DETERMINANTS OF E-PAYMENT SERVICES, FINANCIAL AND MACROECONOMIC RATIOS TO COMPANY PERFORMANCE

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Abstract

The level of achievement of an organization can be seen from the company's performance. Performance shows the ability of management in managing a company. Performance appraisal can be seen from various internal and external factors. The purpose of this research is to determine the effect of partial and simultan digital service systems based on digital e-payment, financial ratios, macroeconomics on company performance. This research type is quantitative method with descriptive approach. The data is secondary data and this research use multiple linear regression analysis method. The population is banking companies listed on the Indonesia Stock Exchange (BEI) within year of 2016-2018. Sampling method used purposive sampling so obtained 33 samples. The results of this research with determination coefficient at 6.22% simultaneously digital-based e-payment service systems, financial ratios, macroeconomics have a significant influence to company performance. Partially, digital e-payment based services and financial ratios (NPL, NIM) have a significant positive influence to company performance.

Kata Kunci: Digital E-payment Based Service System; Financial Ratios; Macroeconomics; Company Performance

Abstrak

Tingkat pencapaian suatu organisasi dapat dilihat dari kinerja perusahaan. Kinerja menunjukan kemampuan manajemen dalam mengelola sebuah perusahaan. Penilaian kinerja dapat dilihat dari berbagai faktor baik internal maupun eksternal. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh secara parsial maupun simultan dari sistem layanan berbasis digital e-payment, rasio keuangan, makroekonomi terhadap kinerja perusahaan. Jenis penelitian yang digunakan dalam penelitian ini adalah kuantitatif dengan pendekatan deskriptif. Data yang digunakan adalah data sekunder dan metode penelitian menggunakan regresi linier berganda. Populasi yang digunakan adalah perusahaan perbankan yang terdaftar di Bursa Efek Indonesia (BEI) pada tahun 2016-2018. Teknik pengambilan sampel yang digunakan adalah purposive sampling sehingga diperoleh 33 sampel. Hasil Penelitian ini menunjukkan koefisien determinasi sebesar 6,22% secara simultan sistem layanan berbasis digital e-payment, rasio keuangan, makroekonomi berpengaruh signifikan terhadap kinerja perusahaan. Secara Parsial, layanan berbasis digital e-payment dan rasio keuangan (NPL, NIM), berpengaruh signifikan positif terhadap kinerja perusahaan.

Keywords: Sistem Layanan Berbasis Digital E-payment; Rasio Keuangan; Makroekonomi; Kinerja Perusahaan

INTRODUCTION

Various kinds of information technology have become available so that human activities become easier, more effective, and efficient. These changes bring challenges and opportunities in business. The company must strive to win the business competition and get the maximum profit by following the company's goals. Performance (performance) is a picture of the level of achievement of the implementation of an activity/program/policy in realizing the goals, vision, and mission contained in the planning strategy of an organization (Mahsun et al., 2013). Performance shows the ability of company management in managing company capital.

Performance is measured by various activities within the company, performance appraisal can be seen from various factors both internally and externally. Internal performance appraisal factors can be seen in terms of ownership structure, board distribution and profitability ratio analysis, activity ratio, leverage ratio, and liquidity ratio. While external factors can be seen from the level of inflation, interest rates, economic growth, and the level of corporate competition. Thus to improve the performance of a company must be able to compete, provide innovations in the products and services of a company by utilizing digital technology that can help human activities to be more easily and efficiently.

The development of the banking sector in the digital era 4.0 is currently experiencing a very rapid increase. This change cannot be denied so companies are demanded to attract public interest by strengthening and developing banking sector products and services. E-payments that use electronic money or e-money will inevitably require banking services. The electronic payment process (e-payment) is carried out by three main actors, namely users, merchants, and banks (Al-Fayoumi et al., 2010). The form of e-payment is divided into several types, namely payment cards, e-wallets, smart cards, e-checks, and e-cash which all use internet transactions by electronic means (Turban, E, et al 2012). Digital-based services consist of three components namely internet banking, mobile banking,

