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Determinants of Cost Efficiency and it's Implications on Sharia Bank in Indonesia Profitability at the Period of 2012 - 2016

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Abstract: The purpose of this research is to know the influence of intellectual capital variable (iB-VACA, VAHU-iB, iB-STVA) and FDR, in CAR, and assets against cost efficiency (BOPO) and profitability (ROA). Research using the method of purposive sampling, hypothesis testing research panel data regression approach used. Processed using MS software application programs. Excel 2010. Statistical data processing with EVIEWS 9.0. The result of this research shows that the variable iB-VACA has a negative and not significant effect on the cost efficiency, variable iB-VAHU has a negative and significant effect on the cost efficiency, iB-STVA variable has negative and significant effect on the cost efficiency, FDR positive and significant to Cost Efficiency, CAR variables have a negative and significant effect Cost Efficiency, ASET variable has negative and significant effect on Efficiency, iB-VACA, iB-VAHU, iB-STVA, FDR, CAR, and Asset Together to Efficiency The cost, which is put forward is feasible and said to be significant. This means that the variables iB-VACA, iB-VAHU, iB-STVA, FDR, CAR, and Assets simultaneously affect the Cost Efficiency and are able to explain variables of 0.936306 atau 93,63 percent. the largest cost efficiency variable is PT Bank Maybank Syariah Indonesia (BMSI), which has the smallest average change in sensitivity is PT Bank BNI Syariah (BNIS). variables iB-VACA have negative and not significant effect to ROA, iB-VAHU variable have negative and significant effect to ROA, iB-STVA have positive and not significant effect to ROA, FDR variable has negative and significant effect to ROA, CAR variable has positive and not significant effect to ROA. ASET variable has positive and not significant effect to ROA, Variables are negative and significant influential on BOPO.

Key Words: ROA, BOPO, CAR, FDR, Intellectual Capital

INTRODUCTION

Every bank all the time always make every effort to do the development of the power possessed in order to increase performance banking optimal. Banking is no only focuses on develop physical resources and

financial but also on capital intellectual. Recently raise awareness that capital intellectual is a cornerstone of for the company to excel and growing, be able to create a good performance for bank, especially again a level playing the higher demanding bank to have competitive advantage which would survive in its industry.

The application of knowledge capital based in an enterprise will enhance efficiency and effectiveness of the use of other resources; so that it will give excellence compete for the company (SiSwati, 2007). The problem is the efficiency of the problems faced by sharia banking the last few years this is shown with a value of BOPO, which is quite high. Referring to the central bank per December 2015 BOPO Islamic banking industry is at the level of 96,98 percent. The high BOPO signify banking is no efficient in running operating in other words banks in Indonesia is banking industry is wasteful operating in running .The magnitude of this BOPO very much dependent on knowledge and experience bank.

The variable is the ratio that reflects the BOPO level banking efficiency. Efficiency became the key word in business competition nowadays. Efficiency is an important indicator in measuring the overall performance of the activities of an enterprise. Efficiency for a bank is an important aspect to note in an attempt to realize the financial performance of the bank is healthy and sustainable (Abidin and Endri, 2009). The measurement of the efficiency of the bank can be used with the use of a comparison between the operational costs with operating income (BOPO). This performance is a measure of efficiency that is commonly used to assess the performance of banking efficiency (Wijayanto and Sutarno, 2009). The larger the BOPO a bank shows the greater the amount of operating costs, making it likely will lower the profitability



Figure 1

Sources: Banking Financial Report (Data Processed)

of the bank and vice versa the smaller bank a BOPO indicates more efficient, so that profitability will be higher. Banks with high efficiency shows the bank is increasingly effective in running his business. From the picture below indicates that the second movement ratio BOPO and ROA opposite each other, which means the increase in the ratio of BOPO cause public bank sharia ROA ratios (BUS) to decrease. During the period 2012-2016, the ratio tends to increase from BOPO 84,97 per cent by the year 2012 be 103.84 percent in 2016. While the performance of the ROA decreased from 1.34 percent in 2012 to-0.91 percent in 2016.

Intellectual capital is economic value of the two categories an intangible asset, namely organizational (structural) capital, and human capital (organization for economic cooperation and development (OECD), 1999). Organizational (structural) capital is a system software, distribution network, and supply chains. Human capital covering of human resources in in organization (employees) and resources external relating to an organization, as consumers, and suppliers.

Stewart (1997) in human resources), structural capital (resources structural) and relational capital (Source al, 2008) dividing into three IC the common component, namely human capital power relationships. Human capital covering knowledge, expertise, the competency and knowledge possessed employees. Structural capital covering organization to an enterprise culture, information systems and technology adaptation. While relational capital consisting of consumer loyalty, the quality of services and good relations with suppliers.

In Indonesia, phenomena IC flourishing, and become attention when the emergence of PSAK no. 19 (revision 2010) clear assets intangible. PSAK 19 (revision 2010) define assets intangible as assets nonmoneter that can be identified and does not have a physical and held for used in yield or surrender goods or services, leased to other parties, or for administrative purposes. But in a report not expressed in directly as IC.

Many factors affect the efficiency describes the performance of the banks, some of which BOPO and Nom. BOPO is a comparison between the total operating cost with the revenue operations (BOPO). The bank's operating efficiency can be described with a low level of the ratio reflects banks BOPO operations with a small fee and obtain the optimal revenue. Net Operating Margin (NOM) is the ratio of the main earning ratios on Islamic banks to know ability assets productive in generating profits (Bank Indonesia, 2012). Increased channeling financing to customers to make bank income be increased. Increased income for results above average earning assets bank-run then a bank's performance is getting better, and the possible problems that would be faced by banks is getting smaller.

This research was conducted to analyze the influence of intellectual capital, and financial performance against cost efficiency and profitability implications for Islamic banking using measurement model iB–VAICTM. This research using a sample of public sharia bank In Indonesia.

LITERATURE REVIEW

1. Cost efficiency

Cost efficiency measures the level of closeness (difference) of the total costs incurred by a bank with the total costs incurred by the bank the best (best practice bank) in producing the same number of outputs

with the same environmental conditions. The smaller the difference between the total costs of the bank with the best bank that becomes the benchmark, then the higher levels of efficiency. Conversely, if the greater the difference between the total costs of the bank with the best bank then the lower the level of efficiency.

