

The Influence of Intellectual Capital and Company Size On Financial Performance (Study on Banking Subsector Companies Listed on the Indonesia Stock Exchange in 2017-2020)

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Abstract

The existence of technology and information that is increasingly sophisticated results in the advancement of economic growth, in this case the banking subsector is a subsector that has an important role in maintaining the stability of a country's economy, for that reason the importance of improving financial work in banking. This study has two variables that affect financial performance, namely intellectual capital and company size, this study aims to determine the influence of intellectual capital and company size the financial performance of banking subsector companies listed on the Indonesia Stock Exchange. The object of this study is a banking subsector company listed on the Indonesia Stock Exchange. In period this study is 2017-2020. This study, financial performance was proxied with Return On Assets (ROA), while intellectual capital was proxied with the formula Variable Added Intellectual Coefficient and the size of the company was proxied with formula Ln Total Assets. The total population in this study was 33 companies. Have 132 samples, The analysis method used in this study is the panel data regression analysis method. The results of this study show that simultaneously, intellectual capital and company size affect financial performance, partially intellectual capital affects on financial performance and company size have no effect on financial performance. As a result of this study, researchers hope that this researcher will become a reference in the company. In addition, researchers hope that this study can be described again in a broader direction.

Keywords

economic growth, financial management, financial performance, intellectual capital, and company size

1. Introduction

Financial statements are a structured presentation of the financial position and performance of an entity. In a company, determining the good and bad of a company can be measured through financial performance. Financial performance is a representation of the company how to carry out its duties according to the application of good finances, it can be interpreted as an image as the achievement of the company. Assessing the performance of the company can be seen from how much the company has produced effective and efficient financial performance in financial statements that can be published in each company, this is because financial performance can see the effectiveness of the company in operations in obtaining profits based on managing company resources (Akmil et al., 2019). In terms of the company's financial performance, it must be able to create profit, the indicator used by the company to assess the company's financial performance, namely by using the calculation of the profitability ratio, the profitability ratio used by this study is return on assets (ROA). The greater the Return On Assets, the greater the profit obtained by the company. In 2020 government banking companies published financial performance, not only government banks, national private

banks also published their financial statements. The financial performance of government banks and private banks experienced a significant decline in profits. In 2020, profits shrank by approximately 30 to 40 percent compared to 2019. During the pandemic, the company was unable to increase profitability throughout 2020, because the majority of people tended to save rather than spend. This can have an impact on the growth of companies in the banking sector which results in the company's financial performance declining.

Financial performance can be influenced by intellectual capital, research by Kurniawati et al., (2020) namely intellectual capital affects the financial performance of a company. This statement is in line with the results of research by Tasawar & Haniffa (2017) that intellectual capital affects financial performance. Another factor affecting financial performance is the size of the company. In Putri's research (2018) explained that the size of the company has a positive effect on financial performance in line with research by Tisna & Agustami (2016) that the size of the company has a positive effect on financial performance because a large company size will carry out all business activities properly.

This research was conducted based on the results of previous studies, there are still research incoherences regarding financial performance. In this case, if there is a poor financial performance, it affects the company in making a profit and makes the company that does not make a profit.

1.1 Objectives

This study aims to determine the effect of intellectual capital and firm size on the financial performance of banking sub-sector companies listed on the Indonesia Stock Exchange in 2017-2020.

2. Literature Review

Agency Theory was initiated in 1976 by Jensen and Mecling, who described agency relationships as a contract in which one of the parties (principals) used the other party (agent) to work on a certain service for their benefit. In this case, the financial performance of the company (principal) that has a company tends to want to get a high profit, but (agent) managers tend to think about things in managing the company so that profit is stable without thinking about high profits. Signalling Theory was initiated in 1973 by Spence saying that the sending party who has the information, provides information that reflects an enterprise that is beneficial to the recipient of the information. In this case, the relationship between signal theory and financial performance if the management in the company gives a positive signal to interested parties.

