

EFFECTS OF FUNDAMENTAL FINANCE ON ROA AT CONVENTIONAL COMMERCIAL BANKS REGISTERED IN INDONESIAN STOCK EXCHANGE

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Abstract—This research aims to analyze the effects of Fundamental Finance on bank ROA. In this research, the fundamental finance is measured by Non Performing Loan (NPL), Operational Costs on Operating Income (OCOI), Loan to Deposit Ratio (LDR) and Capital Adequacy Ratio (CAR), and Credit share on Banking Profitability (ROA). Populations as the research objects are go-public conventional commercial banks registered in Indonesian stock exchange in the period of 2011-2016. The number of samples is 11 go-public conventional commercial banks registered in Indonesian stock exchange. From the results of hypothesis test partially (t-test) in go-public conventional commercial banks, it is shown that OCOI variable has negative and significant effects on Bank ROA. NPL has negative and significant effects on bank ROA. And LDR and CAR variables have positive and insignificant effects on Bank ROA.

Index Terms— NPL, BOPO, LDR, CAR, and ROA

1 INTRODUCTION

Bank is a financial institution which its main business is to collect and distribute funds to the community in the form of credit as well as provide credit. In its operation, banks use more funds collected from the community than using their own capital from their owners or shareholders. Public trust on bank is greatly influenced by the bank performance by maintaining bank health and bank management effort to anticipate any changes in its environment both in national and global levels. Stability of bank institution is greatly required in an economic. Such stability is not only seen from the number of distributed money but also from the number of existing bank as a device of financial implementer (Merkusiwati, 2007).

Very rapid development and high level of complexity in banking world can give effects on the performance of a bank. High complexity of banking business can improve risks faced by bank in Indonesia.

Health level of a banking financial performance can be seen from a bank profitability performance. A health level of bank can be seen from a number of indicators as a basic of assessment namely financial statement of the related bank. Based on the reports, it can be calculated the number of financial ratios which are usually used as a basic of assessment for a bank health level. Bank financial performance can be assessed from bank financial ratios based on group classification, such as Return On Assets (ROA), Non Performing Loans (NPL), OCOI, Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), Deposit Risk Ratio (DRR) and Credit Share. (Nasser and Aryati, 2000).

Profitability Ratio is the most appropriate indicator to be used is Return on Equity (ROE) and Return On Assets (ROA) in the banking industry. (Sofyan, 2002). Return on Assets (ROA) focuses on the ability of company management to

manage company assets, while Return on Equity (ROE) measures returns for company owners in the banking industry (Siamat, 2002). Return On Assets (ROA) is used to measure the effectiveness of a company in generating profits by utilizing its assets.

According to Dendawijaya (2003:120), "this ratio is used to measure the ability of management to obtain profits as a whole. Greater ROA will lead to greater level of profits achieved by the company and better company's position in terms of the use of assets". This will further increase company attractiveness for investors. Increasing company attractiveness makes the company more attractive to investors, because the rate of return will be even greater. This will also have effects on the increasing demand (Demand) of company shares that have high ROA. Meanwhile, ROA growth in conventional commercial banks registered on the IDX is presented in appendix 1.

Appendix 1: ROA Growth for Conventional Commercial Banks in the Period of 2011-2016 in Percentage (%)

NO	NAME OF BANKS	2011	2012	2013	2014	2015	2016	FERTIME
1	PT BANK CENTRAL ASIA, Tbk	3.8	3.59	3.84	3.86	3.84	3.96	3.82
2	PT BANK NEGARA INDONESIA (PERSERO), Tbk	2.94	2.92	3.36	3.49	2.64	2.69	3.01
3	PT BANK RAKYAT INDONESIA (PERSERO), Tbk	4.93	5.15	5.03	4.74	4.19	3.84	4.64
4	PT BANK MANDIRI (PERSERO) TBK	3.37	3.55	3.66	3.57	3.15	1.95	3.2
5	PT BANK BUKOPIN, Tbk	1.87	1.83	1.75	1.33	1.39	1.38	1.59
6	PT BANK MEGA TEK	2.29	2.74	1.14	1.16	1.97	2.36	1.94
7	PT BANK MAYAPADA INTERNASIONAL TEK	2.07	2.41	2.53	1.98	2.1	2.03	2.18
8	PT BANK DANAMON INDONESIA Tbk-ULS	2.58	3.18	2.75	3.14	2.58	2.26	2.74
9	PT BANK CAPITAL INDONESIA, TBK	0.84	1.32	1.59	1.33	1.1	1	1.19
10	PT BANK CIMB NIAGA Tbk-ULS	2.78	3.11	2.75	1.6	0.21	1.19	2.77
11	PT BANK CHINA CONSTRUCTION BANK INDONESIA, Tbk	0.96	2.04	1.74	0.79	1.03	0.69	1.2