Deyoung and Nolle (1996) claim that model based the cost (cost-based model) not appropriate in measuring one of inefficiency of a bank .For example; banks may be able to obtain income (revenue) greater by an increase in the costs. So efficiency income (revenue efficiency) likely to cause one of inefficiency of the cost .If efficiency income can overcome one of inefficiency of the cost, the banks will more profitable. Berger and Mester (1999) and Berger and Deyoung in 2001 recommend, optimization gains profit maximization more superior to on the minimization of the cost of study the company performance for function profit more completed particularly relating to with the interests of the purpose of economic company and its owner. Efficiency profit in top based of a goal economic max profit, requiring company management give more attention large in increase the reception of company and reduce the cost of lowest possible.

2. Intellectual Capital (IC) : Islamic Banking-Value Added Intellectual Coefficient (iB-VAICTM)

A method of iB-VAICTM developed by Ulum (2013) by modifying model Pulic known with the term VAICTM. According to Ulum (2013) said that of the main differences of a method of IB-VAICTM with 7 VAICTM that is vaictm method used to measure IC to companies conventional (private sector, profit motive, non sharia and IBVAICTM method used to measure IC in sharia banks in Indonesia. And other differences located at accounts used to calculate value added). Account used to develop formula VA in the model Pulic deconstruction of total revenue, while in iB-VAICTM VA construed of accounts income all based sharia, namely net income sharia activities and income non-operational sharia. Research conducted Ulum (2013) obtained means intellectual capital calculation with the methods iB-VAICTM measured by value added formed from a summation value added capital employed (IB-VACA), value added human capital (IB-VAHU), and structural capital value added (IB-STVA).

Measurements are wont to do that is by using VAICTM formulated by the Pulic. VAICTM is a relatively easy approach and quite possibly done, because the data used to measure IC comes from existing accounts in the financial statements. VAICTM at measuring companies generally that had accounts owned by the company in General. However, on the other hand measurement IC for Sharia-based company such as Islamic banks. Because Islamic banks have accounts with different companies in General.

3. Capital Adequacy Ratio (CAR)

Capital Adequacy Ratio is capital ratio and it represents the ability bank in set aside for purposes of business development and accommodate the possibility of risk damages operational in bank. The greater the ratio will be better position capital (Achmad and Kusuno, 2003). According to the bank Indonesia number 10/15/ PBI/2008 article 2 paragraph 1 listed bank must provide minimum capital of 8 % of assets weighted according to the risk (ATMR), car was the ratio shows how much all assets bank containing (credit risk, participation, securities, bill in other banks) to financed from their own capital besides obtain cost of resources out bank (PBI, 2008).

Capital Adequacy is capital adequacy and it represents the ability bank in maintaining capital enough and management capability of bank in identifying, measuring, over, and controls the risks arising that can be influential to the size of capital (Almilia, 2005). When car owned bank the bigger it means capital bank owned to bear assets are at risk of the great that the lower the bank the experience troubled because the capital owned the bigger, vice versa car owned bank the lower it means the less capital bank owned to bear assets are at risk, so that the bank the greater the experience problematic due capital is not enough to bear reduction in the value of assets are at risk. Aspects capital in this research represented by CAR Ratio.

4. Financing to Deposits Ratio (FDR)

Financing to Deposit Ratio (FDR) is a ratio used to measure liquidity a bank pay back withdrawals done with financing relies on depositors are given as a source of liquidity, i.e. by way of divide the amount of financing provided by the bank against the third party funds (DPK). The higher the Financing to Deposit Ratio (FDR) then the higher the funds channeled to third party Funds (DPK). With third party remittances (DPK) bank income then great Return on Asset (ROA) will increase, so that the Financing to Deposit Ratio (FDR) a positive effect against the Return on Asset (ROA). Bank Indonesia standards used for the ratio of Financing to Deposit Ratio (FDR) is 80% to 110%.

If the digit ratio Financing to Deposit Ratio (FDR) a bank located on the numbers below the 80% (e.g. 60%), then it can be inferred that the bank can only be disbursed amounting to 60% of all the funds is successfully compiled. Because the main function of the bank is as an intermediary (middleman) between parties that excess funds with the underfunded, then with the ratio of Financing to Deposit Ratio (FDR) 60% means 40% of the funds collected are not distributed to Parties in need, so that it can be said that the bank does not execute its functions properly. Then if the ratio of Financing to Deposit Ratio (FDR) of the bank reached more than 110%, meaning the total financing given the bank exceeded the funds collected. Due to the funds collected from the public for a bit, then the bank in this case can also be said to be not running its function as party intermediary (middleman) fine.

The higher the Financing to Deposit Ratio (FDR) indicate the more risky the bank liquidity conditions, otherwise the lower Financing to Deposit Ratio (FDR) indicate a lack of effectiveness in bank finance. If the ratio of Financing to Deposit Ratio (FDR) banks is on a standard set by Bank Indonesia, then the bank earned profit will increase (assuming the bank is able to channel costing with an effective).

The ratio the FDR used to assess the relative liquidity a bank by means of divide the number of credit granted by a bank against third party funds. According to Dendawijaya in 2005. The bigger the ratio the FRD says that the low level of bank liquidity concerned so can increase the potential condition bank troubled due to lack of liquidity, because the bank did not have enough money to meet withdrawal of funds third party and an excessive number of the amount of loans can increases the risk of failed to pay and bad.

In accordance with the provisions of Bank Indonesia, the bank which is considered healthy when FDR his between 85-110%. In turn that the larger community funneled on then it will give you a great opportunity to banks to reap the benefits are great, although the step contains a large risk that is in the form of credit risk (Siamat, 1993).

The liquidity needs of each bank varies depending on, among others, on the bank's efforts, the size of the specificities of the bank and so on. Therefore to assess whether sufficient liquidity a bank using the one

FDR need researched whether a bank has been taking into account various aspects related to obligations, such as fulfilling the commitment loan, anticipation upon the granting of bank guarantee which in turn will be mandatory for banks and so on. The results are then compared with earlier measurements of target and limit liquidity. Thus be known if banks run into trouble or excess liquidity liquidity (Kuncoro, 2002, 286).

5. The Ratio of Its Operating Costs of Operational Income (BOPO)

BOPO ratio used to measure the level of efficiency and ability in conducting the activities of bank operations (Dendawijaya, 2005). Siamat (1993) suggests that in the banking business are confronted by a variety of risks in running the operation. The risks faced by the bank, among others, as follows:

- a) Credit Ratio
- b) Investment Ratio
- c) Operational Risk
- d) Corruption Risk

According To Veithzal. (2013:131) Understanding BOPO is as follows "operating cost income operating ratio is used to measure the level of efficiency and ability in conducting bank operations). Next according to Malayu Hasibuan (2011:101) elaborated the notions of BOPO is: % u201CBiaya Operations against operating income (BOPO) is a comparison or the ratio of operating costs in the last 12 months against operating income in the same period. The issue of efficiency with regard to the issue of cost control. Operational efficiency means costs incurred to generate more profit than the profits gained from the use of such assets.

