JOURNAL RESEARCH AND ANALYSIS : ECONOMY
e-ISSN: 2597-6591 dan p-ISSN: 0000-0000

RISK AND FINANCIAL HEALTH LEVEL OF SHARIABANKING

Muhammad Tho'in [1], Tri Irawati [2], Mika Lee [3]
STIE-AAS, Surakarta, Indonesia [1], STIMIK Sinar Nusantara, Surakarta, Indonesia [2], Kinki University, Japan[3]
thoinsyakira@yahoo.com[1], 3irawati@sinus.ac.id[2] , 1611530131d@kindai.ac.jp[3]

Keywords :
Financial risk, level of financial health of sharia banking

ABSTRACT
The purpose of this research is to analyze financial risk and financial health level of sharia banking in Indonesia. This is done to obtain empirical evidence about the possible relationship and influence of financial risk, Non Performing Financing and operational risk (ATMR for operational risk) and bank financial health (Net Operating margin, Return on Asset and Return on Equity) Banks, inflation and Gross Domestic Product as a control variable in sharia banking in Indonesia. This study used panel data analysis and used 9 Islamic banks within five years in a period, from 2012 to 2016, so the sample used in this study were 45 data. Data is processed by using Eviews software version 9 and Microsoft Excel. The results showed that simultaneously financial risk did not have significant effect on NOM, but had significant effect on ROA and ROE. Partially, NPF variables had only significantly influence on NOM, FDR and NPF variable had significant effect on ROA, while FDR variable had significant effect on ROE. The control variable used in this study did not affect the existing level of financial health.

INTRODUCTION

Banking as a business institution certainly faces many financial risks in running its business, including in this case sharia banking institutions. With the rapid development of the environment, both internal and external environment is very fast and dynamic, resulting in the risk of business activities increasingly complex as well as finance financial health. Islamic banks are required to always be able to adapt to the environment with the implementation of risk management, of course, that is not contrary to the existing principles of sharia. Of course, in the application of risk management in sharia banking must be adjusted to the complexity and size of the ability and business.

Therefore, with the issuance of Bank Indonesia regulation number 13/23PBI/201 on November 2nd, 2011 on the implementation of risk management for sharia commercial banks and the sharia business units that exist in banking institutions. It is intended that sharia banks are able to identify various existing problems as early as possible, perform positive corrective actions, and make better implementation of risk management and good corporate governance from time to time, given the weak growth and performance of sharia banks in Indonesia, even tend to decrease the more worrisome.

From the background above, this research is aimed to perform financial risk analysis and financial health level, especially to sharia banking in Indonesia.

LITERATURE REVIEW

Financial risk can mean how much a company depends on external financing, in this case including the capital market and the bank itself to support all the company's ongoing operations from start to finish. The company's financial risks are reflected and reflected in factors such as contractual obligations, balance sheet leverage, debt off-balance sheet debt settlement, liquidity, and various matters that reduce the flexibility of the finance itself. So companies that finance their business rely on external parties have a much greater risk level when compared with companies that use their own funds for financing. It is done with the aim of minimizing the buffer from various potentials arising from various unexpected changes. Several studies below, related to the risk and the level of banking finance that shows the results of different, so here there is a gap between researchers with each other.

Fadhlurrahman and Yunita (2015) by analyzing the effect of CAR, FDR, NPF and NIM on the changes in comprehensive profit in Bank Syariah period 2012-2013. The results of this study were CAR, FDR, NPF, and NIM did not significantly influence partially but had significant effect simultaneously.

Hussein A. Hassan (2015) who examined the Financial Risk and Islamic Banks' Performance in The Gulf Cooperation Council Countries. The independent variables in this research are Credit Risk, Liquidity, Capital Risk, Operational Risk, while the dependent variable is ROA and ROE. The results of this study conclude that the Capital Risk and Operational Risk significantly negatively affect the performance (ROA and ROE).

Rafelia and Ardiyanto (2013) by conducting research on the effect of CAR, FDR, NPF, BOPO on ROE in Bank Syariah Mandiri period 2008-2012. From the results of research that do show CAR does not affect the ROE, while FDR, NPF, and BOPO affect the ROE.

Ahmad, Et All (2012) that examines the Determinants Of Profitability Of Pakistani Banks: Evidence Data Panel For The Period 2001-2010. This study concludes that Cost, Capital Ratio, and CKP have a negative Significant impact on ROA.

