bank if they are not properly managed and can result in a profit if they are well organized. Financial risks also are subject to complex interdependencies that may significantly increase its overall risk profile of bank (Greuning & Bratanovic, 2009:3). From that definition, it can be concluded that banks should be careful in taking decisions in order to avoid the financial risks which is caused by financial decisions.

b. Types of Financial Risk

Greuning and Bratanovic (2009:4) divided financial risks into two types of risk which consist of traditional banking and treasury risks. Traditional banking risks are including balance sheet and income statement structure, credit, and solvency risks that can result loss if those could not managed properly. Treasury risks are based on financial arbitrage that can result in a profit if the arbitrage is correct or a loss if it is incorrect. The main categories of treasury risk are liquidity, interest rate, currency, and market (including counterparty) risks.

From these financial risks, there are two risks that should be managed properly because if not, it can endanger the bank operations. These risks are as follows:

a) Capital Adequacy

Capital adequacy signals the ability of bank to maintain capital commensurate with the nature and extent of all types of risk, also the ability of management to identify, measure, monitor, and control these related risks (Koch & Macdonald, 2015:127). Latumaerissa (2014:47) explain that capital for banks or other business companies, beside function as the main source for financing source of their operations, also function as a buffer against potential losses, such as credit risk and investment risk. Effective capital management or the ability of bank to maintain its capital adequacy can increase the profitability of bank and costumer's security. Capital adequacy can be measured by Capital Adequacy Ratio (CAR).

1) Capital Adequacy Ratio

Capital Adequacy Ratio (CAR) is ratio of minimum capital of a bank. Bank Indonesia formulated the calculation of CAR by comparing the capital with risk weighted assets. The risk weighted assets are consists of the credit risk, operational risk, and market risk. The change of capital will be affect the CAR value by adding the capital

from existing shareholders, planning of Initial Public Offering (IPO), right issue, securities issuance, and other capital increase. The formula of CAR is identified as follows:

$$\text{CAR} = \frac{\text{Capital}}{\text{Weighted Assets Based on Credit Risk, Operational Risk, and Market Risk}}$$

Source: BI, 2011

BI determined the CAR requirement in the provision No 15/12/PBI/2013 concerning minimum capital adequacy of conventional bank as follows (BI, 2013:6):

(a) CAR of conventional bank with first rank risk should be 8% from risk based weighted assets.

(b) CAR of conventional bank with second rank risk should be 9% to less than 10% from risk based weighted assets.

(c) CAR of conventional bank with third rank risk should be 10% to less than 11% from risk based weighted assets.

(d) CAR of conventional bank with fourth or fifth rank risk should be 11% to 14% from risk based weighted assets.

b) Credit Risk

Credit risk is risk that arises from default by counterparty in meeting their obligations (Koch & MacDonald, 2015:127). Credit risk can be measured by using Non-Performing Loan Ratio (NPL).

1) Non-Performing Loan Ratio

Non-Performing Loan Ratio (NPL) measures risk that associated with bank that gives loans, but in the substandard, doubtful, and loss. Because that, bank must be cautioned before giving its loans. NPL is a condition where the debtor could not paid its loans to the bank on due date (Mahmoeddin, 2002:4). The formula of NPL is as follows:

$$\text{NPL} = \frac{\text{Non-Performing Loan}}{\text{Total Loan}}$$

Source: BI, 2011

The provision of BI No 17/11/PBI/2015 concerning minimum LDR of conventional bank as follows (BI, 2015:8) explained that bank had a potential into financial distress when the NPL is more than 5% from total loans.

2. Environmental Risk

1. Definition of Environmental Risk

Environmental risks are risks which are caused by bank's business environment, including macroeconomic and policy concerns, legal, and regulatory factors, and the overall financial sector infrastructure and payment systems of the jurisdictions in with location it operates (Greuning & Bratanovic, 2009:4). It is relates to changes in the political, economic, social and financial environment over which an organization has little influence, hence, it can be concluded that bank should anticipate and manage the environmental risks that affect its operations properly, because they have little influence to that.

2. Types of Environmental Risk

Environmental risks include legislative change, regulations, climate change, natural disasters, business loss, competition, economic slowdown and stock market fluctuations. One factor of environmental risk that affects bank operation is macroeconomic policy.

1) Macroeconomic Policy

Macroeconomic policy has two instruments consist of fiscal and monetary policies. Fiscal policy concerns on the determination of tax, while monetary policy concerns on the determination of the benchmark interest rate.

Macroeconomic policy can be measured by benchmark interest rate or in Indonesia is BI Rate.

a) BI Rate

In Indonesia, BI Rate is the interest rate with a tenor of one month that is announced by Central Bank or Bank Indonesia (BI) periodically for a certain period and has a function as stance of monetary policy (Siamat, 2005:139). BI rate is determined by Board of Governors of BI in the Board of Governors meeting quarterly in every January, April, July, and October. But in certain conditions, or if is deemed necessary, BI rate can be determined in other months.

3. Earnings

a. Definition of Earnings

Earnings are the main determinant of bank's capacity to manage risk. The goal of financial management is to maximize the value of a bank, as determined by its profitability and risk level. Since risk is inherent in banking and unavoidable, the task of financial management is to manage risk in such a way that the different types of risk are kept at acceptable levels and profitability is sustained. Doing so requires the continual identification, quantification, and monitoring of risk exposures, which in turn demands sound policies, adequate organization, efficient processes, skilled analysts, and elaborates computerized information systems. In addition, risk management requires the capacity to anticipate changes and to act so that a bank's business can be structured and restructured to profit from the change or at least to minimize losses

(Greuning & Bratanovic, 2009:101). From that definition, bank as business entities must have the best strategy to create maximum earnings by managing the risks which are confronted properly.

1) Profitability

Profitability is the ability of company to create profit. Profitability focuses on a company's sources and levels of profits and involves identifying and measuring the impact of various profitability drivers. Besides that, it also includes evaluation of the two major sources of profitability margins and capital utilization. Profitability analysis also focuses on reasons for changes in the profitability and sustainability of earnings (Subramanyam & Wild, 2009:13). Profitability can be measured by Return on Equity (ROE) and Return on Asset (ROA).

a) Return on Equity

Return on Equity (ROE) is one of ratio that can be used to measure profitability of conventional bank. ROE indicates the earnings after taxes which are received by shareholders from their investment in stock. The formula of ROE is as follows:

$$\text{ROE} = \frac{\text{Earning After Taxes}}{\text{Average Total Equity}}$$

Source: Source: BI, 2011

If the measure was higher ROE than those of peers, means that the bank has a high performance.

b) Return on Asset

Return on asset (ROA) is ratio that can be used to measure profitability of conventional bank. ROA indicates the ability of the company to create income and earnings by utilizing the assets. The formula of ROA is as follows:

$$\text{ROA} = \frac{\text{Earnings before Taxes}}{\text{Average Total Assets}}$$

Source: Source: BI, 2011

If the measure was higher ROA than other banks, means that the bank has a high performance.

C. The Relationship between Variables

1. The Relationship between Capital Adequacy Ratio, Return on Equity, and Return on Asset

Latumaerissa (2014:47) explain that capital for banks or other business companies, beside function as the main source for financing source of their operations, also function as a buffer against potential losses, such as credit risk and investment risk. Effective capital management or the ability of bank to maintain its capital adequacy can increase the profitability of bank and costumer's security.

The capital adequacy of bank is indicated by CAR, while profitability is indicated by ROE and ROA. The increasing of CAR will affect ROE and ROA. The research result of Saputri and Oetomo (2016) supported that statement that CAR had significant positive effect on ROE. The research

result of Putri (2010) also showed that CAR had significant positive effect on ROA. On the other hand, the research of Gizaw et al. (2014) showed that CAR had significant negative effect on ROE, while the research of Gizaw et al. (2014) and Maria (2015) showed that CAR had insignificant positive effect on ROA.

2. The Relationship between Non-Performing Loan Ratio, Return on Equity, and Return on Asset

Credit is the main business that is conducted by bank. The higher credit volume of the bank will increase probability of its bank to create profit or earnings, but, every bank is often faced with Non-Performing Loan Ratio (NPL). It could be caused by the weaknesses of bank in considering its costumer's credit or caused by the worsening of economic condition. High NPL will cause high cost of capital that is indicated by the operational cost of its bank. Furthermore, the high cost of capital will impact on the net profit of the bank (Latumaerissa, 2014:161-164).

The credit risk of bank is indicated by NPL, while the profitability is indicated by ROE and ROA. The NPL of bank should be managed properly to be under of 5%. If it could not be managed properly, NPL could cause the high loss of bank. If there is an increase of NPL, ROE and ROA will be decrease with the assumption that income of bank is constant. The research result of Gizaw et al. (2014), Badan and Lestari (2015), and Saputri and Oetomo (2015) supported that statement that NPL had significant negative effect on ROE. The research result of Putri (2010), Gizaw et al. (2014) and

Saputri and Oetomo (2015) also showed that NPL had significant negative on ROA, while the research result of Maria (2015) showed that NPL had insignificant negative effect on ROA.

3. The Relationship between BI Rate, Return on Equity, and Return on Asset

One instrument of macroeconomic policy is monetary policy. Generally, BI will increase BI Rate if the forward inflation is projected higher than the expectation by issuing Bank Indonesia Certificate (SBI) by interest rate or yield target. In contrast, BI will decrease BI Rate if the forward inflation is projected lower than the expectation. Hopefully, the increasing and decreasing of BI Rate will be followed by deposit rate and banking credit rate (Liembono, 2014:109-111). The increasing of BI Rate, on the one hand can increase the costumer number who wants to save money in the bank will increase, so that can absorb rupiah, but on the other hand, led to the economic slowdown. The increasing of BI Rate can decrease the demand of credit, but if the credit expansion is not implemented, bank will bear the interest savings. The increasing of BI Rate will impact on bank's loss if it could not be managed properly (Wijaya, 2010:111). In contrast, when BI Rate decreased, bank will directly decrease saving/deposit rate, but banking credit rate is not decrease as soon as saving/deposit rate, hence, banks become an institution which most benefited from the decreasing of BI Rate (Liembono, 2014:109-111).

The macroeconomic policy that affects bank is indicated by benchmark interest rate or in Indonesia is BI Rate, while the profitability is indicated by ROE and ROA. The increasing or decreasing of BI Rate will impact on the profit of the bank. The increasing of BI Rate will impact on bank loss if it could not be managed properly, because the demand of credit decreased, but bank bears the interest savings. The research result of Zaman et al. (2014) supported that statement that Interest Rate had significant negative effect on ROE and ROA, while the research result of Badan and Lestari (2015) showed that Interest Rate had significant positive effect on ROE. On the other hand, the research result of Alim (2014) showed BI Rate had insignificant negative effect on ROA.