2.1 Financial Performance

Financial performance is an analysis or measure of company's success for efforts in implementing performance. In financial performance, profit is a scale used to determine the survival of the company, the profit is obtained from the results of managing the company's resources. Financial performance is also a representation of the good and bad management of the company that has been published during a certain period as measured by the aspects of capital adequacy, liquidity, and profitability.

2.2 Intellectual Capital

Intellectual capital is an asset of knowledge owned by every company which if managed properly will create added value for the company and provide advantages in the competitive world. Intellectual capital in this study uses the Value Added Intellectual Coefficient (VAIC) indicator is one of the measurements with an indirect method to measure how efficient intellectual capital and employee capital are in creating value aware of the relationship between three main components, namely human capital, capital employed, and structural capital. The increase in intellectual capital, the performance of keuangan in the company is getting better (Weqar & Haque, 2021).

H₁: Intellectual Capital positively affects financial performance

2.3 Company Size

The size of the company is the large scale of a company which seen from how big the total assets owned by the company. Large companies have greater capabilities than small companies. The size of the company is spelled out in total assets, sales and market capitalization. If the bigger it is, the bigger the size of the company. In the study using the total asset indicator, where total assets represent that the size of the company can affect the size of the company because the larger the assets, the larger the company. According to Arisanti (2020) the size of the company with In

total assets has a positive effect on financial performance. A company that has relatively large assets is able to operate at a higher level, therefore a company that has large assets is able to obtain loans from banks or other parties.

H₂ : Company Size has positively effects on financial performance

3. Methods

In this study, the type of research used was descriptive research. Descriptive research according to Sugiyono (2017) is a study using a data analysis method with a description and description of the collected data without having the intention to make generally accepted conclusions. This, the study looked at the influence of intellectual capital and company size on financial performance. This research uses quantitative research methods. Quantitative research according to (Bahri, 2018) is another name for traditional approaches, positivism, experimental and empirical, emphasizing the testing of hypotheses and theories by measuring research variables in numbers and data analysis using symmetrical statistics measurements. This study used a case study strategy. A case study is a researcher conducting an in-depth exploration of programs, events, processes, activities, of one or more people (Sugiyono, 2016). The object of research in this study is the group of banking subsector companies listed on the Indonesia Stock Exchange in 2017-2020. This study used was purposive sampling, so that the criteria to be used were as follows: (Table 1)

1. Banking subsector companies listed on the Indonesia Stock Exchange for the 2017-2020 period.
2. Banking subsector companies listed on the Indonesia Stock Exchange consistently present financial statements for the 2017-2020 period.

Table 1. Variable Operations

Variable	Concept of Variables	Indicator	Scale
Financial Performance (Y)	Return On Assets (ROA) is an asset reward ratio used to evaluate whether management has received adequate remuneration from controlled assets (Priatna, 2016)	$ROA = \frac{\text{Laba setelah pajak}}{\text{Total Aset}}$	Ratio
Intellectual Capital (X ₁)	Value Added Intellectual Coefficient (VAIC) is a tool to measure intellectual capital owned by companies that are relatively easy to measure and do because they come from accounts in the company's financial statements (Astari & Darsono, 2020)	$VAIC = VACA + VAHU + STVA$	Ratio
Company Size (X ₂)	Ln Total Assets is a measuring tool where the scale of the company is seen from total assets (Jaya, 2020)	Ln Total Aset	Ratio

Descriptive statistical analysis is a series of data transformation of a study in the form of tabulations and there is information related to the characteristics of research variables and is presented in summary form, besides that it is also presented in the form of tables and numerics (Indriantoro & Supomo, 2018). In this study, the descriptive statistical analysis used was the minimum value, maximum value, mean (average) and standard deviation as an illustration of the intellectual capital variable (X₁), company size (X₂), and financial performance (Y). (Table 1)

The analysis equations of the panel data method used in this study are:

$$Y = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + e$$

4. Data Collection

According to Nasution (2017) Descriptive analysis is an analysis of research data to test the abstraction of research results based on one sample, which describes each variable in this study.