Schiniotakis (2012) who conducted research Profitability Factors And Efficiency Of Greek Banks. Type of Bank, Net Profit Before Tax, BOPO, Credit Risk, and Capital Adequacy Rate as independent variable and ROA as dependent variable. This study concludes that Bank Type, Net Profit before tax, credit risk, BOPO, and capital adequacy rate influence ROA.

Reflecting on the results of previous research, the researcher is interested to perform financial risk analysis and financial health level, especially to sharia banking in Indonesia during 2012 until 2016. This study aims to get empirical evidence about financial risk (liquidity risk as measured by FDR, financing risks measured by NPF, and operational risk as measured by ATMR) and bank soundness level (Net Operating Margin, Return On Asset and Return On Equity) with bank size control variables, inflation, and Gross Domestic Product (GDP) growth, in sharia banking in Indonesia. Thus, there are six hypotheses as follows:

H1: Financial risk (liquidity risk, financing risk, and operational risk) is significantly related to financial health (NOM) in sharia banking in Indonesia

H2: Financial risk (liquidity risk, financing risk, and operational risk) is related to the financial health level (ROA) in sharia banking in Indonesia

H3: Financial risk (liquidity risk, financing risk, and operational risk) is related to the level of financial health (ROE) in sharia banking in Indonesia

H4: Financial risk (liquidity risk, financing risk, and operational risk) has a significant effect on the financial health (NOM) level of sharia banking in Indonesia

H5: Financial risk (liquidity risk, financing risk, and operational risk) has a significant effect on the level of financial health (ROA) in sharia banking in Indonesia

H6: Financial risk (liquidity risk, financing risk, and operational risk) has significant effect to the level of financial health (ROE) in sharia banking in Indonesia

Judging from the first, second and third hypotheses, it can be said that if it shows a positive relationship, the higher the risk, the more profit or the level of financial health, and vice versa. However, a negative relationship can occur if the liquidity risk increases, meaning the bank can not lend or return the depositors' money, this will affect the income or profit, thereby decreasing the level

of financial health itself. The purpose of the fourth, fifth, and sixth hypotheses is to examine how much the relative importance and importance of each type of financial risk exists

METHOD

This research is a type of causality research using a quantitative approach. Where the type of causality research is the design of a study designed to examine the possibility of a causal relationship between variables that exist (Sanusi, 2014: 14). The data used in this study is secondary data derived from the financial statements obtained from nine Bank Syariah in Indonesia during 2012 until 2016. While the determination of the sample in this study was conducted by using or using purposive sampling method. Where the sampling method is done by having the objectives according to the criterion of the researcher.

TABLE. 1 SAMPLE RESEARCH

No	Bank Name	Years of research
1.	BNI Syariah	2012 - 2016
2.	BRI Syariah	2012 - 2016
3.	Bukopin Syariah	2012 - 2016
4.	BCA Syariah	2012 - 2016
5.	Bank Muamalat	2012 – 2016
6.	Bank Mandiri Syariah	2012 – 2016
7.	Bank Jawa Barat Syariah	2012 – 2016
8.	Bank Mega Syariah	2012 – 2016
9.	Panin Syariah	2012 – 2016

METHOD OF COLLECTING DATA

According to the time dimension, this study is a pooled study which is a combination of the times series of research using a one time dimension by using several research objects

TABLE. 2 MEASUREMENT OF VARIABLES

No	Variables	Measurement
1	NOM	$NOM = \frac{(PO - DBH) - BO}{Average\ AP}\ x\ 100\%$
2	ROA	$ROA = \frac{Profit\ before\ tax\ (EBIT)}{Average\ total\ Assets}\ x\ 100\%$
3	ROE	$ROE = \frac{Earning\ After\ Tax}{Total\ Equity}\ x\ 100\%$
4	FDR	$FDR = \frac{Financing}{Third\ Party\ Funds}\ x\ 100\%$
5	NPF	$NPF = \frac{Troubled\ Financing}{Total\ Financing}\ x\ 100\%$
6	ATMR for operational risk	12,5 x Capital Expense Operational Risk (15% x average gross income last 3 years)
7	Inflation	$Tingkat\ Inflasi = \frac{IHK_t - IHK_{t-1}}{IHK_{t-1}}\ x\ 100\%$
8	Bank Size	Total Assets