D. Conceptual Model and Hypothesis Model

1. Conceptual Model

Conceptual model in this research is as follows:

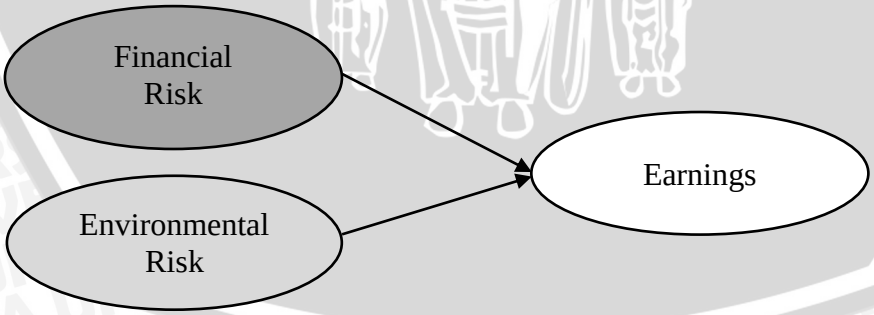


Figure 3 Conceptual Model
Source: Theoretical Review, 2017

2. Hypothesis Model

Hypothesis model in this research is as follows:

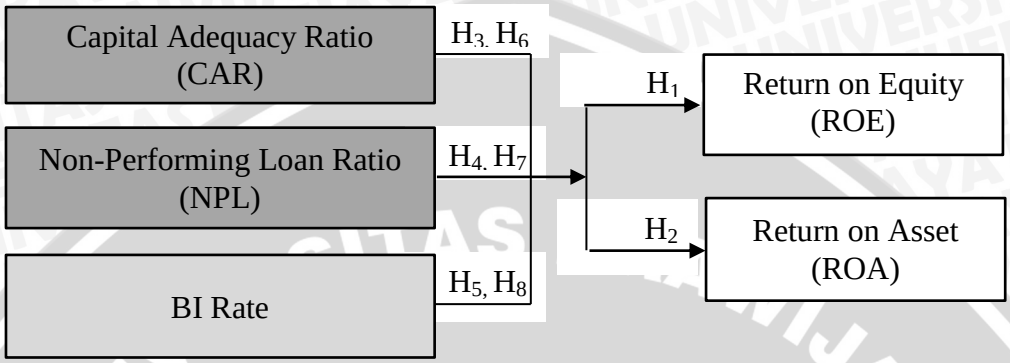


Figure 4 Hypothesis Model
Source: Literature Review, 2017

Based on the hypothesis model which is the development of the conceptual model, the hypothesis is as follows:

H_1: Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate have significant effect on Return on Equity (ROE) simultaneously.

H_2: Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate have significant effect on Return on Asset (ROA) simultaneously.

H_3: Capital Adequacy Ratio (CAR) has significant effect on Return on Equity (ROE) partially.

H_4: Non-Performing Loan Ratio (NPL) has significant effect on Return on Equity (ROE) partially.

H_5: BI Rate has significant effect on Return on Equity (ROE) partially.

H_6: Capital Adequacy Ratio (CAR) has significant effect on Return on Asset (ROA) partially.

H_7: Non-Performing Loan Ratio (NPL) has significant effect on Return on Asset (ROA) partially.

H_8: BI Rate has significant effect on Return on Asset (ROA) partially.

CHAPTER III

RESEARCH METHOD

A. Research Type

The research type was explanatory research with quantitative approach. Explanatory research aims to provide causal explanations of phenomena (Blanche, et al., 2006:44). Quantitative approach is an approach for testing objective theories by examining the relationship among variables (Creswell, 2014:32). This research was explanatory research and used quantitative research approach because the objective of this research was to explain the effect of Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate on Return on Equity (ROE) and Return on Asset (ROA) simultaneously and partially of PT Bank Tabungan Negara (Persero) Tbk.

B. Research Location

The research was conducted at the official website of PT Bank Tabungan Negara (Persero) Tbk that is www.btn.co.id because it is primary object that is being researched. Besides that, the research was also conducted at the official website of Bank Indonesia that is www.bi.go.id because BI is central bank which acts as one of regulators of macroeconomic policy, especially monetary policy through BI rate determination.

C. Variable and Measurement

1. Variable

Cresswell (2014:84) described the variable as a characteristic or attribute of an individual or an organization that can be measured or observed and that varies among the people or organization being researched.

In this research, the variables are as follows:

a. Independent Variables (X)

Independent variables or predictor variables are those that influence outcomes. There are three independent variables in this research which consist of:

X_1 : Capital Adequacy Ratio (CAR)

X_2 : Non-Performing Loan Ratio (NPL)

X_3 : BI Rate

b. Dependent Variables (Y)

Dependent variables are the results of the influence of the independent variables.

Y_1: Return on Equity (ROE)

$Y_{2:}$ Return on Asset (ROA)

Operational definitions of variables that were used in this research were as follows:

a. Capital Adequacy Ratio

Capital adequacy Ratio (CAR) is ratio that indicates the ability of Bank BTN to maintain its capital adequacy with the nature and

extent of all types of risk, and the ability of management to identify, measure, monitor, and control these related risks.

The formula of CAR is identified as follows:

$$\text{CAR} = \frac{\text{Capital}}{\text{Weighted Assets Based on Credit Risk, Operational Risk, and Market Risk}}$$

Source: BI, 2011

b. Non-Performing Loan Ratio

Non-Performing Loan Ratio (NPL) is ratio that indicates credit risk which arises from default by counterparty in meeting their obligations and impact on the earnings of Bank BTN.

The formula of NPL is as follows:

$$\text{NPL} = \frac{\text{Non-Performing Loan}}{\text{Total Loan}}$$

Source: BI, 2011

c. BI Rate

BI Rate is factor that indicates Macroeconomic policy which is regulated by Central Bank or Bank Indonesia that affects the operation of Bank BTN.

Data of BI Rate that is used in this research is data quarterly that appropriate with the research period.

d. Return on Equity

Return on Equity (ROE) is ratio that indicates the earnings after taxes which are received by shareholders from their investment in stock of Bank BTN.

The formula of ROE is as follows:

$$\text{ROE} = \frac{\text{Earning after Taxes}}{\text{Average Total Equity}}$$

Source: Source: BI, 2011

e. Return on Asset

Return on Asset (ROA) is ratio that indicates the ability of the company to create income and earnings by utilizing the assets.

The formula of ROA is as follows:

$$\text{ROA} = \frac{\text{Earnings before Taxes}}{\text{Average Total Assets}}$$

Source: Source: BI, 2011

2. Measurement

The measurement in this research is described as follows:

Table 4 Operational Definition of Research Variables

No	Concept	Variable	Measurement	Scale	Source
1.	Financial Risk	Capital Adequacy Ratio (CAR) (X_1)	$CAR = \frac{\text{Capital}}{\text{Weighted Assets Based on Credit Risk, Operational Risk, and Market Risk}} \times 100$	Ratio	BI, 2011: 445
		Non-Performing Loan Ratio (NPL) (X_2)	$NPL = \frac{\text{Non-Performing Loan}}{\text{Total Loan}} \times 100$	Ratio	BI, 2011: 447
2.	Environmental Risk	BI Rate (X_3)	Data of BI Rate quarterly that related with research period	Ratio	BI, 2015
3.	Earnings	Return on Equity (ROE) (Y_1)	$ROE = \frac{\text{Earning after Taxes}}{\text{Average Total Equity}} \times 100$	Ratio	BI, 2011: 448-449
		Return on Asset (ROA) (Y_2)	$ROA = \frac{\text{Earning before Taxes}}{\text{Average Total Assets}} \times 100$	Ratio	BI, 2011: 448-449

Source: Literature Review, 2017

D. Population and Sample

Population is all units that conform to certain characteristic. Sample is a selection of unit from a population and is used to generalize to a population. Roscoe (1982:253) in the Thoifah (2015:19) explained that minimum sample for research is between 30 to 500 samples. If in the research uses multivariate (correlation or multiple linier regression), minimum sample is 10 times total variables (independent + dependent). Population of this research is all data for each independent and dependent variables. Samples in this research are 40 data which consist of data from quarter I 2006 to quarter IV 2015. This research was used the nonprobability sample or convenience sample, specifically purposive sampling. Nonprobability sampling is the sampling technique in which not every element in the population has similar probability of being selected (Creswell, 2014:204).

E. Data Collection Technique

Data collection technique in this research was documentation technique. Document is a record of events that had passed (Sugiyono, 2013:240). The type of the data is the secondary data of PT Bank Tabungan Negara (Persero) Tbk and Bank Indonesia. A secondary data defined as secondhand accounts of the people or situation written by others (Creswell, 2014:244). The researcher downloaded these required data from several sources as follows:

1. Quarterly time series data of financial reports of Bank BTN from quarter I 2006 to quarter IV 2015 through its official site that is www.btn.co.id.

2. Quarterly time series data of BI Rate which determined by BI from quarter I 2006 to quarter IV 2015 through its official site that is that is www.bi.go.id.

F. Data Analysis Technique

In this research, data was analyzed by using statistical analysis. The researcher used software that is Statistical Product and Service Solutions (SPSS) 23.0. Data analysis was used to answer the research problems. Data analysis methods of this research are as follows:

1. Descriptive Statistics Analysis

Descriptive statistics analysis is analysis that provides description of data for all independent and dependent variables in the research. This analysis should indicate the mean, range, minimum, and maximum for these variables (Cresswell, 2014:209).