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Financial Performance	132	-1.8967	2.6811	0.1604	0.5633
Intellectual Capital	132	-3.2501	26.7348	3.6856	3.5640
Firm Size	132	28.4500	34.9500	31.4361	1.8172

Source: data from the author (2022)

Based on the Table 2 of results from descriptive statistics showing the value of each research variable, the ROA value in financial performance was the lowest at -1.8967. When viewed from the average ROA value of 0.1604 with a standard deviation of 0.5633, it can be concluded that the sample data have varied or non-group data. In the table of results from descriptive statistics, the VAIC value derived from the results of three components, namely VACA (value added capital employed, VAHU (value added human capital), and STVA (structural capital value added), to the VAIC value generated in the lowest intellectual capital of -3.2501, while the VAIC value in intellectual capital is the highest at 26.7348. Judging from the average VAIC of 3.6856 with a standard deviation of 3.5640, it can be concluded that the sample data have data that do not vary or are in groups. Furthermore, in the results table of descriptive statistics, the Ln value of Total Assets in the lowest company size is 28,4500, while the Ln value of total assets is highest at 34.9500. Judging from the average Ln of total assets of 31.4361 with a standard deviation of 1.8172, it can be concluded that the sample data has data that does not vary or is in groups. The data presented in this study used panel data regression analysis techniques using Eviews 12 Software. In testing panel data, there are 3 models of analysis techniques, namely, the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). After that, the selection of a panel data regression model was carried out in order to find out what model was accurate to use in this study. There are 3 stages of testing, namely, Chow Test, Hausman Test, and Lagrange Multiplier Test.

4.1 Classical Assumption Test

The classical assumption test aims to provide certainty results that the regresi equation obtained has the accuracy to be consistent.

1. Multicollinearity Test

The multicollinearity test aims to test whether the regression model found there is a correlation between independent variables. A regression model is said to experience multicollinearity when the correlation coefficient has a > 0.8 but if < 0.8 then there is no multicollinearity problem.

Table 3. Multicollinearity Test

	X1	X2
X1	1.000000	0.296948
X2	0.296948	1.000000

Source: data from via EViews 2012 (2022)

Based on the test results Table 3, the results of the multicollinearity test on the correlation efficiency value possessed by none of them > 0.8 so that no multicollinearity occurs.

2. Heteroskedasticity Test

The Heteroskedasticity Test aims to test whether in the regression model there is an inequality of residual variance (Ghozali, 2019)

Table 4. Heteroskedasticity Test

Heteroskedasticity Test: White			
Null hypothesis: Homoskedasticity			
F-statistic	1.495746	Prob. F(5,126)	0.1958
Obs*R-squared	7.395880	Prob. Chi-Square(5)	0.1928
Scaled explained SS	28.71470	Prob. Chi-Square(5)	0.0000

Source: data from via EViews 2012 (2022)

Based on the test results Table 4, the absence of heteroskedasticity in the regression model, since the probability value is $0.1928 > 0.05$.

4.2 Panel Data Regression Model

1. Chow Test

In the chow test, if the cross-section probability value of $F > 0.05$ then H_0 is accepted, meaning that the common effect model (CEM) is more in line with this study, on the other hand, if the cross-section probability value of $F < 0.05$ then H_0 is rejected, meaning that the fixed effect model (FEM) is more in line with the study.