Source: Bank Publication of Financial Statement (Annual Report)

Based on appendix 1, samples of Return on Assets (ROA) data from several commercial banks in Indonesia show fluctuating values from 2011-2016. The highest ROA was in 2012 at BRI Bank at 5.15% while the lowest ROA was in 2015 at CIMB Niaga bank at 0.21% and if the ROA value was accumulated based on growth from 2011-2016, the highest ROA was at BRI at 4.64%, then BCA bank was at 3.82% and Bank Mandiri was at 3.2% while the lowest ROA based on Accumulated Growth from 2011-2016 was in CHINA bank at 1.2%. The fluctuating ROA value at several commercial banks in Indonesia is influenced by several other factors which these factors can also be used in assessing bank performance and profits such as factors derived from bank internal condition which is usually seen from its bank health level.

These factors can be categorized in various aspects including aspects of credit collectability proxied by Non-Performing Loans (NPL), or management quality proxied by BOPO (Bank Indonesia Regulation Number: 6/10 / PBI / 2004), CAR representing capital, NIM representing productive asset management, LDR representing Liquidity Risk, Deposit Risk Ratio (DRR) and Credit share (Rahardjo, 2007: 104). These various financial ratios refer to the provisions of RI Law No.7 of 1992 concerning banking.

The purpose of this study is as follows, namely to analyze the effect of Non Performing Loans (NPL), Operational Costs / Operating Income (OCOI), Loan to Deposit Ratio (LDR) and Capital Adequacy Ratio (CAR) on Return On Assets (ROA) at conventional commercial bank registered in the Indonesia Stock Exchange for the period of 2011-2016.

2 LITERATURE REVIEW

2.1 Bank Financial Performance

Performance reflects company ability to manage and allocate its resources, so performance serves as an important factor which must be achieved by every company.

Financial performance is an analysis conducted to determine the extent to which a company has carried out using the rules of financial implementation properly and correctly. Company performance is a description on the financial condition of a company which is analyzed by financial analysis tools, so that it can be determined a company good and bad financial condition which reflects work performance in a certain period. This is very important so that resources are used optimally in facing environmental changes (Fahmi, 2011: 2).

Measurement of Financial Performance

Performance measurement is used by companies to make improvements over their operational activities in order to compete with other companies. Financial performance analysis is a critical review process of reviewing data, calculating, measuring, interpreting, and providing solutions to company finances in a certain period. According to Munawir (2012: 31), the objectives of measuring the company's financial performance are: (1) determining level of liquidity, (2) level of solvency, (3) level of profitability and (4) level of stability.

Financial Ratio

Financial ratio is an index that connects two accounting numbers and obtained by dividing one number by another" Horne quoted from Kashmir (2008: 104). In general, financial ratio varies depending on their interests and uses, as well as differences in types of companies can also lead to differences in ratios.

Types of Financial Ratio

Generally, various ratios calculated to assess the performance of a bank are grouped into 3 (three) basic types (Faisal, 2007), namely:

1. Liquidity Ratio

This ratio measures bank ability to meet their short-term financial obligations or due-date obligations. Some liquidity ratios which are often used in assessing a bank performance include Cash Ratio, Reserve Requirement (RR), Loan to Deposit Ratio (LDR) and Loan to Asset Ratio (LAR).

2. Profitability Ratio

Is a tool to analyze or measure the level of business efficiency and profitability achieved by a bank. In addition, ratios in this category can also be used to measure bank health level. Profitability ratios consist of: Return On Assets (ROA), Return On Equity (ROE), Operating Expense Ratio (OER).

3. Solvency Ratio

Is the ratio used to measure a bank ability to meet their long-term obligations, or bank ability to meet their obligations in the event of bank liquidity. This Solvency Ratio consists of: Capital Adequacy Ratio (CAR) and Debt to Equity Ratio (DER).