9	GDP	$GDP\ Growth = \frac{GDP_x - GDP_{x-1}}{GDP_{x-1}}\ x\ 100\%$

DATA ANALYSIS METHOD

Data is processed by using Eviews Version 9 and Microsoft Excel software, data is processed by panel data method. Panel data incorporates cross section data types and time series data. According to Gujarati (2006), panel data regression analysis has three kinds of model that is Pooled Least Square, Fixed effect, and Random Efect. Among the three panel data tests above, the next step is to select the appropriate panel data test for use in this study by performing Chow Test (used to select Pooled Least Square test with Fixed effect Model test) and Hausman test (used to select Fixed model Effect or Random Effect).

RESULTS AND DISCUSSIONS

The result of Chow Test that has been done can be known that for regression model of NOM, ROA, and ROE chi-square cross-section probability value <0,05. With the probability value, then the method chosen Chow test is FEM (Fix Effect Model). The next step is Hausman Test. The result of Hausman test is known that for the regression model of NOM, ROA, and ROE describes the probability value of cross section random effect> 0,05. With the probability value, then the chosen method is REM (Random Effect Model).

TABLE. 3 CORRELATION TEST RESULTS

	NOM	ROA	ROE	FDR	NPF	ATMR	SIZE	INFLATION	GDP
NOM	1.00	0.09	0.06	-0.14	-0.29	-0.32	-0.33	-0.05	0.11
ROA	0.09	1.00	0.75	0.48	-0.27	-0.02	-0.01	-0.23	-0.10
ROE	0.06	0.75	1.00	0.35	-0.10	0.27	0.24	-0.15	0.10
FDR	-0.14	0.48	0.35	1.00	-0.17	-0.11	-0.07	-0.15	-0.09
NPF	-0.29	-0.27	-0.10	-0.17	1.00	0.55	0.54	0.03	-0.41
ATMR	-0.32	-0.02	0.27	-0.11	0.55	1.00	0.97	-0.13	-0.31
SIZE	-0.33	-0.01	0.24	-0.07	0.54	0.97	1.00	-0.12	-0.30
INFLATION	-0.05	-0.23	-0.15	-0.15	0.03	-0.13	-0.12	1.00	0.26
GDP	0.11	-0.10	0.10	-0.09	-0.41	-0.31	-0.30	0.26	1.00

The correlation relationship between variables can be seen in Table 3 which shows that the NOM variable has a weak negative relationship with the two independent variables (FDR and NPF) and the negative relation with the ATMR for operational risk, while for the control variable, NOM has a weak negative relationship with the size of the bank, the negative relationship is very weak with inflation; and have a weak positive relationship with GDP. This indicates that the smaller the FDR, NPF, ATMR for operational risk, bank size, and inflation, it will increase NOM. In contrast to previous, if GDP increases, then NOM will also increase.

The ROA variable has a weak negative relationship with the NPF, a very weak negative relationship with the ATMR for operational risk, and a moderate positive relationship with FDR. For control variables, ROA has a weak negative relationship with both control variables (inflation, and GDP) and a very weak negative relationship with the size of the bank. This indicates that the smaller the NPF, the ATMR for operational risk, bank size, inflation, and GDP will increase ROA. In contrast to the previous, if the FDR increases, then ROA will also increase.

The ROE variable has a moderate positive relationship with the independent variable FDR, a weak positive relationship with the ATMR for operational risk, and has a very weak negative relationship with the NPF variable. For control variables, ROE has a moderate positive relationship with bank size, a weak positive relationship with GDP; and has a weak negative relationship with Inflation. This suggests that the smaller the NPF and inflation, the higher the ROE. In contrast to previous, if the FDR, ATMR for operational risk, bank size, and GDP increase, then ROE will also increase.