2. Classical Assumption Test

A multiple linier regression model requires the classical assumption test. There are four kinds of classical assumption test which justify the use of a multiple linier regression model as follows:

a. Autocorrelation Test

Autocorrelation test aims to test the correlation between errors or residual in the period t with the residual in the period t-1 or before t in the linier regression model. Correlation or autocorrelation problem is happened because the residuals are not independent from an observation to other observation which is often found in the time series data. This research detects the non-autocorrelation with Run Test as a part of

nonparametric statistic to test the high correlation among residuals and the probability of residual that is happened randomly or not. The determination of autocorrelation test is as follows (Ghozali, 2016:116):

1) P value $\geq \alpha$ (0.05) means that there is no autocorrelation

2) P value $< \alpha$ (0.05) means that there is autocorrelation

b. Normality Test

Normality test is implemented to test the probability of residual variables have normal distribution in the regression model because simultaneous significance test (F test) and individual parameter significance test (t test) assume that residual value is normal, so if it is violated, the statistic test will be invalid for small sample size. The normality of data can be analyzed by using Kolmogorov-Smirnov test. This test is used to test the normality of residual value in this research by comparing the data distribution that will be analyzed with the standard normal distribution. The determination of normality test is as follows (Ghozali, 2016:158):

1) P value $\geq \alpha$ (0.05) means that data distribution is normal

2) P value $< \alpha$ (0.05) means that data distribution is abnormal

c. Multicollinearity Test

The multicollinearity test is conducted to test the correlation among independent variables. Good multiple regression models can be shaped if there is no correlation among independent variables or there is no multicollinearity. When there is multicollinearity between

independent variables, hence, it variables are non-orthogonal. Orthogonal is independent variables which have zero correlation value among independent variables. This research verifies the non-multicollinearity by analyzing the Variance Inflation Factor (VIF). It illustrates the correlation among independent variables. The determination of multicollinearity test is as follows (Ghozali, 2016:103-104):

1) VIF $\geq$ 10 means that there is multicollinearity
2) VIF $<$ 10 means there is no multicollinearity

d. Heteroscedasticity Test

Heteroscedasticity test is conducted to examine the differentiation of variance from residual from an observation to other observation in the regression model. The good regression model can be shaped when the variance of residual from an observation to other observation is constant or homoscedasticity, not heteroscedasticity. Time series data has the probability to heteroscedasticity because the data that are collected have a variety measurement (high, average, and low). Method that used to test the heteroscedasticity in this research is by using Glejser test. Glejser test is conducted by examining the relationship between independent variables on their absolute residual. The determination of heteroscedasticity test is as follows (Ghozali, 2016:137):

1) P value $\leq \alpha$ (0.05) means that there is heteroscedasticity
2) P value $> \alpha$ (0.05) means that there is no heteroscedasticity

3. Inferential Statistics Analysis

Inferential statistics analysis is a method to relate variables in the research, so that inferences can be drawn from sample to a population (Cresswell, 2014:209). The researcher conducts inferential statistic test by using SPSS 23.0. The inferential statistics analysis in this research is as follows:

a. Multiple Linier Regression Model

Multiple linier regression analysis is a method to analyze the relationship between two or more variables and show the direction relationship between independent and dependent variables (Ghozali, 2016:93). Predictions can be made about the outcome variable, based on the observed values of the predictor variables. The analysis establishes the relative magnitudes of the contributions of each predictor variable. It is assumed that using more than one predictor variable or independent variable leads for better predictions. There are two models in this research which consist of:

Model 1:

$$Y_1 = a + b_1x_1 + b_2x_2 + b_3x_3 + e$$

Description:

Y : ROE
a : Constant
b_1 : Partial regression coefficient of CAR
b_2 : Partial regression coefficient of NPL
b_3 : Partial regression coefficient of BI Rate
x_1 : CAR
x_2 : NPL
x_3 : BI Rate

e : Residual factor

Model 2:

$Y_2 = a + b_1x_1 + b_2x_2 + b_3x_3 + e$

Description:

Y : ROA
a : Constant
b_1 : Partial regression coefficient of CAR
b_2 : Partial regression coefficient of NPL
b_3 : Partial regression coefficient of BI Rate
x_1 : CAR
x_2 : NPL
x_3 : BI Rate
e : Residual factor

b. F test

The first and the second hypothesis will be examined by using F test to examine the simultaneous effect of independent variables on dependent variable. F test is conducted to explain the effect of independent variables on dependent variable simultaneously. The basic analysis of F test is as follows (Ghozali, 2016:96):

1) F ≤ F table and P value ≥ α (0.05) means that H_0 is accepted and H_1 is rejected
2) F > F table and P value < α (0.05) means that H_0 is rejected and H_1 is accepted

c. T test

The first and the second hypothesis will be examined by using t test to examine the partial effect of independent variables on dependent variable. T test is conducted to explain the effect of independent

variables on dependent variable partially. The basic analysis of t test is as follows (Ghozali, 2016:97):

1) t ≤ t table and P value ≥ α (0.05) means that H_0 is accepted and H_1 is rejected
2) t > t table and P value < α (0.05) means that H_0 is rejected and H_1 is accepted

d. Determination Coefficient Analysis

Determination coefficient analysis (R^2) is used to measure the ability of a multiple linier regression model in explaining the variation of independent variables with value between 0 and 1. R^2 value = 0 means that independent variables have the ability to explain the dependent variable, while R^2 value = 1 means that independent variables have the ability to explain dependent variable. Generally, time series data has a high determination coefficient value with the bias on value of independent variable that is entered to the model. Bias or the addition of independent variables that increase R^2 without considering the significance variable become the basis for the researcher to use Adjusted R^2 because it has the sensitivity on the change of independent variables (Ghozali, 2016:95).

CHAPTER IV

RESEARCH RESULT AND DISCUSSION

A. General Overview of Research Object

1. History of PT Bank Tabungan Negara (Persero) Tbk

PT Bank Tabungan Negara (Persero) Tbk or usually known as Bank BTN is one of a commercial bank based in Indonesia. Bank BTN was established in 1897 under the name Postspaarbank during the reign of the Dutch. After Indonesia gained independence, the bank was taken over by Indonesian government on February 9, 1950 under the Emergency Law No. 9 and renamed to "Bank Tabungan Pos" (Postal Savings Bank). Then, in 1963 PT Bank Tabungan Pos renamed to Bank Tabungan Negara which is the current name. In 1974, Bank BTN became the first bank to be appointed by Indonesian government to provide housing finance and mortgages to lower and middle income society. Bank BTN started to be the commercial bank and issued obligation in 1989. After that, in 1994, Bank BTN was permitted to be Foreign Exchange bank. In 2002, Bank BTN be appointed to be the commercial bank which focuses on the commercial housing finance. Bank BTN became the first bank which conducted mortgage securitization through collective investment contract asset backed securities Kontrak Investasi Kolektif Efek Beragun Aset (KIK EBA) in Indonesia. Then, an Initial Public Offering (IPO) that led to the listing of Bank BTN on the Indonesia Stock Exchange (IDX) was conducted in 2009 that was ranked as Indonesia's largest IPO as of 2009 and conducted Right Issue in 2012.

2. Logo of PT Bank Tabungan Negara (Persero) Tbk

Logo of PT Bank Tabungan Negara (Persero) Tbk is illustrated as follows:

Figure 5 Logo of PT Bank Tabungan Negara (Persero)
Source: PT Bank Tabungan Negara, 2016

3. Vision and Mission of PT Bank Tabungan Negara (Persero) Tbk

Vision of PT Bank Tabungan Negara (Persero) Tbk is to be a leading bank in housing finance.

Missions of PT Bank Tabungan Negara (Persero) Tbk are as follows:

a. To provide superior services and superior services in housing finance and consumer finance-related industries.
b. To increase competitive advantage through innovative products and services and strategic network based on the latest Information Technology.
c. To prepare and develop quality, professional, and high integrity human capital.
d. To implement banking management in accordance with the principle of prudence and the implementation of Good Corporate Governance to increase Shareholder Value.
e. To show concern for the interest of society and the environment.

4. Products and Services of PT Bank Tabungan Negara (Persero) Tbk

a. Products

1) Fund Products

a) Fixed Deposit Accounts

(1) Rupiah Time Deposit Account

Rupiah time deposit account is time deposit saving which is denominated in rupiah.

(2) Foreign Currency Deposit Account

Foreign currency deposit account is time deposit saving which is denominated in foreign currency.

b) Savings Accounts

(1) Batara Saving

Batara saving is saving with ease of transactions to support the financial activities of clients.

(2) Batara Prima Saving

Batara prima saving is high interest saving with withdrawal flexibility equipped with interesting features.

(3) Batara Junior Saving

Batara junior saving is a rejuvenation of the Batara Student saving product allocated more widely to all circles of society susceptible to monthly administration fees.

(4) E'Batarapos Saving

E'Batarapos saving is a rejuvenation of the Tabanas Batara product, organized in cooperation with PT. Pos Indonesia (Company) through counters at pre-determined Post Offices.

(5) TabunganKu

TabunganKu is an individual saving account with marginal requisites, aimed at instilling the habit of saving and promoting the people's welfare.

(6) Hajj Nawaitu Saving

Hajj Nawaitu saving is saving allocated to candidate Hajj pilgrims as part of setting aside Hajj Pilgrimage Travel Expenses.

(7) BTN Housing Saving

BTN housing saving is a saving product in order to help more people in Indonesia to save their money with the aim of buying a home, especially first home. The primary segment is newly married and young people (those who first obtain jobs and middle-level manager) who have realized the need for home ownership.

c) Clearing Accounts

(1) Rupiah Giro

Rupiah transfer account (giro) is highly flexible savings products for which withdrawals can be made at any time by means of checks/BG or other media.

(2) Foreign Currency Giro

Foreign currency giro is a highly flexible savings account in USD denomination for which withdrawals can be made at any time by means of checks/BG or other media.

2) Credit Products

a) Consumer Loan

(1) Subsidized KPR

Subsidized KPR is extended to families/households as first-time house owners and part of the low-income target group.

(2) Non-Subsidized Mortgage (KPR BTN Platinum)

Non-subsidized mortgage is credit facility with designation buying a home (new/old), not finished house (KGUIndent) or take over house.

(3) Apartment Mortgage

Apartment mortgage is reserved for applicants/prospective borrowers to finance the

purchase of apartment (new/old), not finished apartment (KPA Indent), or take over apartment.

(4) Multi Griya Credit

Multi griya credit is reserved for applicants/prospective borrowers to various purposes.

(5) Batara Soft Loan

Batara soft loan is credit facility for company's employee/institution by collateral salaries of employees.

(6) Shop Mortgage

Shop mortgage is credit facility to purchase store to be inhabited and use as a store.

(7) Swa Griya Credit

Swa griya credit is credit facility to finance the house construction on land that had been owned by the applicant.

(8) Swadana Credit

Swadana credit is credit facility by collateral in the form of part or all deposits (either in the form of savings and deposits) which are stored in the bank.

(9) PRR-KB BTN BPJS Ketenagakerjaan

PRR-KB BTN BPJS ketenagakerjaan is credit facility that given by BPJS ketenagakerjaan through BTN for

the members who are eligible PRR-KB to develop/improve house.

(10) PUMP-KB BTN BPJS Ketenagakerjaan

PUMP-KB BTN BPJS Ketenagakerjaan is credit facility that given by BPJS Ketenagakerjaan through BTN for the members who are eligible PRR-KB to advance house payment.