Bank in their business activities inefficient will result in it compete ability in exert community funds and in then distributed the funds to poor people as business capital. With the efficiency at an institute of banking especially of cost efficiency so to be obtained profits optimal, increase in the number of funds 15 that were distributed, the fees are competitive, the increase in services to customers, security and medical banking that rises Mudrajad and Suhardjono, (2002: 569).

According to Anne Mary, (2015) production cost income production (BOPO) ratio is often used for measuring the degree of efficiency or ability to bank in operational control costs operating revenues. The ratio was the ratio BOPO comparisons between the operational costs by operating revenues. The ratio of BOPO used for measuring the degree of efficiency and ability to carry out bank in its operation. The bigger BOPO so getting smaller banks to financial performance. And on the other hand, if BOPO getting smaller, it can be argued that banking financial performance steadily recovering (Ambo, (201. From a notion above it can be concluded that the ratio of BOPO is to determine the level of efficiency in the bank operated by comparison operational costs by operating revenues.

Operational costs is total of all costs deal directly and the operational. Operational income is total of income the outcome of the activities operational. In SE BI no. 6/23 OF/ DPNP on may 31 2004 explained that value the ratio of BOPO will look efficient if it reaches value maximum of 93,52%.

6. Ratio of Return on Asset (ROA)

Return On Assets (ROA) is ratio, which is used to, measures the bank management in obtaining gains (profit) as a whole. The bigger ROA the large also profits reached bank and the good position bank in

terms of the use of asset (Dendawijaya, 2005). Value minimum ROA that required by bank Indonesia was a minimum 2 %. And its high so allow the bank can meet obligations to shareholders and increase the investor to invest their capital.

If the Return on Assets (ROA) increased, the mean level of the profitability of the firm will also increase, so that the impact of the end is an increase of profitability enjoyed by shareholders (Husnan, 2006). Therefore the Return on Assets (ROA) is the proper ratio is used to measure the effectiveness of a Bank in generating profits by making use of assets. The development of a framework of thought below based on the Foundation of theory, a review of some of the earlier research. The framework of this thinking as a basis for formulating a hypothesis that describes the influence of intellectual capital and financial performance against cost and efficiency implications for Islamic banking.



Figure 2: Research Model

Research Hypothesis

Hypothesis (H_1)	: The influence of iB-Value Added Capital Employed (iB-VACA) on Cost Efficiency.
Hypothesis (H_2)	: The influence of iB-Value Added Human Capital (iB-VAHU) on Cost Efficiency.
Hypothesis (H_3)	: The influence of iB-Structural Capital Value Added (iB-STVA) on Cost Efficiency.
Hypothesis (H_4)	: The influence of Financing Deposit Ratio (FDR) on Cost Efficiency.
Hypothesis (H_5)	: The influence of Capital Adequacy Ratio (CAR on Cost Efficiency.
Hypothesis (H ₆)	: The influence of Bank Total Asset (ASET) on Cost Efficiency.
Hypothesis (H ₇)	: The influence of iB-VACA, iB-VAHU, iB-STVA, FDR, CAR, and ASET on Cost
	Efficiency.
Hypothesis (H_8)	: The influence of iB-Value Added Capital Employed (iB-VACA) on Profitability.
Hypothesis (H ₉)	: The influence of iB-Value Added Human Capital (iB-VAHU) on Profitability.
Hypothesis (H ₁₀)	: The influence of iB-Structural Capital Value Added (iB-STVA) on Profitability.
Hypothesis (H ₁₁)	: The influence of Financing Deposit Ratio (FDR) on Profitability (ROA).
Hypothesis (H ₁₂)	: The influence of Capital Adequacy Ratio (CAR) on Profitability (ROA).
Hypothesis (H ₁₃)	: The influence of Bank Total Asset (ASET) on Profitability (ROA).
Hypothesis (H ₁₄)	: The influence of Cost Efficiency (BOPO) on Profitability (ROA).
Hypothesis (H ₁₅)	: The influence of iB-VACA, iB-VAHU, iB-STVA, FDR, CAR, ASET, and BOPO on
	Profitability (ROA).

METHODS

The kind of research it uses the quantitative approach that is several variable and across the quantitative based on a scale of measurement. Data analysis techniques in this research using regression analysis data panel. This method is used because in this research and some of the data time-series cross-section, and variables used is it is suitable financial ratio of regression analysis using data panel.

The population in this research is a public Sharia Bank (BUS), which is registered in the financial services authority (OJK) 2011-2015.

In this research aims to analyze empirically the influence of intellectual capital against the financial performance of Islamic banks. Therefore, testing needs to be done over the hypothesis that has been submitted. The filing of the hypothesis done with research methods and analysis that is designed according to the variables examined in order to get accurate results. Based on the framework in mind, the operational definition of the above variables in this study is as follows:

The data used in this research is secondary data. Secondary data is data the research obtained indirectly through an intermediary media (obtained and recorded by others). Secondary data in this study was obtained from annual reports (annual report) public sharia bank in Indonesia years 2011 to 2015. The data collection methods used in this study by using the methods of documentation, i.e. a method that gathers information and data through a library and study methods of exploration of the literature-literature and financial reports published by the Bank Indonesia, the financial services authority, or the BUS is concerned.

		variables Operational	
	Variables	Indicators	Scale
Independent		$iB-VAIC^{TM} = iB-VACA + IB-VAHU + iB-STVA$	
		• $iB - VACA = \frac{VA}{CE}$	
	Intellectual Capital	• $iB - VAHU = \frac{VA}{HC}$	Ratio
		• $iB - STVA = \frac{SC}{CE}$	
	CAR	$CAR = \frac{Modal}{ASET}$	Ratio
	FDR	$FDR = \frac{Total \ Cost}{Debt \ Cost}$	Ratio
	ASET	Ln Asset Bank	Ratio
Dependent	Cost Efficiency	$BOPO = \frac{Total \ Operational \ Cost}{Total \ Operational \ Revenue}$	Ratio
	Profitability	$ROA = \frac{Total \ Revenue}{Total \ Asset}$	Ratio

Table 1
Variables Operational

Sources: Prilemenry Research, (2016)

VAICTM formulated by Pulic (1998) was used to determine the efficiency of the three models of Intellectual Capital (IC), physical capital, human capital, and structural capital. In this study examines the relationship between the IC and the financial performance of Islamic banking, then VAICTM model less appropriate in the context of Islamic banking. Because VAICTM uses the public accounts (conventional) on the financial statements of the company. Ulum (2013) find measurement IC for Islamic banking called iB-VAICTM (Islamic Banking's Intellectual Value added).