TABLE. 4 NOM REGRESSION TEST RESULTS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.676630	2.687571	0.623846	0.5365
FDR?	-0.000390	0.002114	-0.184551	0.8546
NPF?	-0.073974	0.032611	-2.268383	0.0291
ATMR?	0.355544	0.212824	1.670599	0.1030
SIZE?	-0.380574	0.232869	-1.634289	0.1105
INFLASI?	-0.000281	0.000489	-0.575017	0.5687
GDP?	0.042868	0.100546	0.426351	0.6723
Weighted Statistics				
R-squared	0.208022	Mean dependent var		0.071665
Adjusted R-squared	0.082973	S.D. dependent var		0.240218
S.E. of regression	0.230036	Sum squared resid		2.010837
F-statistic	1.663525	Durbin-Watson stat		1.539914
Prob(F-statistic)	0.156774			
Unweighted Statistics				
R-squared	0.046687	Mean dependent var		0.254622
Sum squared resid	8.379438	Durbin-Watson stat		0.369537

In table 4 we get the panel data regression equation as follows:
NOM: 1.676630 - 0.000390 FDR - 0.073974 NPF + 0.355544 ATMR For Operational Risk - 0.380574 SIZE - 0.000281 INFLATION + 0,042868 GDP.
The above regression model can be explained that if the variable of independent variable (Financing to Deposit Ratio, Non Performing Financing, ATMR for operational risk) and control variable (bank size, inflation, and Gross Domestic Product) are considered constant, hence increase NOM equal to 1,6766 %. The regression coefficient of FDR variable is 0.000390, meaning that if there is a decrease of FDR by 1%, then increase NOM equal to 0.000390%.
NPF variable regression coefficient obtained value of 0.073974, meaning that if there is a decrease in NPF of 1%, then increase the NOM of 0.073974%. The regression coefficient of ATMR variable for operational risk is 0.355544, meaning that if there is an increase or increase of RWA for operational risk of 1%, then increase the NOM by 0,355544%.
Influence of variable Financing to Deposit Ratio, Non Performing Financing, and ATMR for operational risk to NOM variable equal to 0,082973. This shows that the percentage of contribution of variable Financing to Deposit Ratio, Non Performing Financing, and ATMR for operational risk to NOM variable can only be explained by 8.30 percent, while the rest of 91.70 percent is influenced by other factors. The t test results revealed that the independent variable Financing to Deposit Ratio (FDR) has no significant effect on the Net Operating Margin (NOM) due to the value of 0.184551 and (p = 0.8548> 0.05), Non Performing Financing (NPF) had significant effect on Net Operating Margin (NOM) because the value of t equal to 2,268,383 and (p = 0,0291 <0,05), and ATMR for operational risk had an insignificant effect on Net Operating Margin (NOM) because t value equal to 1.670599 and (p = 0.1030> 0.05).
The result of F test in table 4, F test count equal to 1.663525 with significance value P = 0,156774> 0,05 so it can be said that Financing to Deposit Ratio (FDR), Non Performing Financing (NPF), ATMR for operational risk, banks, inflation, and Gross Domestic Product (GDP) together have no effect on Net Operating Margin (NOM). Financing disbursed by banks using third party funds is considered substandard, thereby reducing the quality of the financing value, and not directly affecting the margin obtained by banks.

In table 5 we get the panel data regression equation as follows:
ROA: -15,2140199646 + 0,135496678557 FDR - 1,22031325267 NPF + 0.661890318379 ATMR For Operational Risk - 0.0300046919898 SIZE - 0,00879548818711 INFLATION - 1,46192048962 GDP.
Regression model above can be explained that if the variable of independent variable (Financing to Deposit Ratio, Non Performing Financing, ATMR for operational risk) and control variable (bank size, inflation, and Gross Domestic Product) are considered constant, then increase ROA equal to 15,2140% . The regression coefficient of FDR variable obtained value of 0.135497, meaning if there is an increase of FDR by 1%, then increase ROA by 0,135497%.

TABLE. 5 ROA REGRESSION TEST RESULTS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-15.21402	20.19513	-0.753351	0.4559
FDR?	0.135497	0.034760	3.898103	0.0004
NPF?	-1.220313	0.495686	-2.461869	0.0185
ATMR?	0.661890	1.891229	0.349979	0.7283
SIZE?	-0.030005	2.068121	-0.014508	0.9885
INFLASI?	-0.008795	0.009053	-0.971580	0.3374
GDP?	-1.461920	1.440955	-1.014550	0.3167
Weighted Statistics				
R-squared	0.319296	Mean dependent var		2.037867
Adjusted R-squared	0.211817	S.D. dependent var		5.951144
S.E. of regression	5.283407	Sum squared resid		1060.747
F-statistic	2.970766	Durbin-Watson stat		1.236494
Prob(F-statistic)	0.017718			
Unweighted Statistics				
R-squared	0.319296	Mean dependent var		2.037867
Sum squared resid	1060.747	Durbin-Watson stat		1.236494

NPF variable regression coefficient obtained value of 1.22031325267, meaning that if there is a decrease in NPF of 1%, then increase the ROA of 1.2203%. The regression coefficient of ATMR variable for operational risk is 0.661890318379, meaning that if there is an increase or increase of ATMR for operational risk by 1%, then increase the ROA by 0,6619%.