(11) TBUM BAPERTARUM

TBUM BAPERTARUM is credit facility for PNS to advance house payment.

(12) TBM BAPERTARUM

TBM BAPERTARUM is credit facility for PNS to advance house payment through house development credit (KBR).

b) Commercial Loan

1) Yasa Griya Credit/Construction Credit

Yasa griya credit/construction credit (KGY) is working capital loans granted for Developer to help working capital financing for the house construction project.

2) Working Capital Credit-Contractor

Working capital credit-contractor (KMK-Contractor) is working capital loans granted for contractor to help working capital financing accordance to contract.

3) Working Capital Credit of Industry-Related to the Housing

Working capital credit of industry-related to the housing is working capital loans granted to help working capital financing especially industry of the housing or related sector.

4) Investment Credit

Investment credit (KI) is credit facility that granted for PT, CV, Cooperative, Foundation, and Individual, in order to investment financing.

5) Micro Credit (KUR)

Micro credit (KUR) is working capital loans or investment for debtor engaged in business scale as micro, small, and medium enterprises for productive financing.

6) Non Cash Loan: Bank Guarantee

Non cash loan: bank guarantee is guarantee that granted for Enterprise incorporated in Indonesia/Non Legal Entity domiciled in Indonesia or Cooperative.

b. Services

1) Bank Guarantee

Bank guarantee is statement issued by bank at the request of costumer to ensure particular risks arise if the costumer could not perform its task well to the person receiving the guarantee.

2) Payroll

Payroll is a service for users (Company, Individual, Institution) to manage payroll, THR, and bonus and other financial needs that are routine for employees of service user.

3) Inkaso

Inkaso is a service to collect inkaso to the third party without other document in the country.

4) BTN Credit Card

5) Batara ATM

Batara ATM is a card service facility for costumer of savings and giro (Rp-Individual) which ease the costumers to meet the needs of a wide variety of transactions through ATM machines such as cash withdrawals, bill payments, and so on.

6) Money Transfer

Money transfer is a service facility of money transfer in rupiah or foreign currency which addressed to the other party in a place (in/abroad).

7) Money Changer

Money changer is a service that granted to the society who wants to sell or purchase certain foreign currency that had a record of exchange rate in Bank Indonesia.

8) Payment Point

Payment point is a service facility for costumers to ease in paying routine charge.

9) Real Time Gross Settlement (RTGS)

Real time gross settlement (RTGS) is a transfer system of online fund in rupiah that the settlement is conducted per individual transaction.

10) Safe Deposit Box

Safe deposit box is depository facilities of goods/securities that safe and secure from fire risk, crime, disaster, etc.

11) Domestic Letter of Credit (SKBDN)

12) SPP of University

SPP of university is service for university/school to provide delivery channel (receive education fees by online.

B. Descriptive Statistical Analysis

Period of data in this research is from quarter I 2006 to quarter IV 2015. The statistics descriptive in this research are as follows:

Table 5 Data of CAR, NPL, and BI Rate of PT Bank Tabungan Negara (Persero) Tbk Quarter I 2006 to Quarter IV 2015

Year	Quarter	CAR	NPL	BI Rate	ROE	ROA
		X_1	X_2	X_3	Y_1	Y_2
		(%)	(%)	(%)	(%)	(%)
2006	I	20.93	2.50	12.75	32.55	2.28
	II	18.07	2.55	12.50	19.17	1.76
	III	17.91	3.41	11.25	24.77	1.91
	IV	17.52	1.77	9.75	23.36	1.78
2007	I	18.90	2.99	9.00	29.22	2.31
	II	17.75	3.08	8.50	23.25	1.86
	III	16.77	3.17	8.25	22.54	1.86
	IV	21.12	2.81	8.00	21.54	1.89
2008	I	20.54	3.40	8.00	20.09	1.67
	II	19.81	3.64	8.50	19.38	1.90
	III	16.85	3.23	9.25	19.42	1.73
	IV	16.14	2.66	9.25	19.64	1.80
2009	I	16.68	3.36	7.75	17.63	1.35
	II	15.59	3.39	7.00	15.93	1.26
	III	15.00	3.36	6.50	17.01	1.31
	IV	21.75	2.75	6.50	18.23	1.47
2010	I	20.20	3.28	6.50	13.85	1.94
	II	18.71	3.43	6.50	14.35	1.92
	III	16.99	3.48	6.50	14.59	3.48
	IV	16.74	2.66	6.50	16.67	2.05
2011	I	17.13	3.39	6.75	15.73	1.93
	II	15.85	3.65	6.75	15.34	1.85
	III	15.44	3.46	6.75	15.03	1.77
	IV	15.03	2.23	6.00	17.65	2.03
2012	I	16.89	2.22	5.75	17.19	1.99
	II	15.59	2.42	5.75	18.43	1.98
	III	17.69	2.51	5.75	19.06	2.01
	IV	17.40	3.12	5.75	18.23	1.94
2013	I	17.40	3.83	5.75	13.66	1.60
	II	16.36	3.65	6.00	13.89	1.58
	III	16.05	3.81	7.25	14.52	1.63
	IV	15.62	3.04	7.50	16.05	1.79
2014	I	15.74	3.57	7.50	12.68	1.39
	II	15.03	3.83	7.50	10.19	1.11
	III	14.33	3.36	7.50	9.66	1.02
	IV	14.64	2.79	7.75	10.66	1.12

Table 5 (Continued)

Year	Quarter	CAR	NPL	BI Rate	ROE	ROA
		X_1	X_2	X_3	Y_1	Y_2
		(%)	(%)	(%)	(%)	(%)
2015	I	15.05	3.47	7.50	15.31	1.53
	II	14.78	3.37	7.50	15.62	1.55
	III	15.78	3.18	7.50	15.13	1.50
	IV	16.97	2.11	7.50	16.84	1.61

Source: PT Bank Tabungan Negara (Persero) Tbk and Bank Indonesia, 2006-2015

Table 6 Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CAR	40	14.33	21.75	17.0140	1.94156
NPL	40	1.77	3.83	3.1050	.52060
BI Rate	40	5.75	12.75	7.6188	1.68324
ROE	40	9.66	32.55	17.6015	4.63624
ROA	40	1.02	3.48	1.7615	.40993
Valid N (listwise)	40				

Source: Data was processed by the Researcher, 2017

1. Capital Adequacy Ratio

Capital Adequacy Ratio (CAR) is X_1 variable that indicated the capital adequacy. Data of CAR per quarter which is showed on the Table 5 is the accumulation of data per three months from 2006 to 2015. The first value of CAR in this research period was 20.93% in quarter I 2006 and the last value of CAR was 16.97% in quarter IV 2015. The minimum value of CAR in this research period was 14.33% in the quarter III 2014 and the maximum value was 21.75% in the quarter IV 2009. Based on that data, in the 10 years from 2006 to 2015, the mean value of CAR was 17.01% with mean standard deviation 1.94%.

2. Non-Performing Loan Ratio

Non-Performing Loan Ratio (NPL) is X_2 variable that indicated the credit risk. Data of NPL per quarter which is showed on the Table 5 is the accumulation of data per three months from 2006 to 2015. The first value of NPL in this research period was 2.50% in quarter I 2006 and the last value of NPL was 2.11% in quarter IV 2015. The minimum value of NPL in the research period was 1.77% in the quarter IV 2006 and the maximum value was 3.83% in the quarter I 2013 and quarter II 2014. Based on that data, in the 10 years from 2006 to 2015, the mean value of NPL was 3.11% with mean standard deviation 0.52%.

3. BI Rate

BI Rate is X_3 variable that indicated macroeconomic policy. Data of BI Rate per quarter which is showed on the Table 5 is the accumulation of data per three months from 2006 to 2015. The first value of BI Rate in this research period was 12.75% in quarter I 2006 and the last value of BI Rate was 7.50% in quarter IV 2015. The minimum value of BI Rate in the research period was 5.75% in the quarter I 2012 until quarter I 2013 and the maximum value was 12.75% in the quarter I 2006. Based on that data, in the 10 years from 2006 to 2015, the mean value of BI Rate was 7.62% with mean standard deviation 1.68%.

4. Return on Equity

Return on Equity (ROE) is Y_1 variable that indicated profitability. Data of ROE per quarter which is showed on the Table 5 is the accumulation

of data per three months from 2006 to 2015. The first value of ROE in this research period was 32.55% in quarter I 2006 and the last value of ROE was 16.84% in quarter IV 2015. The minimum value of ROE in the research period was 9.66% in the quarter III 2014 and the maximum value was 32.55% in the quarter I 2006. Based on that data, in the 10 years from 2006 to 2015, the mean value of ROE was 17.60% with mean standard deviation 4.64%.

5. Return on Asset

Return on Asset (ROA) is Y_2 variable that indicated profitability. Data of ROA per quarter which is showed on the Table 5 is the accumulation of data per three months from 2006 to 2015. The first value of ROA in this research period was 2.28% in quarter I 2006 and the last value of ROA was 1.61% in quarter IV 2015. The minimum value of ROA in the research period was 1.02% in the quarter III 2014 and the maximum value was 3.48% in the quarter III 2010. Based on that data, in the 10 years from 2006 to 2015, the mean value of ROA was 1.76% with mean standard deviation 0.41%.

C. Classical Assumption Test

1. Autocorrelation Test

Autocorrelation test was conducted to analyze the correlation between errors or residual in the period t with the residual in the period t-1 or before t in the linier regression model. This test is conducted if the data which are used are the time series data. Autocorrelation test in this research used

Run Test. The result of autocorrelation tests by using Run Test of ROE and ROA are as follows:

Table 7 Run Test of Return on Equity and Return on Asset

Runs Test

	Unstandardized Residual	Unstandardized Residual
Test Value[a]	-.08305	.03571
Cases < Test Value	20	20
Cases >= Test Value	20	20
Total Cases	40	40
Number of Run	16	12
Z	-1.422	-2.723
Asymp. Sig. (2-tailed)	.149	.006

Source: Data was processed by the Researcher, 2017

Table 7 shows that P value of ROE is greater than significance level ($0.149 \geq 0.05$). It means that there is no autocorrelation, so that the model of ROE is feasible to predict the dependent variable with independent variables. In contrast, table 7 shows P value of ROA is less than significance level ($0.006 < 0.05$). It means that there is autocorrelation, so that the model of ROA is not feasible to predict the dependent variable with independent variables. To overcome the problem, the researcher transformed the data into natural logarithm. The result of autocorrelation test by using Run Test of model of ROA after transformation is as follows:

Table 8 Run Test of Return on Asset after Transformation

Runs Test

	Unstandardized Residual
Test Value[a]	.03165
Cases < Test Value	20
Cases >= Test Value	20
Total Cases	40
Number of Run	16
Z	-1.442
Asymp. Sig. (2-tailed)	.149

Source: Data was processed by the Researcher, 2017

Table 7 shows that P value of ROA after transformation is greater than significance level ($0.149 \geq 0.05$). It means that there is no autocorrelation, so that the model of ROA after transformation is feasible to predict the dependent variable with independent variables.