By ratio analysis, it can be obtained a description on good or bad situation or a bank financial position, especially in assessing profitability.

Calculation of CAR ratio based on BankIndonesia standard is as follow:

$$CAR = \frac{MODAL}{ATMR} \times 100\%$$

Productive assets are all assets invested by banks with the intention to achieve or obtain income such as loans, investment in banks in the form of savings, time deposits and demand deposits, investments in securities, investments in companies, and others.

The ratio used to assess a bank quality of assets is using the Non Performing Loan (NPL) method and the calculation is:

$$NPL = \frac{BAD CREDIT}{TOTAL CREDIT} \times 100\%$$

The NPL ratio assessment is based on BI DIR Decree No. 30/12 / KEP / DIR April 30, 1997 is NPL <5% which is included in a healthy bank.

The income aspect is a measure of a bank ability to increase profits or to measure the level of business efficiency and profitability achieved by related bank. A healthy bank is a bank which is measured by profitability continues to increase. The

ratio used is the ROA and comparison of operating costs with operating income (OCOI).

To determine whether a bank obtains a reasonable profit, ROA and BOPO ratios are used. Calculations for finding ROA and BOPO are:

$$ROA = \frac{NETT\ PROFIT}{TOTAL\ ASSETS} \times 100\%$$
$$BOPO = \frac{OPERATIONAL\ COSTS}{OPERATING\ INCOME} \times 100\%$$

The calculation to determine LDR :

$$LDR = \frac{AMOUNT\ OF\ GIVEN\ CREDIT}{TOTAL\ OF\ THIRD\ PARTY\ FUNDS} \times 100\%$$

The LDR ratio assessment is based on DIR BI Decree No. 30/12 / KEP / DIR dated 30 April 1997 is a healthy bank having LDR \leq 94.75%.

2.2 Financial Statement

In general, every company, both banks and non-banks, will report their financial activities in a certain period. Information about the company's financial processes, company performance, cash flow and other information relating to financial statement activities can be obtained from company financial statements.

Financial statement is a system and means of delivering information about all conditions and company performance, especially in financial terms and is not limited to what can be conveyed through financial statements.

The financial report is one source of information that illustrates the overall condition and development of a company, so that it can be a means of assessing the level of company professionalism in carrying out its business activities (Sudarini, 2005). This financial report shows the performance of bank management during a certain period.

The main purpose of financial statements is to provide useful information to investors, creditors and other current and potential users in making rational investments, loans and similar decisions.

The second objective is to provide information in assessing the amount, time, uncertainty of cash receipts from dividends and interest in the future. This implies that investors want information about the results and risks of investments made. The financial statements basically show results of the accounting process which can be used as a tool to communicate between financial data or activities of a company with those who are interested in the company data or activities.

Any interested parties with the financial position and development of a company are: (1). owner of the company, (2) manager or leader of the company in order to determine past company financial position leading to ability to draw up a better plan, improve its monitoring system and determine more appropriate policies, (3) Investors, (4) creditors and bankers and the Government.

2.3 Research Hypotheses

Based on the framework of thought and previous research, a temporary hypothesis can be formulated, namely:

H1: Non Performing Loans (NPLs) have negative and significant effects on Return On Assets (ROA) on conventional commercial banks listed on the Indonesia Stock Exchange 2011-2016 Period

H2: Operating Costs / Operating Income (BOPO) has negative and significant effects on Return On Assets (ROA) on conventional commercial banks listed on the Indonesia Stock Exchange Period 2011-2016

H3: Loan to Deposit Ratio (LDR) has positive and significant effects on Return On Assets (ROA) on conventional commercial banks listed on the Indonesia Stock Exchange Period 2011-2016

H: Capital Adequacy Ratio (CAR) has positive and significant effects on Return On Assets (ROA) on conventional commercial banks listed on the Indonesia Stock Exchange Period 2011-2016.

3 RESEARCH METHOD

3.1 Financial Statement

The research object is the Financial Fundamental Factors which are proxied by Operational Costs Against Operational Income (OCOI), Non Performing Loans (NPL), Capital Adequacy Ratio (CAR) and Loan to Deposit Ratio (LDR). All of which are as the aspects measured by Return On Assets (ROA) at Conventional Commercial Banks listed on the Indonesia Stock Exchange Period 2011-2016.