Influence of variable of Financing to Deposit Ratio, Non Performing Financing, and ATMR for operational risk to ROA variable equal to 0,211817. This shows that the percentage contribution of variable Financing to Deposit Ratio, Non Performing Financing, and ATMR for operational risk to ROA variable can be explained by 21.18 percent, while the rest of 78.82 percent is influenced by other factors.

The independent variable Financing to Deposit Ratio (FDR) has significant effect on Return On Asset (ROA) because t value equal to 3,898103 and (p = 0,0004 <0,05), Non Performing Financing (NPF) Asset (ROA) due to the t value of 2.461869 and (p = 0,0185 <0,05), and ATMR for operational risk have an insignificant effect on Return On Asset (ROA) because the value of t equal to 0.349979 and (p = 0.7283> 0.05).

The result of F test in table 4.11, F test count 2,970766 with significance value P = 0,017718 <0.05 so it can be said that Financing to Deposit Ratio (FDR), Non Performing Financing (NPF), ATMR for operational risk, banks, inflation, and Gross Domestic Product (GDP) together have a significant effect on Return On Assets (ROA).

In table 6 we get the panel data regression equation as follows:

ROE: -228,973231304 + 0.431771517351 FDR - 2,25382198295 NPF + 14,7096828822 ATMR For Operational Risk - 8,69873697942 SIZE - 0,0245899665642 INFLATION + 9,94301775999 GDP

Based on the above regression model, it can be explained that if the independent variable (Financing to Deposit Ratio, Non Performing Financing, ATMR for operational risk) and control variables (bank size, inflation, and Gross Domestic Product) are considered constant, increasing ROE by 228, 9732%. The regression coefficient of FDR variable obtained value of 0.43177, it means if there is decrease of FDR by 1%, hence increase ROE equal to 0,43177%.

TABLE. 6 ROE REGRESSION TEST RESULTS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-228.9732	87.30581	-2.622657	0.0125
FDR?	0.431772	0.134664	3.206291	0.0027
NPF?	-2.253822	1.973071	-1.142291	0.2605
ATMR?	14.70968	8.172594	1.799879	0.0798
SIZE?	-8.698737	8.950020	-0.971924	0.3372
INFLASI?	-0.024590	0.034148	-0.720096	0.4759
GDP?	9.943018	5.552397	1.790761	0.0813
Weighted Statistics				
R-squared	0.328857	Mean dependent var		9.349395
Adjusted R-squared	0.222887	S.D. dependent var		19.21872
S.E. of regression	16.94207	Sum squared resid		10907.28
F-statistic	3.103308	Durbin-Watson stat		1.938851
Prob(F-statistic)	0.014239			
Unweighted Statistics				
R-squared	0.332114	Mean dependent var		11.21291
Sum squared resid	11394.56	Durbin-Watson stat		1.855938

NPF variable regression coefficient obtained value of 2.25382198295, meaning if there is a decrease in NPF by 1%, then increase the ROE of 2.2538%. The regression coefficient of ATMR variable for operational risk is 14,709,682,8822, meaning that if there is an increase or increase of ATMR for operational risk by 1%, then increase ROE by 14.7097%.

The effect of variable Financing to Deposit Ratio, Non Performing Financing, and ATMR for operational risk to ROE variable equal to 0,222887. This shows that the percentage contribution of variable Financing to Deposit Ratio, Non Performing Financing, and ATMR for operational risk to ROE variable can be explained by percent, while the rest of 77.71 percent is influenced by other factors.

The independent variable of Financing to Deposit Ratio (FDR) has significant effect on Return On Equity (ROE) because the value of t equal to 3,206291 and (p = 0,0027 <0,05), Non Performing Financing (NPF) On Equity (ROE) because t value of 1.142291 and (p = 0,2605> 0,05), and ATMR for operational risk have insignificant effect on Return On Equity (ROE) because t value equal to 1,799879 and (p = 0.0798> 0.05).