2. Normality Test

Normality test was conducted to analyze the probability of residual of variables and ensure that the residual of variables have a normal distribution in the regression model, because the F test and t test assume that residual value follows the normal distribution, so if it is violated statistical test will be invalid for the small number sample. Normality test in this research used Kolmogorov-Smirnov test. The result of normality tests by using Kolmogorov-Smirnov of ROE and ROA are as follows:

Table 9 Kolmogorov-Smirnov Test of Return on Equity and Return on Asset

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual	Unstandardized Residual
N		40	40
Normal Parameters[a,b]	.0000000	.0000000	.0000000
	.08399192	2.91675910	.19339868
Most Extreme Differences	.150	.133	.150
	.150	.094	.150
	-.113	-.133	-.113
Kolmogorov-Smirnov Z		.840	.951
Asymp. Sig. (2-tailed)		.481	.327

Source: Data was processed by the Researcher, 2017

Table 9 shows that P value of ROE and ROA are greater than significance level ($0.481 \geq 0.05$) and ($0.327 \geq 0.05$) respectively. It means that data distribution is normal, so that the model of ROE and ROA are feasible to predict the dependent variable with independent variables.

3. Multicollinearity Test

Multicollinearity test was conducted to test the correlation among independent variables. Good multiple regression models can be shaped if there is no correlation among independent variables or there is no multicollinearity. Multicollinearity test in this research used the Variance Inflation Factor (VIF). The result of multicollinearity tests by analyzing Variance Inflation Factor (VIF) of ROE and ROA are as follows:

Table 10 Variance Inflation Factor of Return on Equity and Return on Asset

Coefficients[a]

Model	Collinearity Statistics	Collinearity Statistics
	VIF	VIF
CAR	1.125	1.112
NPL	1.045	1.028
BI Rate	1.146	1.120

Source: Data was processed by the Researcher, 2017

Table 10 shows that the VIF of ROE and ROA are greater than 10 for each independent variable. For the model of ROE, VIF value of CAR, NPL, and BI Rate are 1.125, 1.045, and 1.146 respectively. For the model of ROA after transformation, VIF value of CAR, NPL, and BI Rate are 1.112, 1.028, and 1.120 respectively. It means that there is no multicollinearity, so that the model of ROE and ROA are feasible to predict the dependent variable with independent variables.

4. Heteroscedasticity Test

Heteroscedasticity test is conducted to analyze the differentiation of variance from residual from an observation to other observation in the regression model. The good regression model can be shaped when the variance of residual from an observation to other observation is constant or homoscedasticity, not heteroscedasticity. Heteroscedasticity test in this research uses the Glejser test. The result of heteroscedasticity tests by using Glejser test of ROE and ROA are as follows:

Table 11 Glejser Test of Return on Equity and Return on Asset

Model	Sig.	Sig.
CAR	.943	.981
NPL	.360	.746
BI Rate	.070	.570

Source: Data was processed by the Researcher, 2017

Table 11 shows that P value of ROE and ROA are greater than significance level for each independent variable. For the model of ROE, P value of CAR, NPL, and BI Rate are 0.943, 0.360, and 0.070 respectively. For the model of ROA, P value of CAR, NPL, and BI Rate are 0.981, 0.746, and 0.570 respectively. It means that there is no heteroscedasticity, so that the model of ROE and ROA are feasible to predict the dependent variable with independent variables.

D. Inferential Statistical Analysis

1. Multiple Linier Regression Model

Multiple Linier Regression analysis was conducted to analyze the effect of Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate on Return on Equity (ROE) and Return on Asset (ROA). By using Statistical Product and Service Solutions (SPSS) 23.0, the regression models of this research are as follows:

a. Return on Equity

Table 12 Regression Coefficient of Return on Equity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.040	5.724		.356	.724
	CAR	.860	.266	.360	3.237	.003
	NPL	-2.701	.954	-.303	-2.830	.008
	BI Rate	1.224	.309	.444	3.958	.000

Source: Data was processed by the Researcher, 2017

Based on table 12, the regression model of ROE is as follows:

$Y_1 = 2.040 + 0.860X_1 – 2.701X_2 + 1.224X_3 + e$

The model is explained as follows:

1) The constant 2.040 means that if the value of CAR, NPL, and BI Rate are 0, ROE is 2.040 units.
2) The regression coefficient of CAR 0.860 means that if CAR increases one unit, ROE will increase 0.860 units, with assumption *ceteris paribus*. The positive value of regression coefficient means that there is a positive relationship between CAR and ROE. The increase of CAR will increase ROE significantly.
3) The regression coefficient of NPL -2.701 means that if NPL increases one unit, ROE will decrease 2.701 units, with assumption *ceteris paribus*. The negative value of regression coefficient means that there is a negative relationship between

NPL and ROE. The increase of NPL will decrease ROE significantly.

4) The regression coefficient of BI Rate 1.224 means that if BI Rate increases one unit, ROE will increase 1.224 units, with the assumption *ceteris paribus*. The positive value of regression coefficient means that there is a positive relationship between BI Rate and ROE. The increase of BI Rate will increase ROE significantly.

b. Return on Asset

Table 13 Regression Coefficient of Return on Asset

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2	(Constant)	-1.294	.888		-1.457	.154
	CAR	.869	.309	.432	2.808	.008
	NPL	-.274	.178	-.228	-1.542	.973
	BI Rate	-.156	.170	-.141	-.914	.893

Source: Data was processed by the Researcher, 2017

Based on table 13, the regression model of ROA is as follows:

$Y_2 = -1.294 + 0.869X_1 – 0.274X_2 – 0.156X_3 + e$

The model is explained as follows:

1) The constant -1.294 means that if the value of CAR, NPL, and BI Rate are 0, ROA is -1.294 units.

2) The regression coefficient of CAR 0.869 means that if CAR increases one unit, ROA will increase 0.869 units, with

assumption *ceteris paribus*. The positive value of regression coefficient means that there is a positive relationship between CAR and ROA. The increase of CAR will increase RO significantly.

3) The regression coefficient of NPL -0.274 means that if NPL increases one unit, ROA will decrease -0.274 units, with assumption *ceteris paribus*. The negative value of regression coefficient means that there is a negative relationship between NPL and ROA. The increase of NPL will decrease ROA insignificantly.

4) The regression coefficient of BI Rate -0.156 means that if BI Rate increases one unit, ROA will decrease 0.156 units, with the assumption *ceteris paribus*. The positive value of regression coefficient means that there is a negative relationship between BI Rate and ROA. The increase of BI Rate will decrease ROA insignificantly.

2. F Test

The first and second hypotheses were analyzed by using F test to explain the simultaneous effect of independent variables on dependent variable. The first hypothesis explained the effect of Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate on Return on Equity (ROE) simultaneously. The second hypothesis explained the effect of Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate on

Return on Asset (ROA) simultaneously. By using SPSS 23.0 the results are as follows:

a. Return on Equity

Table 14 ANOVA Test of Return on Equity

ANOVA[a]

Model 1	F	Sig.	F Table	Result
Regression	18.319	.000[b]	2.859	H_1 is Accepted
Residual				
Total				

Source: Data was processed by the Researcher, 2017

Table 14 shows that F is greater than F table (18.319 > 2.859) with P value is less than significance level (0.000 < 0.05). Based on these two comparisons, H_0 is rejected and H_1 is accepted. It means that CAR, NPL, and BI Rate have significant effect on ROE simultaneously.

b. Return on Asset

Table 15 ANOVA Test of Return on Asset

ANOVA[a]

Model 2	F	Sig.	F Table	Result
Regression	3.687	.021[b]	2.859	H_2 is Accepted
Residual				
Total				

Source: Data was processed by the Researcher, 2017

Table 15 shows that F is greater than F table (3.687 > 2.859) and P value is less than significance level (0.021 < 0.05). Based on these two comparisons, H_0 is rejected and H_2 is accepted. It means that CAR, NPL, and BI Rate have significant effect on ROA simultaneously.

3. T Test

The third, fourth, fifth, sixth, seventh, and eighth hypotheses were analyzed by using t test to explain the partial effect of independent variables on dependent variable. The third hypothesis explained the effect of Capital Adequacy Ratio (CAR) on Return on Equity (ROE) partially. The fourth hypothesis explained the effect of Non-Performing Loan Ratio (NPL) on Return on Equity (ROE) partially. The fifth hypothesis explained the effect of BI Rate on Return on Equity (ROE) partially. The sixth hypothesis explained the effect of Capital Adequacy Ratio (CAR) on Return on Asset (ROA) partially. The seventh hypothesis explained the effect of Non-Performing Loan Ratio (NPL) on Return on Asset (ROA) partially. The eighth hypothesis explained the effect of BI Rate on Return on Asset (ROA) partially. By using SPSS 23.0 the results are as follows:

a. Return on Equity

Table 12 page 73 shows that t of CAR is greater than t table (3.237 > 2.028) and P value is less than significance level (0.003 < 0.05). Based on these two comparisons, H_0 is rejected and H_3 is accepted. It means that CAR has significant positive effect on ROE partially.

Table 12 page 73 shows that t of NPL is greater than t table (-2.830 > 2.028) and P value is less than significance level (0.040 < 0.05). Based on these two comparisons, H_0 is rejected and H_4 is accepted. It means that NPL has significant negative effect on ROE partially.

Table 12 page 73 shows that t of BI Rate is greater than t table (3.958 > 2.028) and P value is less than significance level (0.000 < 0.05). Based on these two comparisons, H_0 is rejected and H_5 is accepted. It means that BI Rate has significant positive effect on ROE partially.

b. Return on Asset

Table 13 page 74 shows that t of CAR is greater than t table (2.808 > 2.028) and P value is less than significance level (0.008 < 0.05). Based on these two comparisons, H_0 is rejected and H_6 is accepted. It means that CAR has significant positive effect on ROA partially.

Table 13 page 74 shows that t of NPL is less than t table (-1.542 < 2.028) and P value is greater than significance level (0.132 > 0.05). Based on these two comparisons, H_0 is accepted and H_7 is rejected. It means that NPL has insignificant negative effect on ROA partially.