RESULT AND DUSCUSSION

Result

Factors that affect profitability consists of internal factors of the company associated with the iB-Value Added Capital Self-employed (iB-VACA), iB-Value Added Human Capital (iB-VAHU), iB-Structural Capital Value Added (STVA-iB), and Financing Deposit Ratio (FDR), Capital Adequacy Ratio (CAR). Total assets of the bank-owned (ASET).

1. Descriptive

A description of statistics the factors that influence profitability considering internal factors, and external company and test implications to profitability general sharia-based bank Indonesia the period 2012 - 2016 of each variable used in the, shown in table 2.

				Table 2				
				Descriptive				
	ROA	BOPO	VACA	VAHU	STVA	FDR	CAR	ASET
Mean	0.001327	0.576364	0.250289	1.245911	-1.232131	1.018909	0.209273	0.157089
Median	0.006000	0.530000	0.251516	1.426899	0.338361	0.810000	0.160000	0.156300
Maximum	0.037000	2.090000	0.837642	4.311644	1.378881	3.360000	0.640000	0.179500
Minimum	-0.177000	0.290000	-0.483169	-10.18281	-87.06270	0.570000	0.110000	0.137500
Std. Dev.	0.031202	0.332985	0.230208	1.913692	11.79229	0.489572	0.114469	0.010779
Skewness	-4.265925	3.237477	-0.529779	-4.142631	-7.203651	2.665949	2.149439	0.341799
Kurtosis	22.95436	13.73267	5.559360	24.92628	52.93627	11.73003	7.486698	2.489069
Jarque-Bera	1079.304	360.0557	17.58393	1259.058	6190.254	239.8058	88.48309	1.669153
Probability	0.000000	0.000000	0.000152	0.000000	0.000000	0.000000	0.000000	0.434058
Sum	0.073000	31.70000	13.76590	68.52511	-67.76719	56.04000	11.51000	8.639900
Sum Sq. Dev.	0.052574	5.987473	2.861772	197.7597	7509.143	12.94273	0.707571	0.006275
Observations	55	55	55	55	55	55	55	55
Cross sections	11	11	11	11	11	11	11	11

2. Determinant of Cost Efficiency

A regression model for panel data estimation determinants of the profitability of public Bank Sharia Indonesia 2012, 2013-2016 period based on three models, namely: common effect, fixed effects (fixed effects) and the effects of random (random effect). Which model will be used in this study to be analyzed further used paired test for each model.

Two Models Test

1. Chow-Test (Common Effect vs. Fixed Effect)

Table 3Result of Chow Test to Cost Efficiency

Redundant Fixed Effects Tests Pool: EFFICIENCY Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.271578	(10,38)	0.2805
Cross-section Chi-square	15.875800	10	0.1032

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Based on testing of the chow-test, which is done above the chosen method, then the method of common effects (common effect model). However, it is not yet the final result over data processing method because the untested statistically. It needs to be seen there are results from other methods, namely the method of random effects, and statistical testing.

2. Langrage Multiplier TEST (Common Effect vs. Random Effect)

Table 4 Result of LM to Cos Efficiency

Residual Cross-Section Dependence Test Null hypothesis: No cross-section dependence (correlation) Pool: EFISIENSI Periods included: 5 Cross-sections included: 11 Total panel observations: 55 Note: non-zero cross-section means detected in data Cross-section means were removed during computation of correlations

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	111.1047	55	0.0000
Pesaran scaled LM	4.300563		0.0000
Pesaran CD	3.034522		0.0024

Based on the results of the calculation of the LM-Breusch-Pagan test (BP) of 0.0000 < B1 = 0.05, and df = 9, i.e. of 4,321, or the value of the probability of LM-Breusch-Pagan test less than 0.0000 < B1= 0.05, then It can be concluded that the random effects model is better than the common effect in the estimating determinants of efficiency cost and profitability implications for public Sharia Bank of Indonesia 2012, 2013-2016 period.

Haustman Test (Fixed Effect vs. Random Effect) 3.

Table 5 Hausman Test to Cost Efficiency

Correlated Random Effects - Hausman Test			
Pool: EFFICIENCY			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	11.178262	6	0.0830
Correlated Random Effects - Hausman Test Pool: EFFICIENCY			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.999581	6	0.0430
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Based on the calculation on test hausman shown in table 5.5 concluded that value probability chisquare of 0.0830 > 0.05 (5 % and received h₀. So regression data panel that used in the this is the kind of random effect.

Based on the test results the test using paired Chow, LM Breusch-Pagan test (BP), and test the Hausmant against the third panel data regression method above, it can be concluded that the random effect model in the panel data regression method is used more for estimating and analyzing the factors that influence the efficiency of costs and the implications for the profitability of public Sharia Bank of Indonesia 2012-2016 period.

Panel Data Regression Model					
Nu	Method	Testing	Result		
1	Chow-Test	Common Effect vs. Fixed Effect	Fixed Effect		
2	Lagrange Multiplier	Common Effect vs. Random Effect	Random Effect		
3	Hausman Test	Fixed Effect vs. Random Effect	Fixed Effect		

Table 6

Determinant of Cost Efficiency and Implication on Profitability: Hybrid Analysis

The table below describes the combined two models the regression data panel, on the first model, describes the determinants of the profitability of the company contribute to and can be explained by the variable BOPO, iB-VACA, VAHU-iB, iB-STVA, FDR, CAR, and ASET ... Partially visible results in table 7:

	Determinant of Cost Efficiency and Implication on Profitability							
Variables	Deterr	Model 1 Determinant of Cost Efficiency			Model 2 Implication on Profitability			
	Regression Coefficient	Prob.	Sign. /No. Sign.	Regression Coefficient	Prob.	Sign. /No. Sign.		
BOPO	-	-	-	-0.073168	0.0000	Significant		
iB-VACA	-0.051001	0.2234	No.Sign.	-0.011710	0.1223	No.Sign.		
iB-VAHU	-0.072578	0.0000	Significant	0.008268	0.0000	Significant		
iB-STVA	-0.002219	0.0002	Significant	-0.000131	0.0011	Significant		
FDR	0.059012	0.0016	Significant	-0.004835	0.0253	Significant		
CAR	-0.202807	0.0078	Significant	0.008349	0.7123	No.Sign.		
ASET	-1.496010	0.0422	Significant	0.091217	0.6653	No.Sign.		