Result of F test in table 6, F test count equal to 3,103308 with significance value P = 0,014239 <0.05 so it can be said that Financing to Deposit Ratio (FDR), Non Performing Financing (NPF), ATMR for operational risk, bank size , inflation, and Gross Domestic Product (GDP) together have a significant effect on Return On Assets (ROE).

The estimated coefficients of the three independent variables are statistically significant at the 5 percent level in the case of liquidity risk (FDR) and 10 percent in the case of operational risk to ROE.

CONCLUSION AND SUGGESTION

Based on the research results obtained can be summarized as follows:

1. There is a negative relationship between FDR, NPF, operational risk Risk, Bank size, Inflation with NOM, while GDP has a positive relationship with NOM.
2. There is a positive relationship between FDR and ROA, while NPF, ATMR for operational risk, bank size, inflation, and GDP have a negative relationship with ROA.
3. There is a positive relationship between FDR, ATMR for operational risk, bank size, GDP with ROE, while NPF and Inflation have negative relationship with ROE.
4. The results of F test, financial risk (FDR, NPF, and ATMR for operational risk) have an insignificant effect on bank financial soundness (NOM). The financial risks faced by banks, have no direct effect on NOM. To obtain a smooth financing, the bank must perform a strategy that requires a fee. For that, large and smooth financing does not necessarily have a direct impact on

NOM. This is also because the management of productive assets also affects the magnitude of the NOM value.

5. The results of F test, financial risk (FDR, NPF, and ATMR for operational risk) have a significant effect on bank soundness (ROA). Partially / result of t test calculation only FDR and NPF which have significant effect with ROA. This indicates that the greater the liquidity risk faced by the bank, the health of the bank will increase, and the higher the financing risk that exist in a bank, it will decrease the soundness of the bank. A bank with large financing, is expected to be able to increase profit from the bank. But banks also have to be careful in making decisions, because the amount of problematic financing will result in decreased levels of financial health of the bank.
6. The results of F test, financial risk (FDR, NPF, and ATMR for operational risk) have a significant effect on bank financial soundness (ROE). The result of t test shows that only FDR has an effect on ROE. This indicates that the higher the FDR of a bank, the ROE will increase. Bank Indonesia added that the performance criteria of a bank's health refers to risk-oriented, materiality, proportionality, and significance as well as comprehensive and structured assessments. For that financial risk is very important role in determining the financial health of Islamic banks.

REFERENCES

Ahmad, Salman, et all. (2012). Determinants Of Profitability Of Pakistani Banks: Panel Data Evidence For The Period 2001-2010. *Journal of Business Studies Quarterly 2012*, Vol. 4, No. 1, pp. 149-165.

Astutik, Puji. (2015). *Pengaruh Tingkat Kesehatan Bank Menurut Risk Based Bank Rating terhadap Kinerja Keuangan (Studi pada Bank Umum Syariah di Indonesia).* Tidak dipublikasikan. Jurnal Universitas Brawijaya.

Fadhlurrahman, Nuha dan Irni Yunita. (2015). *Analisis pengaruh CAR, FDR, NPF dan NIM terhadap Perubahan Laba Komprehensif di Bank Syariah periode 2012-2013*.

Gujarati, Damodar. (2006) . Dasar-Dasar Ekonometrika.Jakarta: Erlangga.

Hassan, H. A et all. (2015). Financial Risk And Islamic Bank's Performance In The Gulf Cooperation Council Countries. *The International Journal of Business And Finance Research*. ISSN. Vol. 9, No. 15. Pp 103-112.

Nikos Ioani. (2012). Profitability factors and efficiency of Greek banks. *Euro Med Journal of Business*. Vol. 7 Iss: 2, pp.185 – 200.

Rafelia, Thyas dan Ardiyanto, Moh. Didik. (2013). Pengaruh CAR, FDR, NPF, dan BOPO terhadap ROE Bank Syariah Mandiri Periode Desember 2008-Agustus 2012. *Jurnal Akuntansi UNDIP*. Vol. 1: 1-9.

Sanusi, Anwar. (2014). *Metodologi Penelitian Bisnis.* PT. Salemba Empat : Jakarta.