Table 13 page 74 shows that t of BI Rate is less than t table (-0.914 < 2.028) and P value is greater than significance level (0.367 > 0.05). Based on these two comparisons, H_0 is accepted and H_8 is rejected. It means that BI Rate has insignificant negative effect on ROA partially.

4. Determination Coefficient Analysis

Determination coefficient analysis (R^2) is used to measure the ability of a multiple linier regression model in explaining the variation of independent variables with value between 0 and 1. R^2 value = 0 means that independent variables have the ability to explain the dependent variable, while R^2 value = 1 means that independent variables have the ability to

explain dependent variable. Determination coefficient analysis (R^2) was conducted to explain the ability of Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate explain Return on Equity (ROE) and Return on Asset (ROA). By using SPSS 23.0 the result is as follows:

a. Return on Equity

Table 16 Model Summary of Return on Equity

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.777[a]	.604	.571	3.03586

Source: Data was processed by the Researcher, 2017

Table 16 shows that the value of Adjusted R Square is 0.571. It means that CAR, NPL, and BI Rate could explain their effects on ROE 57%. Other 43% may be affected or explained by other variables which are not taken in this research model, such as Loan to Deposit Ratio (LDR), Gross Domestic Product (GDP), and operational risk variables.

b. Return on Asset

Table 17 Model Summary of Return on Asset

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	.458[a]	.235	.171	.20130

Source: Data was processed by the Researcher, 2017

Table 17 shows that the value of Adjusted R Square is 0.171. It means that CAR, NPL, and BI Rate could explain their effects on ROA 17%. Other 83% may be affected or explained by other variables which are not taken in this research model, such as Loan to Deposit Ratio (LDR), Gross Domestic Product (GDP), and operational risk variables.

The following are two pictures showing examined hypothetical models:

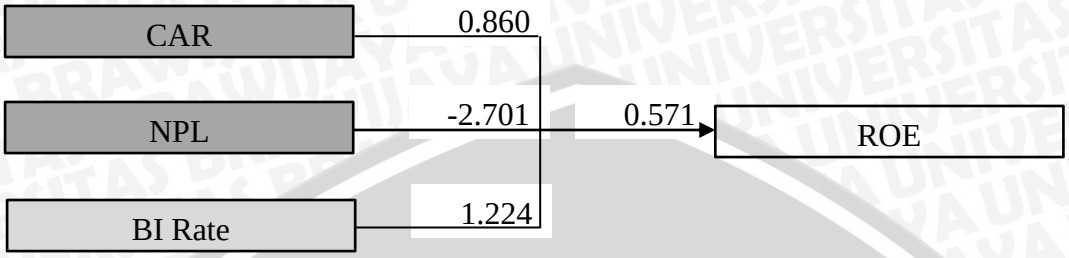


Figure 6 Examined Hypothetical Model the Effect of Capital Adequacy Ratio, Non-Performing Loan Ratio, and BI Rate on Return on Equity
Source: Data was processed by the Researcher, 2017

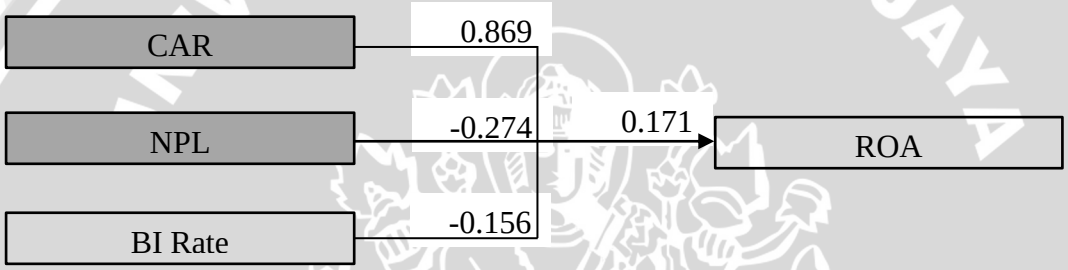


Figure 7 Examined Hypothetical Model the Effect of Capital Adequacy Ratio, Non-Performing Loan Ratio, and BI Rate on Return on Asset
Source: Data was processed by the Researcher, 2017

E. Interpretation of Research Result

The Effect of Financial Risk and Environmental Risk on Earnings (Case Study of PT Bank Tabungan Negara (Persero) Tbk period 2006-2015)

1. The Simultaneous Effect of Capital Adequacy Ratio, Non-Performing Loan Ratio, and BI Rate on Return on Equity

Based on F test and P value on Table 14 page 76, CAR, NPL, and BI Rate had significant effect on ROE simultaneously. This research result showed that CAR, NPL, and BI Rate acted as factors which could explain the change of ROE of Bank BTN.

Greuning and Bratanovic (2009:101-102) has stated that banks are subjected to financial, operational, and environmental risks. The bank's capacity to manage those risks can impact on its income and earnings. This research result supported the basic theory of Greuning and Bratanovic (2009:101-102).

2. The Simultaneous Effect of Capital Adequacy Ratio, Non-Performing Loan Ratio, and BI Rate on Return on Asset

Based on F test and P value on Table 15 page 76, CAR, NPL, and BI Rate had significant effect on ROA simultaneously. This research result showed that CAR, NPL, and BI Rate acted as factors which could explain the change of ROA of Bank BTN.

Greuning and Bratanovic (2009:101-102) has stated that banks are subjected to financial, operational, and environmental risks. The bank's capacity to manage those risks can impact on its income and earnings. This research result supported the basic theory of Greuning and Bratanovic (2009:101-102).

3. The Partial Effect of Capital Adequacy Ratio on Return on Equity

Based on T test and P value on Table 12 page 73, CAR had significant positive effect on ROE partially. This research result showed that CAR acted as factor which could explain the change of ROE of Bank BTN. Latumaerissa, (2014:47) has explained that capital for banks or other business companies, beside function as the main source for the financing source of their operations, also function as a buffer against potential losses, such as

credit risk and investment risk. Effective capital management or the ability of bank to maintain its capital adequacy can increase the profitability of bank and costumer's security. This research result supported the theory of Latumaerissa (2014:47). This research result also supported the research result of Saputri and Oetomo (2016) which showed that CAR had significant positive effect on ROE.

4. The Partial Effect of Non-Performing Loan Ratio on Return on Equity

Based on T test and P value on Table 12 page 65, NPL had significant negative effect on ROE partially. This research result showed that NPL acted as factor which could explain the change of ROE of Bank BTN. Latumaerissa, (2014:161-164) has stated that credit is the main business that is conducted by bank. The higher credit volume of the bank will increase probability of its bank to create profit or earnings, but, every bank is often faced with non-performing loan. Non-performing loan could be caused by the weaknesses of bank in considering its costumer's credit or caused by the worsening of economic condition. High non-performing loan will cause high cost of capital that is indicated by the operational cost of its bank, furthermore the high cost of capital will impact on the net profit of the bank. This research result supported the basic theory of Latumaerissa, (2014:161-164). This research result also supported the research result of Gizaw et al. (2014), Badan and Lestari (2015), and Saputri and Oetomo (2016) which showed that NPL had significant negative effect on ROE.

5. The Partial Effect of BI Rate on Return on Equity

Based on T test and P value on Table 12 page 73, BI Rate had significant positive effect on ROE partially. This research result showed that BI Rate acted as factor which could explain the change of ROE of Bank BTN. Liembono, (2014:109-111) has stated that one instrument of macroeconomic policy is monetary policy. Generally, BI will increase BI Rate if the forward inflation is projected higher than the expectation. In contrast, BI will decrease BI Rate if the forward inflation is projected lower than the expectation by issuing Bank Indonesia Certificate by interest rate or yield target. Hopefully, the increasing and decreasing of BI Rate will be followed by deposit rate and banking credit rate. The increasing of BI Rate, on the one hand, the costumer number who wants to save money in the bank will increase, so that can absorb rupiah, but on the other hand, led to the economic slowdown. The increasing of BI Rate can decrease the demand of credit, but if the credit expansion is not implemented, bank will bear the interest savings. The increasing of BI Rate will impact on bank's loss if it could not be managed properly (Wijaya, 2010:111). In contrast, when BI Rate decreased, bank will directly decrease saving/deposit rate, but banking credit rate is not decrease as soon as saving/deposit rate, hence, banks become an institution which most benefited from the decreasing of BI Rate (Liembono, 2014:109-111). This research result did not support the theory of Wijaya (2010:111). This research result also did not support to the research result of Zaman et al. (2014) which showed that Interest Rate had significant negative

effect on ROE. The finding about the significant positive effect of BI Rate on ROE could be caused by the ability of Bank BTN to manage the increase of BI Rate by maximizing its equity capital as funding source, increase the collectability, and be careful in distributing credit for costumers, also conduct efficiency, hence, increasing of BI Rate could increase its ROE. This research result supported the research result of Badan and Lestari (2015) which indicated that Interest Rate had significant positive effect on ROE.

6. The Partial Effect of Capital Adequacy Ratio on Return on Asset

Based on T test and P value on Table 13 page 74, CAR had significant positive effect on ROA partially. This research result showed that CAR acted as factor which could explain the change of ROA of Bank BTN. Latumaerissa (2014:47) has explained that capital for banks or other business companies, beside function as the main source for financing source of their operations, also function as a buffer against potential losses, such as credit risk and investment risk. Effective capital management or the ability of bank to maintain its capital adequacy can increase the profitability of bank and costumer's security. This research result supported the theory of Latumaerissa (2014:47). This research result also supported the research result of Putri (2013) which stated that CAR had significant positive effect on ROA.

7. The Partial Effect of Non-Performing Loan Ratio on Return on Asset

Based on T test and P value on Table 13 page 74, NPL had insignificant negative effect on ROA partially. The research result showed

that NPL did not act as factor which could explain the change of ROA of Bank BTN. (Latumaerissa, 2014:161-164) has stated that credit is the main business that is conducted by bank. The higher credit volume of the bank will increase probability of its bank to create profit or earnings. However, every bank is often faced with non-performing loan. Non-performing loan could be caused by the weaknesses of bank in considering its costumer's credit or caused by the worsening of economic condition. High non-performing loan will cause high cost of capital that is indicated by the operational cost of its bank, furthermore the high cost of capital will impact on the net profit of the bank. This research result did not support the basic theory of Latumaerissa (2014:161-164). This research result also did not support to the research result of Putri (2010) and Gizaw, Kabede, and Selvaraj (2014) which showed that NPL had significant negative effect on ROA. This research result could be happened because Bank BTN not only allocated its liabilities capital for credit distribution, but also for saving in other bank which will generate other income, so that the loss which was caused by NPL could covered by income from that source, hence, NPL did not have significant negative effect on ROA. This research result supported the research result of Badan and Lestari (2015) and Maria (2015) which stated that NPL had insignificant negative effect on ROA.