Table 7

Note:

Prob. $\alpha < 0,05 =$ Significant

Prob. $\alpha > 0.05 =$ No Significant

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DISCUSSION

1. Determinant of Cost Efficiency

Based on the estimation and analysis of the results of empirical data fixed effects models with panel conclude that four variables in this study by iB-Value Added Capital Self-employed (iB-VACA), iB-Value Added Human Capital (iB-VAHU), iB-Structural Capital Value Added (STVA-iB), and Financing the Deposit Ratio (FDR), Capital Adequacy Ratio (CAR). Total assets of the bank-owned (assets) affects the cost efficiency (BOPO) simultaneously and is able to explain variable cost efficiency (BOPO) by 0.976505, or 97,65 percent while the remaining 2.35 % (100% - 97,65 %) influenced by other variables that no in this study, while 3 variables negative and significant of cost efficiency (BOPO) is ib-value added (IB-VAHU)

human capital, capital adequacy ratio (CAR) and total assets bank (ASET), 2 variables positive and significant namely ib-value added capital employed (IB-VACA) and financing deposit ratio (FDR), there are 1 variables positive and not significant to affect of cost efficiency (BOPO) is ib-structural capital value added (IB-STVA) for testing in simultaneous suggests that positive f-statistic of 117.5996 and influential significant with prob (f-statistic) 0.000000 of smaller than the level of errors in (alpha) 0,05 (appointed) so all variable determinant of cost efficiency (BOPO) in effect positive and significant.

• iB-Value Added Capital Employed (iB-VACA) on Cost Efficiency.

The findings empirical the result of this research showed that value prob does. t value of 0.2234 (shown in prob does) were less than the level of errors in (alpha) 0.05 that which has been fixed it can be said not significant with the regression coefficient is 0.051001 and t-statistic of -1.233536 hypothesis variable free namely b-value added capital employed (IB-VACA) proposed received or said positive and significant on variables bound namely of cost efficiency general sharia-based bank of Indonesia the 2012 to 2016 period.

• iB-Value Added Human Capital (iB-VAHU) on Cost Efficiency.

The findings empirical the result of this research showed that value prob does. t value of 0.000 (shown in prob does) were less than the level of errors in (alpha) 0.05 (that which has been fixed it can be said significant. With the regression coefficient -0.072578 and t-statistic of -14.26171 (negative). Hypothesis variable free namely value added human capital (IB-VAHU) proposed based on t-statistic and scores prob does. t value compere with the level of errors in (alpha) 0.05 said negative and significant on variables bound namely of cost efficiency general sharia-based bank of Indonesia the period of 2012 to 2016.

• iB-Structural Capital Value Added (iB-STVA) on Cost Efficiency.

The empirical findings the results of the study showed that the value of the prob. t value of 0.0002 (shown in Prob.) smaller than the error rate (alpha) 0.05 (specified) then it can be said to be insignificant regression coefficients -0.002219 and t-statistic of -3.960964 (negative). That the free variables hypothesis, namely Structural Capital Value Added (iB-STVA) submitted on the basis of t-statistic as well as the value of the prob. t calculate compare with error rate (alpha) 0.05 is said to be positive and insignificant against variables bound i.e. the cost-efficiency of public Bank of Sharia the period 2012-2016.

• Financing Deposit Ratio (FDR) on Cost Efficiency.

The empirical findings the results of the study showed that the value of the prob. t count of 0.0016 (shown in Prob.) greater than the error rate (alpha) 0.05 (specified) then it can be said to be significant with the regression coefficient 0.059012 and t-statistic of 3.354630 (positive). Hypotheses non variable i.e. Financing to Deposit Ratio (FDR) submitted on the basis of t-statistic as well as the value of the prob. t value d with error rate (alpha) 0.05 is said to be positively and significantly to a bound variable, namely Efficiency Public Bank Sharia Indonesia stay period 2012-2016.

• Capital Adequacy Ratio (CAR) on Cost Efficiency.

The empirical findings the results of the study showed that the value of the prob. t count of 0.0078 (shown in Prob) greater than the error rate (alpha) 0.05 (specified) then it can be said to be significant with the regression coefficient -0.202807 and t-statistic -2.775961 (negative). Free variables hypothesis,

namely Capital Adequacy Ratio (CAR) submitted on the basis of t-statistic as well as the value of the prob. t calculate compared with error rate (alpha) 0.05 is said to be negative and significantly to variable i.e. cost efficiency Public sharia bank in Indonesia 2012-2016 period.

• Total Assets Owned by Banks (ASET) on Cost Efficiency

The empirical findings the results of the study showed that the value of the prob. t value of 0.0422 (shown in Prob) smaller than the error rate (alpha) 0.05 (specified) then it can be said to be significant with the regression coefficient registration -1.496010 and t-statistic of --2.087520 (negative). Hypotheses non variable i.e. total bank owned assets (assets) are filed based on t-statistic as well as the value of the prob. t calculate compare with error rate (alpha) 0.05 is said to be negative and significantly to variable i.e. Efficiency Public Bank Sharia Indonesia stay period 2012-2016.

2. Implication on Profitability (ROA)

Based on the estimation and analysis of the results of empirical data fixed effects models with panel conclude that four variables in this study i.e.) implications Profitability i.e., BOPO, iB-VACA, VAHU-iB, iB-STVA, FDR, CAR, and Public Islamic Bank Assets Indonesia 2012-2016 period. Based on Test data regression coefficient test panel using-F (simultaneous) tests the overall equation for the variables in the model are performed using test-F. F the test results as shown in table + 5.22 shows the value of the f-statistic of 237.8771 showed positive results. With the value of the probability of less than 0.05 means that the hypothesis put forward feasible and is said to be significant. This means that the variable, BOPO, iB-VACA, VAHU-iB, iB-STVA, FDR, CAR, and assets jointly (simultaneous) affects Profitability with a confidence level of 0.990933 or 99,09 percent.

• *iB-Value Added Capital Employed (iB-VACA)* on Profitability.

The empirical findings the results of the study showed that the value of the prob. t value of 0.1223 (shown in Prob) greater than the error rate (alpha) 0.05 (specified) then it can be said to be insignificant regression coefficients registration -0.011710 and t-statistic -1.581569 (negative). Hypotheses non-variable i.e. Value Added Capital Self-employed (iB-VACA) received or submitted a negative and insignificant said against variables bound IE profitability of public Sharia Bank in Indonesia 2012-2016 period.

• *iB-Value Added Human Capital (iB-VAHU)* on Profitability.