The results of research conducted by (Abdullai and Micheni, 2018) show that e-payment has a positive effect on company performance as measured by company profitability, this study is in line with (Tunay et. Al, 2015). But the results of this study are inversely proportional to research (Elizar & Rohani, 2017) and (Alfauzi Firdaus, 2019) say that e-payment does not determine company performance. CAR has a positive influence on company performance (Setiani, Gagah, & Fathoni, 2018), this research is inversely proportional to the research conducted by (Sistiyarini and Supriyono, 2016). NPL has a positive effect on company performance (Herry, 2015: 7), this study contrasts with research conducted by (Million, Matewos, & Sujata, 2015). NIM has a positive influence on company performance (Noor, Dillak, & Aminah, 2018), this study contrasts with research conducted by (Yuda & Chabachib, 2016). LDR has a positive effect on company performance (Ab-Rahim & Chiang, 2016), this research is inversely proportional to the research conducted by (Arimi & Mahfud, 2012). Inflation has a positive influence on company performance (Sahara, 2013), whereas it is inversely proportional to the research conducted by (Kanwal and Nadeem, 2013). Economic growth (GDP) has a positive influence on company performance (Khizer, 2009 in Sahara, 2013), this study is inversely

proportional to research conducted by (Sistiyarini and Supriyono, 2016). This research is contrary to research conducted by (Yuda & Chabachib, 2016). LDR has a positive effect on company performance (Ab-Rahim & Chiang, 2016), this research is inversely proportional to the research conducted by (Arimi & Mahfud, 2012). Inflation has a positive influence on company performance (Sahara, 2013), whereas it is inversely proportional to the research conducted by (Kanwal and Nadeem, 2013). Economic growth (GDP) has a positive influence on company performance (Khizer, 2009 in Sahara, 2013), this study is inversely proportional to research conducted by (Sistiyarini and Supriyono, 2016). This research is contrary to research conducted by (Yuda & Chabachib, 2016). LDR has a positive effect on company performance (Ab-Rahim & Chiang, 2016), this research is inversely proportional to the research conducted by (Arimi & Mahfud, 2012). Inflation has a positive influence on company performance (Sahara, 2013), whereas it is inversely proportional to the research conducted by (Kanwal and Nadeem, 2013). Economic growth (GDP) has a positive influence on company performance (Khizer, 2009 in Sahara, 2013), this study is inversely proportional to research conducted by (Sistiyarini and Supriyono, 2016). this research is inversely proportional to the research conducted by (Arimi & Mahfud, 2012). Inflation has a positive influence on company performance (Sahara, 2013), whereas it is inversely proportional to the research conducted by (Kanwal and Nadeem, 2013). Economic growth (GDP) has a positive influence on company performance (Khizer, 2009 in Sahara, 2013), this study is inversely proportional to research conducted by (Sistiyarini and Supriyono, 2016). this research is inversely proportional to the research conducted by (Arimi & Mahfud, 2012). Inflation has a positive influence on company performance (Sahara, 2013), whereas it is inversely proportional to the research conducted by (Kanwal and Nadeem, 2013). Economic growth (GDP) has a positive influence on company performance (Khizer, 2009 in Sahara, 2013), this study is inversely proportional to research conducted by (Sistiyarini and Supriyono, 2016).

Based on the description above, this study aims to determine the effect of e-payment, financial ratios (CAR, NPL, NIM, LDR) and macroeconomics (inflation and GDP) on the performance of banking companies that were listed on the IDX in 2016 to 2018. Differences in this study with previous research which is located on the independent variable, the researcher developed the independent variable from various previous studies.

LITERATURE REVIEW

Performance

Performance is the result of work-related to organizational goals, customer satisfaction, and can add economic value (Wilya 2013). Company performance consists of several measurements, namely financial performance, and organizational performance. According to Mulyadi (2007: 2) company performance is a periodic determination of operational activities of an organization and employees based on established standards and criteria. From some of the discussion above it can be concluded that the measurement of financial performance is the achievement of results by managers of an organization based on standards set at

certain periods. In evaluating the performance of banking companies, the calculation of financial ratios such as leverage ratio, activity ratio, liquidity ratio, and profitability ratio is used.