8. The Partial Effect of BI Rate on Return on Asset

Based on T test and P value on Table 13 page 74, BI Rate had insignificant negative effect on ROA partially. This research result showed

that BI Rate did not act as factor which could explain the change of ROE of Bank BTN. Liembono, (2014:109-111) has stated that one instrument of macroeconomic policy is monetary policy. Generally, BI will increase BI Rate if the forward inflation is projected higher than the expectation. In contrast, BI will decrease BI Rate if the forward inflation is projected lower than the expectation by issuing Bank Indonesia Certificate by interest rate or yield target. Hopefully, the increasing and decreasing of BI Rate will be followed by deposit rate and banking credit rate. The increasing of BI Rate, on the one hand, the costumer number who wants to save money in the bank will increase, so that can absorb rupiah, but on the other hand, led to the economic slowdown. The increasing of BI Rate can decrease the demand of credit, but if the credit expansion is not implemented, bank will bear the interest savings. The increasing of BI Rate will impact on bank's loss if it could not be managed properly (Wijaya, 2010:111). In contrast, when BI Rate decreased, bank will directly decrease saving/deposit rate, but banking credit rate is not decrease as soon as saving/deposit rate, hence, banks become an institution which most benefited from the decreasing of BI Rate (Liembono, 2014:109-111). This research result did not support the theory of Wijaya (2010:111). This research result also did not support the research result of Zaman et al. (2014) which showed that interest rate had significant negative effect on ROA. In this research, BI Rate had significant positive effect on ROE, but did not have significant effect on ROA. The relationship direction of BI Rate on ROA which was negative also different with direction

relationship of BI Rate on ROE which was positive. The researcher guesses that a lack of the significant effect of BI Rate on ROA and the different relationship direction could be caused by the liabilities which are a part of ROA. Liabilities capital of Bank BTN is higher than its equity capital. Increasing of BI Rate could decrease its ROA, because increasing of BI Rate meant that Bank BTN also should pay its liabilities with higher interest rate. The effect of BI Rate on ROA which was insignificant could happen because the interest capital of Bank BTN is not only liabilities but also equity. When the BI Rate increased, Bank BTN prefer to utilize its equity capital as funding source, increase the collectability, and be careful in distributing credit for costumers, also conduct efficiency, but it was not optimal because Bank BTN have a high Loan to Deposit Ratio (LDR) which is above 100%. High LDR means that the amount of loan distributed is higher than deposits received, hence, the increasing of BI Rate have insignificant negative effect on ROA. The result supported the research result of Alim (2014) which showed that BI Rate had insignificant negative effect on ROA.

F. Research Limitation

The limitation of this research is as follows:

1. This research used BI Rate as independent variable and did not use BI 7-Day Repo Rate. This consider the use of BI 7-day Repo Rate newly enacted on April 15, 2016, but in the research period, benchmark interest rate still referred to BI Rate.

CHAPTER V

CONCLUSION AND RECOMMENDATION

A. Conclusion

The objective of this research was to explain the effect of Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPL), and BI Rate on Return on Equity (ROE) and Return on Asset (ROA) simultaneously and partially. Based on the result of analysis, the conclusions of this research are as follows:

1. Based on F test and P value, CAR, NPL, and BI Rate had significant effect on ROE simultaneously. This research result showed that CAR, NPL, and BI Rate acted as factors which could explain the change of ROE of Bank BTN simultaneously.
2. Based on F test and P value, CAR, NPL, and BI Rate had significant effect on ROA simultaneously. This research result showed that CAR, NPL, and BI Rate acted as factors which could explain the change of ROA of Bank BTN simultaneously.
3. Based on t test and P value, CAR had significant positive effect on ROE partially. This research result showed that CAR acted as factor which could explain the change of ROE of Bank BTN partially.
4. Based on t test and P value, NPL had significant negative effect on ROE partially. This research result showed that NPL acted as factor which could explain the change of ROE of Bank BTN partially.

5. Based on t test and P value, BI Rate had significant positive effect on ROE partially. This research result showed that BI Rate acted as factor which could explain the change of ROE of Bank BTN partially.
6. Based on t test and P value, CAR had significant positive effect on ROA partially. This research result showed that CAR acted as factor which could explain the change ROA of Bank BTN partially.
7. Based on t test and P value, NPL had insignificant negative effect on ROA partially. This research result showed that NPL did not act as factor which could explain the change of ROA of Bank BTN partially.
8. Based on t test and P value, BI Rate had insignificant negative effect on ROA partially. This research result showed that BI Rate did not act as factor which could explain the change of ROA of Bank BTN partially.

B. Recommendation

Based on the conclusion, the researcher gives recommendations as follows:

1. For Bank Tabungan Negara (Persero) Tbk

a. Bank BTN should increase its capital adequacy and conduct proper risk management by increasing CAR. Equity capital is cheaper than other capital sources. Optimum equity capital can protect Bank BTN from any unexpected risks, especially credit risk and increase the trust of stakeholders. The stakeholders will be more respect to the

bank with optimum capital adequacy, so that the capital adequacy will be increase, profitability will also be increase.

b. Bank BTN should decrease its credit risk by decreasing NPL. The main business of Bank BTN is to provide housing loans or long-term loans which are very risky. Higher credit risk can decrease the earnings and the trust of stakeholders. Bank BTN can anticipate its credit risk by tightening the credit procedure to costumers, conducting active billing, and build mutual relationship with costumers, so that the credit risk will be increase, profitability will also be increase.

c. Bank BTN should anticipate macroeconomic policy as like the determination of BI Rate. Bank BTN is one of macroeconomic policy practitioners which must be submissive to the macroeconomic policy. It is for this reason that Bank BTN should anticipate it, because it can give negative impact if not be managed properly. Bank BTN can manage the negative impact of macroeconomic policy by strengthen its capital adequacy, so that the macroeconomic policy can anticipate well, profitability will be increase.

2. For Further Researcher

a. The researcher recommends the further researcher to use other financial risk variables such as Loan to Deposit Ratio (LDR) that is indicated the liquidity risk, currency risk, and other environmental risk variables such as Inflation and Gross Domestic Product (GDP).

b. The researcher recommends the further researcher to conduct research about the effect of operational risk on earnings by using qualitative approach to understand more deeply about problem in the banking industry.

REFERENCES

Alim, S. 2014. Analisis Pengaruh Inflasi dan BI Rate Terhadap Return on Assets (ROA) Bank Syariah di Indonesia. *Jurnal Ekonomi Modernisasi* Vol. 10, No. 3: 201-220, accessed on April 18, 2017 from http://ejournal.unikama.ac.id/index.php/JEKO/article/view/785.

Ariyanti, F. 2016. Ekonomi Lesu, Begini Kondisi Industri Perbankan RI. *Liputan6,* accessed on December 22, 2016 from http://bisnis.liputan6.com/read/2441288/ekonomi-dunia-lesu-beginikondisi-industri-perbankan-ri.

Badan, A.Y.A. and Lestari, S.L. 2015. Faktor-faktor yang Mempengaruhi Profitabilitas Bank yang Terdaftar di Bursa Efek Indonesia. *Trijurnal*, accessed on April 19, 2017 from http://www.trijurnal.lemlit.trisakti.ac.id/index.php/semnas/ article/download/197/196.

Bank Indonesia. 2011. *Peraturan Bank Indonesia Nomor 13/1/PBI/2011 tentang Penilain Tingkat Kesehata Bank Umum*, accessed on December 22, 2016 from http://www.bi.go.id/id/peraturan/perbankan/Pages/pbi130111.aspx.

_____. 2011. *Surat Edaran Nomor 13/24/DPNP tentang Penilain Tingkat Kesehata Bank Umum*, accessed on December 22, 2016 from http://www.bi.go.id/id/peraturan/perbankan/Pages/SE%20No.13_24_DPNP_2011.aspx.

_____. 2013. *Peraturan Bank Indonesia Nomor 15/12/PBI/2013 tentang Kewajiban Penyediaan Modal Minimum Bank Umum*, accessed on December 23, 2016 from http://www.bi.go.id/id/peraturan/perbankan/Documents/pbi_151213rev.pdf.

_____. 2015. *Peraturan Bank Indonesia Nomor 17/11/PBI/2015 tentang Giro Wajib Minimu Bank Umum dalam Rupiah dan Valuta Asing bagi Bank Umum Konvensional*, accessed on December 23, from http://www.bi.go.id/id/peraturan/ssk/Pagespbi_171115.aspx.

_____. 2016. *BI Rate*, accessed on December 22, 2016 from http://www.bi.go.id/ en/moneter/bi-rate/data/Default.aspx.

_____. 2016. *Sejarah Bank Indonesia: Perbankan Periode 1997-1999*, accessed on December 30, 2016 from http://www.bi.go.id/id/tentang-bi/museum/sejarah-bi/bi/Documents/f2310af43715441bb8d57d865ea7987cSejarahPerbankanPeriode19971999.pdf

Bank Tabungan Negara. 2016. *Laporan Triwulan*, accessed on December 16, 2016 from http://www.btn.co.id/id/content/Hubungan-Investor/Laporan-Keuangan/Laporan-Triwulanan?page=4.

Blanche, M.T., K. Durrheim., & D. Painter. 2006. *Research in Practice: Applied Methods for the Social Sciences*. 2nd Ed. South Africa: University of Cape Town Press (Pty) Ltd., accessed on December 17, 2016 from https://books.google.co.id/.

Creswell, J.W. 2014. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 4th Ed. United States of America: Sage Publication, Inc., accessed on December 12, 2016 from https://books.google.co.id/.

Ghozali, I. 2016. *Aplikasi Analisis Multivariete dengan Program IBM SPSS 23*. 8th Ed. Semarang: Lembaga Penerbit Universitas Diponegoro.

Gizaw, M., M. Kebede., & S. Selvaraj. 2014. The Impact of Credit Risk on Profitability Performance of Commercial Banks in Ethiopia. *African Journal of Business Management* Vol. 9, No. 2: 59-66, accessed on December 27, 2016 from http://www.academicjournals.org/journal/AJBM /article-full-text-pdf/4A412A250102.