The empirical findings the results of the study showed that the value of the prob. t value of 0.0000 (shown in Prob.) smaller than the error rate (alpha) 0.05 (specified) then it can be said to be significant with the regression coefficient 1.581569 and t-statistic of 8.054938 (positive). Hypotheses non-variable i.e. Value Added Human Capital (iB-VAHU) submitted are accepted or is said to be positive and significantly to variable i.e. the profitability of public Bank Sharia Indonesia 2012-2016 period.

• *iB-Structural Capital Value Added (iB-STVA)* on Profitability.

The findings empirical the result of this research showed that value prob does. t value of 0.0011 (shown in prob does) were greater than the level of errors in (alpha) 0.05 (that which has been fixed it can be said significant with the regression coefficient -0.000131 and t-statistic of -3.548572 (negative). Hypothesis variable free namely structural capital value added (IB-STVA) proposed received or said positive and insignificant on variables bound namely profitability general sharia-based bank Indonesia the period of 2012 to 2016.

• Financing Deposit Ratio (FDR) on Profitability (ROA).

The findings empirical the result of this research showed that value prob does. T count of 0.0253 (shown in prob does) were less than the level of errors in (alpha) 0.05 (that which has been fixed it can be said significant with the regression coefficient -0.004835 and t-statistic of -2.330662 (negative). Hypothesis variable free namely financing deposit ratio the FDR proposed received or said negative and significant on variables bound namely profitability general sharia-based bank Indonesia the period of 2012 to 2016.

• Capital Adequacy Ratio (CAR) on Profitability. (ROA).

The empirical findings the results of the study showed that the value of the prob. t count of 0.7123 (shown in Prob) greater than the error rate (alpha) 0.05 (specified) then it can be said to be insignificant regression coefficients 0.008349 and t-statistic of 0.371568 (positive). Free variables hypothesis, namely Capital Adequacy Ratio (CAR) put forward positive and is said to be accepted or not significantly too variable i.e. Profitability public Bank Indonesia Sharia period of 2012-2016.

• Total asset of bank (ASET) on Profitability (ROA).

The empirical findings the results of the study showed that the value of the prob. t count of 0.6653 (shown in Prob.) greater than the error rate (alpha) 0.05 (specified) then it can be said to be insignificant regression coefficients 0.091217 and t-statistic of 0.436148 (positive). Hypotheses non-variable i.e. Total bank owned assets (assets) are filed are accepted or is said to be positive and not significantly too variable i.e. Profitability public Sharia Bank in Indonesia 2012-2016 period.

• Cost Efficiency (BOPO) on Profitability (ROA).

The findings empirical the result of this research showed that value prob does. T count of 0.0000 (shown in prob does.) were greater than the level of errors in (alpha) 0.05 (that which has been fixed it can be said significant with the regression coefficient -0.073168 and t-statistic of -5.635302 (negative). Hypothesis variable free namely of cost efficiency (BOPO) proposed received or said negative and insignificant on variables bound namely profitability general sharia-based bank Indonesia the period 2012 to 2016.

CONCLUSION

This research do estimation and analysis of the factors that affect the Cost and Profitability implications Efficiency public Bank Indonesia Sharia 2012-2016 period. More specifically, in accordance with the outline of the issue, the purpose of the research and the research hypothesis, then the conclusions of the research are as follows:

- 1. IB-Value added capital employed (IB-VACA) on cost efficiency (BOPO) proposed accepted or said negative and insignificant on variables bound the variables of cost efficiency thus IB-VACA not have effect on cost efficiency sharia commercial banks in Indonesia 2016 2012 period.
- 2. IB-Value added human capital (IB-VAHU) on cost efficiency submitted received or said negative and significant on variables bound namely of cost efficiency thus variable IB-VAHU have effect on cost efficiency (BOPO) general sharia-based bank Indonesia the period 2012 to 2016.

- 3. IB-structural capital value added (IB-STVA) on cost efficiency submitted received or said negative and significant on variables bound namely of cost efficiency thus variable IB-STVA effect on cost efficiency general sharia-based bank in Indonesia the period 2012 to 2016.
- 4. Financing of the Deposit Ratio (FDR) on cost efficiency proposed is accepted or is said to be positive and significant to a bound variable i.e. cost-efficiency thus variable FDR have effect on cost efficiency public Bank of Sharia the period 2012- 2016.
- 5. Capital Adequacy Ratio (CAR) Against the efficiency of cost on Return on Asset (ROA) submitted are accepted or is said to be negative and significant to variable i.e. cost-efficiency thus variable CAR have effect on Cost efficiency of commercial sharia banks in Indonesia 2012-2016 period.
- 6. Total assets of the bank-owned (ASSETS) of the efficiency of the proposed Biayayang received or is said to be negative and significant too variable i.e. cost-efficiency thus mempengruhi ASSETS variable cost-efficiency public Bank of Sharia the period 2012-2016.
- 7. The iB-VACA, VAHU-iB, iB-STVA, FDR, CAR, and assets jointly towards cost-efficiency, put forward feasible and is said to be significant. This means that the variable iB-VACA, VAHU-iB, iB-STVA, FDR, CAR, and assets jointly (simultaneous) affects the cost-efficiency of public Bank Sharia Indonesia 2012-2016 period. with the able to explain a variable of 0.936306 or 93,63 percent. Public bank of sharia in Indonesia 2012 period% u2013 2016 which have an average change of variable sensitivity iB-VACA, VAHU-iB, iB-STVA, FDR, CAR, and assets simultaneously against the largest variable cost-efficiency is PT Bank Maybank Islamic Indonesia (BMSI), public Bank of Sharia in Indonesia 2012 period% u2013 2016 which have an average change of variable sensitivity iB-VACA, VAHU-iB, iB-STVA, FDR, CAR, and assets simultaneously against the smallest variable cost-efficiency is PT Bank BNI Syariah (BNIS).
- 8. iB-Value Added Capital Self-employed (iB-VACA) towards the profitability of proposed or accepted said negative and insignificant against a bound variable i.e. Profitability (ROA) thus the variables affecting the profitability of VACA iB-Bank Public Islamic in Indonesia 2012-2016 period.
- 9. The iB-Value Added Human Capital (iB-VAHU) towards the profitability of proposed or accepted is said to be positive and significant to a bound variable i.e. Profitability (ROA) thus variable iB-have effect on VAHU the profitability of commercial banks of Sharia in Indonesia 2012-2016 period.
- 10. The iB-Structural Capital Value Added (Ib-STVA) on Profitability submitted are accepted or is said to be negative and significant to variable i.e. Profitability (ROA) thus variable iB-STVA have effect on Profitability Public bank of Sharia in Indonesia 2012-2016 period.
- 11. Financing of the Deposit Ratio (FDR) towards Profitability (ROA) submitted are accepted or is said to be negative and significant too variable i.e. Profitability thus variable FDR have effect on profitability of public Bank of Sharia the period 2012-2016.
- 12. Capital Adequacy Ratio (CAR) of Profitability (ROA) submitted are accepted or is said to be positive and insignificant too variable i.e. Profitability thus variable CAR mempengruhi profitability of public Bank of Sharia in Indonesia 2012-2016 period.