3.2 Population and Samples

Population is a combination of all elements in the form of events, things or people who have similar characteristics as the center of a researcher attention because it is seen as a universe of research (Ferdinand, 2006). The populations used in this study are all Conventional commercial banks and are listed on the Indonesia Stock Exchange in the period of 2011-2016, namely 43 companies. Source: www.sahamok.com

Sample is a subset of the population and consists of several members of population. This subset is taken because in many cases, it is not possible to examine all members of the population so that it forms population representatives (Ferdinand, 2006). Sampling in this study was conducted by purposive sampling technique. Purposive sampling technique is conducted by selecting samples with specific objectives subjectively by the researchers in accordance with established criteria and the criteria to be met by the sample.

The criteria for sampling by purposive sampling in this study are as follows:

1. Go-public banking sector companies and ones listed on the IDX during the period of 2011-2016.
2. Companies consistently publish financial statements for the period of 31 December 2011-2016 and are submitted to Bank Indonesia and the Financial Services Authority.
3. Companies present in full the financial statements and ratios needed in this study for 5 consecutive years.
4. Having a positive and consistent profit during the period of 2011-2016. Because with a positive profit, then there

will not be extreme data that can cause problems in data processing.

Based on these criteria, the number of samples used in the study is 11 banks (data attached)

3.3 Data Types and Sources

Type of data used in this study is: Quantitative data namely data in the form of numbers obtained through documents and reports related to the research problem. While the source of the data obtained is the financial statements in the period of 2011-2016 obtained from the Banking Financial Publication Report www.ojk.go.id www.idx.co.id

3.4 Data Analysis Technique

The method of analysis in this study uses panel data regression. The panel regression model of this study is as follows:

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + e_{it}$$

Information:

$$Y = \text{ROA}$$

α = Constanta

X_1 = 1st independent variable (NPL)

X_2 = 2nd independent variable (BOPO)

X_3 = 3rd independent variable 3 (LDR)

X_4 = 6 independent variable 6 (CAR)

$\beta_1, \beta_2, \beta_3, \dots, \beta_7$ = regression coefficient of each independent variable

e = Error term

t = period

i = company

4 RESULTS

4.1 Effects of Non Performing Loan (NPL) on Return on Asset (ROA)

Based on the regression equation, it can be seen that value of t statistics in table 4.9 for this variable is negative, so it can be interpreted that the effect given by the NPL variable on ROA is negative but from table 4.9 which shows the results of partial testing (t test) of NPL on profitability (ROA) indicates a significance value of 0.1926, which means the significance value > 0.05. This means that in this study, there is no significant effect of NPL variable on ROA.

Such condition implies that higher NPL value leads to lower ROA level at go-public commercial banks. This is due to NPLs indicating the level of bad loans to banks which will result in a decrease in the level of profit (ROA). But the significance value of NPL on ROA by 0.1926 indicates not significant effect or indirect effect of NPL variable on ROA. This is due to the value of Allowance for Earning Assets (PPAP) which can cover non-performing loans.

Banking profits can still increase with high NPLs because banks can still obtain sources of profit not only from interest but also from other profit sources such as fee-based income which also has relatively high effects on the growth rate of ROA. Another thing leading to insignificant effects of NPL variable on ROA is because banks also maintain their NPLs in accordance with Bank Indonesia regulations which require banks to keep their NPLs below 5% of total credit.

This is also evidenced by the results of Descriptive statistics which the average of NPL is 1,167 with a standard deviation of 0.766 which these results indicate that NPL has a small value while based on Descriptive results on ROA, the average value is 2,499 with a standard deviation of 1,164 meaning ROA indicates good results.

The results of this study are in line with the results of research conducted by Restiyana (2011), Nusantara (2009), Prastningtyas (2010) stating that NPL has negative effects on ROA.