Greuning, H.V. & S.B. Bratanovic. 2009. *Analyzing Banking Risk: A Framework for Assessing Corporate Governance and Risk Management*. 3rd Ed. Washington, D.C.: The World Bank., accessed on December 17, 2016 from https://gen.lib.rus.ec/.

Gupta, A. 2014. *Risk Management and Simulation*. New York: Taylor & Francis Group., accessed on December 26, 2016 from https://books.google.co.id/.

International Accounting Standards Board. 2006. *Conceptual Framework: Asset Definition.* IASB: London, accessed December 21, 2016 from http://www.ifrs.org/Current-Projects/IASB-Projects/Conceptual-Framework/Other-Public-Meetings-Observer-Notes/Documents/WSSAGENDAPAPER1A.pdf.

Indonesia Stock Exchange. 2016. *Ringkasan,* accessed on December 29, 2016 from http://www.idx.co. id/id-id/beranda/unduhdata/ringkasan.aspx.

Undang-undang Nomor 10 Tahun 1998. *Undang-undang Republik Indonesia Nomor 10 Tahun 1998 Tentang Perbankan,* accessed on December 17, 2016 from http://www. hukumonline.com/pusatdata/downloadfile/lt4cce89fb14e43/parent/334.

Undang-undang Nomor 21 Tahun 2011. *Undang-undang Nomor 21 Tahun 2011 Tentang Otoritas Jasa Keuangan*, accessed on December 22, 2016 from http://www.hukumonline.com/pusatdata/detail/lt4eddf04dc6fba/nprt/lt4d50fbec8b2ce/uu-no-21-tahun-2011-otoritas-jasa-keuangan.

Koch, T.W. & S.S. MacDonald. 2015. *Bank Management*. Boston: Cengage Learning., accessed on December 17, 2016 from https://gen.lib.rus.ec/.

Latumaerissa, J.R. 2014. *Manajemen Bank Umum*. Jakarta: Mitra Wacana Media.

Liembono, R.H. 2014. *Analisis Fundamental*. Jakarta: BEI5000.

Mahmoeddin, A. 2002. *Melacak Kredit Bermasalah*. Jakarta: Sinar Harapan.

Maria, A. 2015. *Pengaruh CAR, BOPO, NIM, NPL, dan LDR Terhadap ROA: Studi Kasus pada 10 Bank Terbaik di Indonesia Periode 2007-2011*, accessed on April 18, 2017 from http://repository.ubaya.ac.id/24357/.

Marta, M.F. 2016. Kinerja Bank BUMN: Laba Stagnan, Kredit Bermasalah Melonjak. *Kompas*, accessed on December 22, 2016 from http:// bisniskeuangan.kompas.com/read/2016/05/09/072514726/ Kinerja.Bank. BUMN.Laba.Stagnan.Kredit.Bermasalah.Melonjak.

Ostrom, L.T. and C.A. Wilhelmsen. 2012. *Risk Assessment: Tools, Techniques, and Their Applications*. New Jersey: A John Wiley & Sons, Inc, Publications., accessed on January 1, 2016 from https://books.google. co.id/.

Otoritas Jasa Keuangan. 2016. *Indonesian Banking Statistics-Desember 2015*. OJK: Jakarta, accessed on December 15, 2016 from http://www.ojk.go.id/ id/kanal/perbankan/data-dan-statistik/statistik-perbankan indonesia/Pages/ Statistik-Perbankan-Indonesia---Desember-2015.aspx.

Putri, F.S. 2013. Pengaruh Resiko Kredit dan Tingkat Kecukupan Modal Terhadap Tingkat Profitabilitas pada Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia. *E-journal of The State of Padang University*. 1-19, accessed on December 30, 2016 from http://ejournal. unp.ac.id /students/index.php/akt/article/ viewFile/73/6.

Saputri, S.F.H. & Oetomo, H.W. 2016. Pengaruh CAR, BOPO, NPL, dan FDR Terhadap ROE pada Bank Devisa. *E-journal of STIESIA Surabaya* Vol. 5, No. 5: 1-19, accessed on April 18, 2017 from https://ejournal.stiesia.ac. id/jirm/user/setLocale/id_ID?source=%2Fjirm%2Farticle%2Fview%2F15 53%2F0.

Siamat, D. 2005. *Manajemen Lembaga Keuangan: Kebijakan Moneter dan Perbankan*. 5th Ed. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.

Subramanyam, K.R. & J.J. Wild. 2009. *Financial Statement Analysis*. 10th Ed. Singapore: The McGraw-Hill Companies Inc.

Sugiyono. 2013. *Metode Penelitian Kuantitatif, Kualitative, dan R&D*. 19th Ed. Bandung: CV Alfabeta.

Thoifah, I. 2015. *Statistika Pendidikan dan Metode Penelitian Kuantitatif*. Malang: Madani.

Wijaya, K. 2010. *Analisis Kebijakan Perbankan Nasional*. Jakarta: PT Elex Media Komputindo.

Zaman, R., M. Arslan., M. Sohail, & D.R.K. Malik. 2014. The Impact of Monetary Policy on Financial Performance: Evidence from Banking Sector of Pakistan. *Journal of Basic and Applied Scientific Research* Vol. 4, No. 8, pp. 119-124, accessed on December 29, 2016 from https://www.researchgate.net/publication/265964170_The_Impact_of_Monetary_Policy_on_Financial_Performance_Evidence_from_Banking_Sector_of_Pakistan.

APPENDICES

Appendix 1 Residual Value

No	Res_1	Res_2
1	3.66848	0.12515
2	-6.81227	-0.00371
3	2.77796	0.14925
4	-0.89064	-0.10462
5	7.99634	0.22176
6	3.86982	0.05887
7	4.55121	0.11147
8	-0.85410	-0.11081
9	-0.21199	-0.15799
10	-0.25824	0.03067
11	0.30063	0.05786
12	-0.40867	0.08157
13	0.84370	-0.19808
14	1.07952	-0.22178
15	3.19755	-0.16334
16	-3.03184	-0.42594
17	-4.64805	-0.03586
18	-2.46221	0.03263
19	-0.60878	0.71509
20	-0.52872	0.12493
21	-0.13818	0.11713
22	1.27427	0.16257
23	0.80349	0.12644
24	1.37158	0.14780
25	-0.40817	0.01867
26	2.48941	0.10692
27	3.68052	0.15286
28	2.37510	0.04655
29	-0.02793	-0.07542
30	0.30382	-0.04106
31	0.10259	0.04800
32	-0.38355	0.10846
33	-2.42517	-0.10694
34	-3.60265	-0.27246
35	-4.07118	-0.33033

Appendix 1 (Continued)

No	Res_1	Res_2
36	-5.91244	-0.32262
37	0.52780	0.02016
38	0.79977	0.04084
39	-1.06294	-0.06477
40	-3.26583	-0.16989

Source: Data was Processed by the Researcher

Appendix 2 Statistical Analysis Result of Return on Equity

Runs Test

	Unstandardized Residual
Test Value[a]	-.08305
Cases < Test Value	20
Cases >= Test Value	20
Total Cases	40
Number of Runs	16
Z	-1.442
Asymp. Sig. (2-tailed)	.149

a. Median

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		40
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	2.91675910
Most Extreme Differences	Absolute	.133
	Positive	.094
	Negative	-.133
Kolmogorov-Smirnov Z		.840
Asymp. Sig. (2-tailed)		.481

a. Test distribution is Normal.

b. Calculated from data.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.257	3.646		.345	.732
	CAR	-.012	.169	-.012	-.072	.943
	NPL	-.564	.608	-.147	-.928	.360
	BI_Rate	.368	.197	.310	1.867	.070

a. Dependent Variable: ABS_RES

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	506.502	3	168.834	18.319	.000[b]
	Residual	331.792	36	9.216		
	Total	838.294	39			

a. Dependent Variable: ROE

b. Predictors: (Constant), BI_Rate, NPL, CAR

Coefficients[a]

Model		Unstandardized Coefficients		t	Sig.	Collinearity Statistics	
		B	Std. Error			Tolerance	VIF
1	(Constant)	2.040	5.724	.356	.724		
	CAR	.860	.266	3.237	.003	.889	1.125
	NPL	-2.701	.954	-2.830	.008	.957	1.045
	BI_Rate	1.224	.309	3.958	.000	.872	1.146

a. Dependent Variable: ROE

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.777[a]	.604	.571	3.03586

a. Predictors: (Constant), BI_Rate, NPL, CAR

b. Dependent Variable: ROE

Appendix 3 Statistical Analysis Result of Return on Asset

Runs Test

	Unstandardized Residual
Test Value[a]	.03571
Cases < Test Value	20
Cases >= Test Value	20
Total Cases	40
Number of Runs	12
Z	-2.723
Asymp. Sig. (2-tailed)	.006

a. Median

The following is Run Test after Transformation into Natural Logarithm

Runs Test

	Unstandardized Residual
Test Value[a]	.03165
Cases < Test Value	20
Cases >= Test Value	20
Total Cases	40
Number of Runs	16
Z	-1.442
Asymp. Sig. (2-tailed)	.149

a. Median

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		40
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.19339868
Most Extreme Differences	Absolute	.150
	Positive	.150
	Negative	-.113
Kolmogorov-Smirnov Z		.951
Asymp. Sig. (2-tailed)		.327

a. Test distribution is Normal.
b. Calculated from data.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2	(Constant)	.243	.598		.406	.687
	Ln_CAR	-.005	.208	-.004	-.024	.981
	Ln_NPL	.039	.120	.055	.326	.746
	Ln_BI_Rate	-.066	.115	-.100	-.573	.570

a. Dependent Variable: ABS_RES

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	.448	3	.149	3.687	.021[b]
	Residual	1.459	36	.041		
	Total	1.907	39			

a. Dependent Variable: Ln_ROA
b. Predictors: (Constant), Ln_BI_Rate, Ln_NPL, Ln_CAR

Coefficients[a]

Model		Unstandardized Coefficients		t	Sig.	Collinearity Statistics	
		B	Std. Error			Tolerance	VIF
2	(Constant)	-1.294	.888	-1.457	.154		
	Ln_CAR	.869	.309	2.808	.008	.899	1.112
	Ln_NPL	-.275	.178	-1.542	.132	.973	1.028
	Ln_BI_Rate	-.156	.170	-.914	.367	.893	1.120

a. Dependent Variable: Ln_ROA

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	.485[a]	.235	.171	.20130

a. Predictors: (Constant), Ln_BI_Rate, Ln_NPL, Ln_CAR

b. Dependent Variable: Ln_ROA

Appendix 4
Financial Reports of PT Bank Tabungan Negara (Persero) Tbk from Quarter I 2006 to Quarter IV 2015