- 13. Total bank owned assets (assets) Against Profitability (ROA) submitted are accepted or is said to be positive and insignificant to variable i.e. Profitability thus variable ASET mempengruhi profitability of commercial banks of Sharia in Indonesia 2012-2016 period.
- 14. Cost efficiency (BOPO) towards Profitability (ROA) received or submitted a negative and significant said against variables bound i.e. Profitability thus variable BOPO mempengruhi profitability of public Bank of Sharia the period of 2012-2016.
- 15. BOPO, iB-VACA, VAHU-iB, iB-STVA, FDR, CAR, and assets jointly against the profitability of proposed decent and is said to be significant. This means that the variable BOPO, iB-VACA, VAHU-iB, iB-STVA, FDR, CAR, and assets jointly (simultaneous) affect the profitability of public Bank Sharia Indonesia 2012 2016 period with able to explain a variable of 0.990933 or 99,09 percent. Public bank Sharia in Indonesia 2012 2016 period which have an average change of variable sensitivity BOPO, iB-VACA, VAHU-iB, iB-STVA, FDR, CAR, and assets simultaneously against Profitability (ROA) is the largest PT Bank Mega Sharia (BMS) Public Islamic Bank, Indonesia 2012 2016 period which have an average change of variable sensitivity BOPO, iB-STVA, FDR, CAR, and assets simultaneously against the variable profitability of the smallest is PT Bank Maybank Islamic Indonesia (BMSI).

REFERENCES

Antonio, Muhammad Syafi i, (2001), Bank Syariah dari Teori ke Praktek., Gema Insani Press, Jakarta.

Badan Pusat Satistik (2015), Indikator Ekonomi Indonesia Oktober 2015.

Bank Indonesia (2015), Tinjauan Kebijakan Moneter Desember 2015.

Bapenas (2016), Badan Perencanaan Nasional Republik Indonesia, Peraturan Presiden RKP 2016.

Bank Indonesia. (2012), Peraturan Bank Indonesia Nomor: 14/2/PBI/2012 tentang Perubahan atas PBI Nomor:11/11/ PBI/2009 tentang Kegiatan Alat Pembayaran dengan Menggunakan Kartu.

Dendawijaya, Lukman, (2009), Manajemen Perbankan, Bogor Jakarta, Ghalia Indonesia.

Endri, (2012), Model Regresi Panel Data dan AplikasI Eviews: programdoktorpersada.files.wordpress.com, diakses 8 maret 2016.

Gujarati, Damodar N. (2003), Basic Econometrics, McGraw-Hill, 4Th ed. New York.

Husnan, Suad dan Enny, Pudjiastuti (2006), "Dasar-dasar Manajemen Keuangan", Edisi Lima, Yogyakarta : UPP STIM YKPN.

Husnan, Suad. Manajemen Keuangan (2008), Teori dan Penerapan Buku 1, Edisi 4, BPFE Yogyakarta

Husnan, S. (2015), Teori Porto folio dan Analisis Investasi edisi Keempat. Yogyakarta: BPFE

Ikatan Akuntan Indonesia. (2010), Pernyataan Standar Akuntansi Keuangan No. 19, Per 7 Maret 2016.

Kasmir, (2010), Dasar-dasar Perbankan, Raja Grafindo Persada, Jakarta 2010.

Kasmir. (2012), Bank dan Lembaga Keuangan Lainnya. PT Raja Grafindo Persada

Karim, Adiwarman. (2010), Bank Islam Analisis Fiqih dan Keuangan Edisi Keempat. Rajawali Press, Jakarta

Katsir, Ibnu, (2003), Tafsir Ibnu Katsir, Jilid 1-7, Pustaka Imam Syafi'I, Bogor

____, Tafsir Al-Qur'an al-Azim, Jilid 4, hal. 647-648.

Nachrowi, Djalal Nachrowi, Hardius Usman. (2006), Pendekatan Populer dan Praktis Ekonometruka untuk Analisis Ekonomi dan Keuangan, Lembaga Penerbit Universitas Indonesia, Jakarta

International Journal of Economic Research

Determinants of Cost Efficiency and it's Implications on Sharia Bank in Indonesia Profitability at the Period of 2012 - 2016

Otoritas Jasa Keuangan, (2015), Roadmap Perbankan Syariah Indonesia 2015-2019, Departemen Perbankan Syariah OJK, Jakarta

_____, (2016), Statistik Perbankan Sariah, Per Maret 2016, http://www.ojk.go.id/id/kanal/syariah/data-danstatistik/ statistiperbankan-syariah/Pages/Statistik-Perbankan-Syariah—Januari-2016.aspx

- Pangestika, Styfanda, (2015), Analisis Estimasi Model Regresi Data Panel Dengan Pendekatan Common Effect Model (CEM), Fixed Effect Model (FEM), dan Random Effect Model (REM), Skripsi Fakultas MIPA Universitas Negeri Semarang, tidak dipublikasikan
- Peraturan Perundang-undangan, (1992), Undang-undang Republik Indonesia Tahun 1992 Tentang Perbankan, DPR-RI, Jakarta.
- Sunann Ibn Majah kitab *Al-Muqoddimah* bab Fadl *Al-Ulama wa al-hasts ala talab al-ilm* no,224. (Abu Abdillah Muhammad ibn Yazid al-Qazwini, *sunan Ibn Majah*, Beirut:Dar al-Fikr, 1995, Jilid 1, hal. 81).