E-payment

Electronic payment (e-payment) is a payment system that supports e-commerce and benefits business transactions by improving service to customers, improving cash management processes, saving time and efficiency, payment transactions can be done anytime, anywhere, with a variety of media and not limited (Revelation 2005: 1). E-payment services are used for various needs through Payment Media Bank (ATM, phone banking, internet banking, mobile banking, tellers). Electronic payments consist of three components, namely:
1. Mobile Banking
2. Internet banking
3. Card payment instrument (CPI)

Financial Ratios

The capital ratio in this study was measured using the variable Capital Adequacy Ratio (CAR), which illustrates the level of bank capital adequacy. Capital Adequacy Ratio (CAR) is a capital adequacy ratio that shows how the ability of a bank to provide funds that will be used to overcome the risk of loss in the banking system. If CAR rises, profitability decreases, which means that the greater the CAR, the performance decreases, but if CAR decreases, profitability will increase, meaning the lower the CAR value, profitability will increase, thereby increasing company performance.

Non-Performance Loan (NPL) is a comparison between non-performing loans and total loans. This ratio indicates that the higher the NPL ratio, the worse the quality of the credit.

Net Interest Margin (NIM), this ratio is used to measure the ability of bank management in managing productive assets to generate net interest income. Net interest income is derived from interest income less interest expense. The standard set by Bank Indonesia for the NIM ratio is 6% and above. The greater this ratio, it shows an increase in interest income on productive assets managed by banks so that the likelihood of a bank in problematic conditions is getting smaller (Riyadi, 2015).

The liquidity calculation uses a Loan to Deposit Ratio (LDR) ratio. This ratio is used to determine the ability of banks to repay obligations to customers who have invested funds with loans that have been given to their debtors (Santoso and Triandaru, 2006).

Macroeconomics

Inflation

Inflation is an event that shows a general increase in the price level that continues. Inflation can be measured by calculating the change in the percentage change in a price index Prices will rise due to excess money created or produced by the central bank. Increasing the amount of money in circulation means an increase in the cash balance held by consumer households and consequently will increase public consumption expenditure.

Economic Growth (GDP)

Economic growth is a process of changing a country's economic conditions on an ongoing basis to a better condition for a certain period (Agustina, 2016). Economic growth can be measured through Gross Domestic Product (GDP), which is one indicator of the economy, if GDP increases, wages for people's living standards also increase. The increase in wages or income of the community affects the ability to save (saving) also increases. This increase in savings will affect bank profitability.

Transaction Cost Theory

Transaction costs can be minimized by using information technology, and according to transaction cost theory, both companies and individuals looking for the lowest transaction costs, most of which are production costs. Laudon & Jane (2014: 93) also added that using the market costs is expensive because of the costs of moving and communicating with suppliers that are far away, overseeing contract fulfillment, buying insurance, obtaining product information, and other things. With the existence of information technology these costs can be minimized.

Signaling Theory

Signaling theory explains that companies have the drive to provide financial statement information to external parties (Jogiyanto, 2014). Information is an important element for investors and business people because the information presents information, notes, or pictures both for the past, current, and future conditions for the survival of a company.

Hypothesis

H1: E-payment (Mobile banking, Internet Banking, and APMK) have a significant positive effect on the performance of banking companies.

H2: CAR has a significant negative effect on the performance of banking companies.

H3: NPL has a significant negative effect on the performance of banking companies.

H4: NIM has a significant positive effect on the performance of banking companies.

H5: LDR has a significant negative effect on the performance of banking companies

H6: Inflation has a significant negative effect on the performance of banking companies.

H7: Economic growth has a significant positive effect on the performance of banking companies.

RESEARCH METHODOLOGY

The independent variable used in this study is e-payment which uses a dummy variable with a value of 1 for companies that provide e-payment services and a value of 0 for companies that do not provide e-payment, financial ratios (CAR, NPL, NIM, LDR) by using a formula. Macroeconomics consisting of inflation is calculated by the Consumer Price Index (CPI) and Economic Growth with Gross

Domestic Product (GDP). While the dependent variable used in this study is company performance measured by profitability ratios, namely ROA.