4.2 Effects of Operational Cost on Operating Income (OCOI) on Return on Asset (ROA)

Based on the regression equation, it can be seen that value of t statistic for this variable is negative, so it can be interpreted that the effect given by the OCOI variable on ROA is negative. T statistical value of -18,97941 means that every 1% decrease in OCOI will increase ROA by 18.97%. However, from table 4.9, it shows the results of partial testing (t test) of OCOI on profitability (ROA) shows a significance value of 0.0000, which means the significance value < 0.05. So the results of this study indicate that if the OCOI increases, efficiency decreases, the ROA obtained by the Bank will decrease. This is because the level of bank efficiency in carrying out its operations gives effects on the income produced by the bank. If the operational activities are carried out efficiently (in this case, OCOI value ratio is low) then the income produced by the bank will increase or more efficient a bank operational performance will lead to greater profit gained by the bank (SE. Intern BI, 2004). Therefore, Bank Indonesia has determined the best value for OCOI ratio, which is below 95.92% in the healthy predicate, because if OCOI exceeds 95.92% even approaches 100%, the bank can be categorized as inefficient in carrying out its operations.

The results of this study are in line with studies by Prastningtyas (2010), Ponco (2008) and Restiyana (2011) stating that OCOI has negative effects on ROA.

4.3 Effects of Loan to Deposit Ratio (LDR) on Return on Asset (ROA)

Based on the regression equation, it can be seen that the value of t-statistics for this variable is negative so it can be interpreted that the effect given by the LDR variable on ROA is negative. However, from table 4.9, it shows the results of partial testing (t test) of LDR on profitability (ROA) shows a significance value > 0.05.

This means that there is insignificant LDR variable effect on ROA. In this study, higher or lower LDR of a bank does not become a measure of the success of bank management to obtain high profits. Theoretically, LDR is a ratio that measures the ratio of the amount of credit given by banks to funds received by banks, which illustrates the ability of banks to repay withdrawals of funds by depositors in relying on credit given as a source of liquidity. Higher ratio indicates low ability of a bank's liquidity, this is due to greater amount of funds needed to finance credit.

According to the BI regulation, healthy bank has LDR by < 94.75%. A high LDR does not give effects on ROA, this is because large amount of credit is not supported by credit quali-

ty. Poor credit quality will increase risk especially if credit is given without using the principle of prudence and expansion in giving credit which is not controlled so that banks will face greater risks as well. In addition, LDR is insignificant with ROA, this is because addition of capital from owners in the form of fresh money is to anticipate the business scale in the form of credit expansion or loans. It can also be caused by fluctuating data movements or LDR ratios in each banking company every year.

There are banking companies that have low LDR values and there are banking companies that have high LDR values so that there is a high gap between banking companies each year as explained in the Descriptive statistics in table 4.1. LDR variable has a minimum value of 44.24, a maximum value of 100.57 and the average value of 79.44 with a standard deviation of 12.68 showing that the data on the LDR variable has a high value because the average value is greater than the standard deviation.

4.4 Effects of Capital Adequacy Ratio (CAR) on Return on Asset (ROA)

Based on the regression equation, it can be seen that the value of t statistics for this variable is 0.575106, so it can be interpreted that the effect given by the CAR variable on ROA is positive. However, from table 4.9, it shows the results of partial testing (t test) of CAR on profitability (ROA) shows a significance value of 0.5674 which means the significance value > 0.05 this means that higher adequacy of capital fulfillment (CAR) of a bank does not become benchmarks the success of bank management in obtaining high profits.

CAR with a positive value shows that according to capital theory, capital serves as an important factor for banks in developing their business and accommodating losses. Capital adequacy ratio (CAR) means the amount of own capital needed to cover the risk of losses that may arise from investing assets. Such insignificant effects of CAR on ROA is because BI regulations require each bank to maintain CAR with a minimum requirement of 8%, so that bank owners increase capital by providing funds (fresh money) to anticipate the scale of businesses that are trying to expand or loans provided in order the bank's capital adequacy ratio (CAR) can meet BI requirements.

Meanwhile condition of Banks listed on the IDX at the time of the research was not appropriately characterized by fluctuating CAR growth rates which can be seen in table 4.1 on the previous page and also the condition of banks on the IDX in 2013 and 2011 showed that third party deposits were not too large since in 2010, there were funds that settle by 24.5% of the total DPK by Rp. 572 trillion more than the LDR of 75.5% with an upward trend in the last 6 year periods (Yuda 2011).

As a result of such condition, banks have distributed less loans as seen in NPL data attached to this study and capital owners were more dominant in buying SBIs which the weighted assets according to the risk of RWA ATMs by banks were 0. Thus, the weighted activity according to bank risk is relatively small so it is reasonable if CAR remains large, this is due to the banking crisis (www.bi.go.id) so it is natural that CAR is insignificant on ROA, because even though the capital owned by banks is high, public trust is still low. This will not

have effects on ROA or because banks tend to invest their funds carefully and put more emphasis on bank survival so CAR does not have much effects on ROA.