JURNAL-JURNAL

- Sri Windarti M. dan Misbach Fuady (2015), *Faktor-Faktor yang Mempengaruhi Profitabilitas Bank Umum Syariah di Indonesia*. E B B A N K Vol. 6, No. 1, Juli 2015, Halaman : 33 – 62, Program Studi Akuntansi STIEBBANK Yogyakarta
- Astohar (2016), Pengaruh capital adequacy ratio (car) dan financing to deposit ratio terhadap profitabilitas perbankan syariah di indonesia dengan inflasi sebagai variabel pemoderasi. Jurnal Among Makarti Vol.9 No.18, Desember 2016, , Halaman : 38 56, STIE Totalwin Semarang.
- Fida Arumingtyas (2017), Pengaruh rasio keuangan terhadap kinerja bank umum syari'ah indonesia periode 2012-2014, Jurnal Competitive, Vol. 1 No. 2, Juli Desember 2017, Halaman : 133 148, Universitas Tarumanagara.
- Wahab (2015), Analisis Faktor-Faktor yang Mempengaruhi Efisiensi Bank Umum Syariah Di Indonesia Dengan Pendekatan Two Stage Stochastic Frontier Aproach (Studi Analisis di Bank Umum Syariah), Jurnal Conomica, Volume VI/Edisi 2/Oktober 2015, Halaman 57-76.
- Ningsukma Hakiim & Haqiqi Rafsanjani (2016), Pengaruh Internal Capital Adequency Ratio (CAR), Financing To Deposit Ratio (FDR), dan Biaya Operasional Per Pendapatan Operasional (BOPO) dalam Peningkatan Profitabilitas Industri Bank Syariah di Indonesia, Jurnal Aplikasi Manajemen (JAM), Vol 14 No 1, 2016, Terindeks dalam Google Scholar, Halaman 161-168. Sekolah Pascasarjana Universitas Airlangga Surabaya
- Salman Al Parisi (2017), Determinan Kinerja Keuangan Bank Umum Syariah di Indonesia, IKONOMIKA :Journal of Islamic Economics and Business Volume 2, No 1 (2017) ISSN: 2527-3434 (PRINT) - ISSN: 2527-5143 (ONLINE) Page : 41 - 52. Magister Manajemen Syariah SB IPB.
- Ubaidillah (2016), Analisis Faktor-Faktor yang Mempengaruhi Profitabilitas Bank Syariah di Indonesia, el-JIZYA, Jurnal Ekonomi Islam (Islamic Economics Journal), Vol.4, No.1 Januari - Juni 2016, ISSN 2354 – 905X Page : 151 - 188. IAIN Purwokerto.
- Syamsurizal (2016), pengaruh CAR (Capital Adequacy Ratio), NPF (Non Performing Financing) dan BOPO (Biaya Operasional Perpendapatan Operasional) terhadap ROA (Return On Asset) pada BUS (Bank Umum Syariab) yang terdaftar di BI (Bank Indonesia), Kutubkhanah : Jurnal Penelitian sosial keagamaan, Vol.19, No.2 Juli-Desember 2016, Page : 151 - 176. Universitas Islam Negeri Sultan Syarif Kasim Riau.
- Muhammad Yusuf W & Salamah Wahyuni (2017), Pengaruh CAR, NPF, BOPO, FDR, terhadap ROA yang dimediasi oleh NOM, Jurnal Bisnis & Manajemen Vol. 17, No. 1, 2017, Halaman : 41 - 62. Universitas Sebelas Maret.
- Mokhamad Anwar (2016), The Efficiency of Banks in Indonesia: Sharia vs. Conventional Banks, Bulletin of Monetary, Economics and Banking, Volume 18, Number 3, January 2016, The University of Padjadjaran (UNPAD). Email: mokhamad.anwar@fe.unpad.ac.id.
- Okky Paulin & Sudarso Kaderi Wiryono (2015), Determinants Of Islamic Bank's Profitability In Indonesia For 2009 2013, Journal Of Business And Management, Vol. 4, No.1, 2015: 175-185, School of Business and Management, Institut Teknologi Bandung, Indonesia.

- Siti Nurhayati (2017), The Analysis of the effect of intellectual capital on market and financial performance in LQ45 listed in Indonesia Stock Exchange in 2010-2013, Jurnal Akuntansi Riset, Vol. 6, No.1, 2017, pp : 127 - 166, Universitas Pendidikan Indonesia.
- Muhammad Arslan & Rashid Zaman (2015), Intellectual Capital and Its Impact on Financial Performance: A Study of Oil and Gas Sector of Pakistan, International Letters of Social and Humanistic Sciences Online: 2014-11-05, ISSN: 2300-2697, Vol. 43, pp 125-140, © 2015 SciPress Ltd., Switzerland.
- Ihyaul Ulum (2013), Model Pengukuran Kinerja Intellectual Capital Dengan Ib-Vaic Di Perbankan Syariah, Jurnal Penelitian Sosial Keagamaan, Vol. 7, No. 1, Juni 2013, Hal. 185-206, Program Doktor Ilmu Ekonomi Universitas Diponegoro Semarang.
- Astoeti Wahjoe Widiarti & Hermanto Siregar (2015), The Determinants of Bank's Efficiency Indonesia, Buletin Ekonomi Moneter dan Perbankan, Volume 18, Nomor 2, Oktober 2015, Hal. 129-156.
- Rina Haryati & Endang Tri Widyarti (2016), Pengaruh Leverage, SIZE, NPL, BOPO dan LDR Terhadap Kinerja Keuangan Bank (Studi Pada Bank Umum Konvensional Yang Terdaftar Di Bursa Efek Indonesia Periode 2010-2014), Diponegoro Journal Of Management, Volume 5, Nomor 3, Tahun 2016, Halaman 1-13, Universitas Diponegoro.
- Shahla Sohrabi & Amir Mo%ammad Alizadeh (2015), *The relationship between the intellectual capital and theshare price in companies listed on the Stock Exchange*, Technical Journal of Engineering and Applied Sciences: Tech J Engin & App Sci., 5 (S): 198-204, 2015.
- Djamil Thalib (2016), Intermediasi, Struktur Modal, Efisiensi, Permodalan Dan Risiko Terhadap Profitabilitas Bank, Jurnal Keuangan dan Perbankan, Vol.20, No.1 Januari 2016, hlm. 116–126, Terakreditasi SK. No. 040/P/2014.
- Agus Wahyudi SG. & Ni Wayan Eka M. (2014), *Modal Intelektual Terhadap Efisiensi dan Kinerja Pasar Perbankan di Indonesia,* Finance and Banking Journal, Vol. 16 No. 1 Juni 2014, Hal. 77-86, Universitas Mahasaraswati Denpasar.
- Pulic, A. 2000. VAIC An Accounting Tool for IC Management. International Journal of Technology Management, 20(5).
- Eko Wibowo & Arifin Sabeni (2013), Analisis Value Added Sebagai Indikator Intellectual Capital dan Konsekuensinya terhadap Kinerja Perbankan, Diponegoro Journal of Accounting Volume 2, Nomor 1, Tahun 2013, Halaman 1-14, Universitas Diponegoro.