Table 5. Chow Test

Redundant Fixed Effects Tests			
Equation: FEM			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.654110	(32,97)	0.9136
Cross-section Chi-square	25.791887	32	0.7727

Source: data from via EViews 2012 (2022)

The probability value of cross-section F in chow test is 0.9136 then it is explained that if cross-section $F > 0.05$ then H_0 received the selected in the chow test is the common effect model (CEM). Furthermore, a thirstrman test is carried out. (Table 5)

2.Uji Hausman

In the Hausman test, if the random cross section value > 0.05 then H_0 is accepted, meaning that the common effect model (CEM) is more in line with the study. But on the contrary, if the value of the random cross section < 0.05 then H_0 is rejected, it means that the fixed effect model (FEM) is more appropriate in this study

Table 6. Hausman Test

Correlated Random Effects - Hausman Test			
Equation: MODEL_REM			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.861056	2	0.0880

Source: data from via EViews 2012 (2022)

The probability value of random cross-section in Hausman test is $0.0880 > 0.05$ then H_0 is accepted, the corresponding model is the random effect model (REM). Furthermore, a lagrange multiplier test was carried out. (Table 6)

3. Lagrange Multiplier Test

Lagrange multiplier test, if the Breusch-pagan probability value (BP) > 0.05 then H_0 is accepted, meaning that the common effect model (CEM) is more in line with the study, on the contrary, if the breusch-pagan probability value (BP) < 05 then H_0 is rejected, meaning that the random effect model (REM) is more in line with this study. (Table 7)

Table 7. Lagrange Multiplier Test

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	4.354532 (0.0369)	79.63726 (0.0000)	83.99180 (0.0000)

Source: data from via EViews 2012 (2022)

The Breusch-pagan probability value of $0.0000 < 0.05$ then it is explained that if the breusch-pagan < 0.05 then H_0 is rejected, and the corresponding model in the study is the random effect model (REM).

4.3 Panel Data Regression Model Selection

Based on the model tests that have been carried out, the model that is good for use in research is the random effect model (REM). The following are the results of testing using a random effect model (REM). (Table 8)

Table 8. Random Effect Model

Dependent Variable: Y
Method: Panel EGLS (Cross-section random effects)
Date: 06/19/22 Time: 21:59
Sample: 2017 2020
Periods included: 4
Cross-sections included: 33
Total panel (balanced) observations: 132
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.283625	0.855230	-1.500912	0.1358
X1	0.051351	0.014077	3.647950	0.0004
X2	0.039916	0.027607	1.445847	0.1506
Effects Specification				
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			0.548309	1.0000
Weighted Statistics				
R-squared	0.146994	Mean dependent var	0.160436	
Adjusted R-squared	0.133769	S.D. dependent var	0.563285	
S.E. of regression	0.524258	Sum squared resid	35.45522	
F-statistic	11.11491	Durbin-Watson stat	1.630221	
Prob(F-statistic)	0.000035			
Unweighted Statistics				
R-squared	0.146994	Mean dependent var	0.160436	
Sum squared resid	35.45522	Durbin-Watson stat	1.630221	

Source: data from via EViews 2012 (2022)

Results of the random effect model (REM) test, it can be known that the panel data regression equation in this study is as follows:

$$Y = -1.283625 + 0.051351X_1 + 0.039916X_2 + e$$

5. Results and Discussion

5.1 The Effect of Intellectual Capital and Company Size on Financial Performance

Based on the probability value (f-statistic) of $0.000035 < 0.05$ then H_0 is rejected and H_1 is accepted, it can be interpreted that the independent variables of this study intellectual capital and company size affect the dependent variables of financial performance in banking subsector companies listed on the IDX in 2017-2020.

5.2 The Effect of Intellectual Capital on Financial Performance

Intellectual capital (X_1) has a probability value of $0.0004 < 0.05$ with a positive regression coefficient value of 0.051351. This means that H_0 is rejected, and H_a is accepted so that intellectual capital partially has a positive influence on financial performance.

5.3 The Effect of Company Size on Financial Performance

The size of the company (X_2) has a probability value of $0.1506 > 0.05$ with a positive regression coefficient value of 0.039916. This means that H_0 is rejected, and H_a is accepted so that the size of the company partially has no influence on financial performance.

6. Conclusion

This research proves that intellectual capital and company size have a simultaneous effect on financial performance. However, partially intellectual capital has a positive effect on financial performance, in this case it shows that intellectual capital can play a role in improving financial performance, meaning that the higher the intellectual capital, the better the company's financial performance. This, the company is able to use and maximize existing resources such as the use of creativity and innovation of employees in the company so as to create added value for the company. Firm size has no negative effect on financial performance, in this case because the increase in a company is not always with total assets for which there are many other indicators that improve the financial performance of a company.