5 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Based on aforementioned results of data analysis and discussion, the following conclusions can be drawn:

1. NPL has insignificant negative effects on Bank ROA. If the NPL increases or decreases, it cannot have effects on decrease or increase in ROA.
2. OCOI has significant negative effects on bank ROA. If OCOI is low, ROA will increase.
3. LDR has insignificant negative effects on bank ROA. If the LDR increases or decreases, it cannot have effects on decrease or increase in ROA.
4. CAR has no significant positive effects on bank ROA. If CAR increases or decreases, it does not have effects on decrease or increase in ROA.

5.2 Recommendations

The recommendations that can be given through the results of this study are as follows:

1. In order to reduce the NPL value from year to year, the bank must establish or have precautionary principle to apply to problem loans. Banks must be able to reduce the presence of substandard loans, doubt and existence of bad loans so that ROA can increase.
2. Bank management in order to increase ROA, banks should be more selective in issuing operational costs.
3. It is necessary to increase LDR value from year to year to meet Bank Indonesia standards, but it is also necessary to use precautionary principle so that NPLs do not increase.
4. In order to increase ROA, CAR value must be increased by reducing the risk of assets or adding capital. But on the contrary, if the risk weighted asset increases or the risk of the asset increases and the capital decreases or the capital is low, the CAR will decrease.
5. In order to increase ROA again, banking companies must be able to improve the quality and quantity of credit using precautionary principle and control expansion in lending.

REFERENCES

- [1] Ahmad Buyung Nusantara. 2009. "Analysis of the Effects of NPL, CAR, LDR, and BOPO
- [2] Augusty, Ferdinand. 2006. Management Research Methods: Research Guidelines for thesis, Thesis and Accompanied Management Science. Semarang: University Diponegoro.
- [3] Agustine, Restiyana. 2011. Biogas Production from Palm Oil Mill Effluent (POME) by Mining Beef Manure as an Activator. Thesis. Faculty of Animal Husbandry, Bogor Institute of Agriculture, Bogor.
- [4] Astri Yudha, 2011, The Effect of Employee Discipline and the Work Environment on Performance of Weaving Section Employees in the Company PT. Iskandar Surakarta (study at PT Iskandar Surakarta company). http://library.uns.ac.id/1/Jurnal_Scription.

- [5] Budi Rahardjo. 2007. Finance and Accounting for Non-Financial Managers. First edition. Yogyakarta: Graha Science.
- [6] Dahlan Siamat. 2004. Management of Financial Institutions. Fourth Edition. Jakarta: University of Indonesia Faculty Publisher Institute.
- [7] Dendawijaya, Lukman. 2003. Banking Management. Jakarta: Ghalia Indonesia.
- [8] Fahmi, Irham. 2011. Analysis of Accounting Reports. Bandung: ALFABETA.
- [9] Faisol, Ahmad. 2007. Analysis of Bank Financial Performance at PT Bank Muamalat Indonesia Tbk. Journal of Business and Management. Vol. 3, No. 2
- [10] Harahap, Sofyan Syafri. 2002. "Critical Analysis of Financial Statements", Jakarta: PT Raja Grfindo Persada.
- [11] Kashmir. 2008. Banks and Other Financial Institutions. 2008 Revised Edition Jakarta: PT. RAJAGRAFINDO PERSADA.
- [12] Merkusiwati, Ni Ketut Lely Aryani. 2007. Evaluation of the Effect of CAMEL on Company performance. Bulletin of Economic Studies Volume 12 No. 1 2007.
- [13] Munawir, S. 2012. Analysis of Financial Information, Liberty, Yogyakarta
- [14] Nasser, Ety M and Titik Aryati, 2000. "CAMEL Analysis Model for Predicting Financial Distress in the Go Pulic Banking Sector "JAAI, Volume 4, No, 2, December.
- [15] Sudarini, Sinta. 2005. "Use of Financial Ratios in Predicting Future Profit (Case Study in a Banking Company Listed on the Jakarta Stock Exchange). Journal of accounting and Management Vol. XVI No. 3 pp. 195-207.