References

- Akmlil, P. S., Husaini, A., & Nurlaily, F. Pengaruh Intellectual Capital Terhadap Kinerja Keuangan (Studi Pada Perusahaan Sub Sektor Perdagangan Besar Barang Produksi Yang Terdaftar di BEI Periode 2016-2018). *Jurnal Administrasi Bisnis*, 196–204. 2019
- Arisanti, P. *Pengaruh Struktur Modal, Likuiditas, dan Ukuran Perusahaan Terhadap Kinerja Keuangan Pada Perusahaan Manufaktur Subsektor Keperluan Rumah Tangga Yang Terdaftar Di Bursa Efek Indonesia Periode 2014-2018*. 14 No 1. 2020
- Astari, R. K., & Darsono. Pengaruh Intellectual Capital Terhadap Kinerja Perusahaan. *Diponegoro Journal Of Accounting*, 9 No 2. 2020
- Bahri, S. *Metodologi Penelitian Bisnis Lengkap dengan Teknik Pengolahan Data dengan SPSS*. Andi. 2018
- Imam, G. *Aplikasi Analisis Multivariate dengan Program IBM SPSS*. Badan Penerbit Universitas Diponegoro. 2019
- Indriantoro, N., & Supomo, B. *Metodologi Penelitian Bisnis Untuk Akuntansi dan Manajemen*. Yogyakarta: Penerbit Andi. 2018
- Jaya, S. Pengaruh Ukuran Perusahaan, Profitabilitas terhadap Nilai Perusahaan Pada Perusahaan Subsektor Property dan Real Estate di BEI. *Jurnal Manajemen Motivasi*, 16 No 1. 2020
- Kurniawati, H., Rasyid, R., & Andriani Setiawan, F. Pengaruh Intellectual Capital dan Ukuran Perusahaan Terhadap Kinerja Keuangan Perusahaan. *Jurnal Muara Ilmu Ekonomi Bisnis*, 4, 72. 2020
- Nasution, L. M. Statistik Deskriptif. *Jurnal Hikmah*, Vol 14 No.1. 2017
- Priatna, H. Pengukuran Kinerja Perusahaan Dengan Rasio Profitabilitas. *Jurnal Ilmiah Akuntansi*, 7 No 2. 2016
- Putri, A. R. *Pengaruh Ukuran Perusahaan, Umur Perusahaan, Kepemilikan Institusional, Dan Kepemilikan Manajerial Terhadap Kinerja Keuangan Perusahaan (Studi Empiris pada Perusahaan Manufaktur yang*

- terdaftar di BEI pada periode 2013-2017).
https://dspace.uui.ac.id/bitstream/handle/123456789/13489/SKRIPSI_P.pdf?sequence=2&isAllowed=y. 2018
- Sugiyono. *Metode Penelitian Kuantitatif, Kualitatif dan Kombinasi (Mixed Methods)*. Alfabeta. 2016
- Sugiyono. *Metode Penelitian Kuantitatif dan R & D*. 2017
- Tasawar, N., & Haniffa, R. Determinants of financial performance of Islamic banks: an intellectual capital perspective. *Journal of Islamic Accounting and Business Research*, 130–142. 2017
- Tisna, G. A., & Agustami, S. Pengaruh Good Corporate Governance dan Ukuran Perusahaan terhadap Kinerja Keuangan Perusahaan (Pada Perusahaan Perbankan yang terdaftar di Bursa Efek Indonesia tahun 2010-2014). *Jurnal Riset Akuntansi Dan Keuangan*, 4 (2). 2016
- Weqar, F., & Haque, S. . I. The Influence of Intellectual Capital on Indian Firms Financial Performance. *International Journal of Learning and Intellectual Capital*. 2021

Biography

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