Population and sample

This study uses a population of banking companies listed on the Indonesia Stock Exchange (BEI) in 2016-2018. While the sample of the population used in this study is a banking company listing on the Indonesia Stock Exchange (BEI) in 2016-2018 with certain criteria.

Data and Data Types

The data used in this study are secondary. The data to be used is financial statement information from banking companies listing on the Indonesia Stock Exchange (IDX) in 2016-2018 and various other relevant sources.

This study uses data obtained from information on financial statements of banking companies listed on the Stock Exchange in 2016-2018. The data were obtained at the Indonesia Stock Exchange (IDX). The data will be processed using SPSS software for statistical tests.

Definition of Operational Variables

1. *E-payment* is a digital-based payment instrument consisting of internet banking, mobile banking, and APMK, this variable uses a dummy variable which will be given a value of 1 if the company provides digital-based services, while a value of 0 for companies that do not provide digital-based services.

2. CAR is the ratio between capital and weighted assets according to risk. The formula used in calculating CAR is as follows:

Formula 1. CAR

$$CAR = \frac{Capital}{Risk\ Weighted\ Assets}\ x\ 100\% \ldots (1)$$

3. NPL is a comparison between non-performing loans and total loans, the formula used is as follows:

Formula 2. NPL

$$NPL = \frac{Non\ performing\ loans}{Total\ Loans}\ x\ 100\% \ldots (2)$$

4. NIM is the ratio between net interest income and average earning assets. The following is the formula used in calculating NIM:

Formula 3. NIM

$$NIM = \frac{Interest\ Income\ net}{Average\ Productive\ Assets}\ x\ 100\% \ldots (3)$$

5. LDR is a comparison between the amount of credit given and the funds received. Following are the formulas used in calculating the LDR ratio:

Formula 4. LDR

$$LDR = \frac{Total\ Credit\ ceiling\ provided}{Funds\ received} \ x\ 100\% \dots (4)$$

6. Inflation in this study was measured using the Consumer Price Index (CPI)
7. Economic growth in this study will be measured by Gross Domestic Growth (GDP).
8. ROA is the profitability ratio used in assessing company performance. The formula used is as follows:

Formula 5. ROA

$$ROA = \frac{Net\ Income}{Average\ Total\ Assets} \ x\ 100\% \dots (5)$$

Data Analysis Method

The analysis in this study uses multiple linear regression analysis. Multiple linear regression analysis is used to test the effect of independent variables on the dependent variable. Before carrying out multiple linear regression analysis, it must conduct a classic assumption test to ascertain whether the regression model used does not have problems of normality, multicollinearity, heteroscedasticity, and autocorrelation.

RESULTS AND DISCUSSION

Classic Assumption Test is a test on multiple linear regression analysis. The series of classic assumption tests conducted are the normal test, autocorrelation test, multicollinearity test, heteroscedasticity test. after conducting the classic assumption test continued with the F test (simultaneous) and the T-test (partial). Data can be said to have a normal distribution if the dependent variable has a value with a significance of more than 5% or 0.05. In the normality test the research data is said to be good if it has a normal distribution (Ghozali, 2018).

Muktikolinearitas test is a test to determine whether or not there is a correlation between one independent variable with another. The method used to determine multicollinearity in the research model is by looking at Tolerance and Variance Inflation Factors (VIF) through the SPSS program if the Tolerance value> 0.10 or equal to VIF <10. In this study, each independent variable has a value of less than 10 so that no multicollinearity problem is found.

The regression model is state to be good if the regression model is free from autocorrelation. If the significance value> 0.05 then no autocorrelation occurs whether positive or negative. There are several criteria for the autocorrelation test using Durbin Watson (DW Test). In this study, a DW value of 2.199 was found to be

close to the range of dU values and 4-dU values so that the assumption of autocorrelation was fulfilled.

Regression models are state to be good if the heteroscedasticity regression model data. The method used to detect heteroscedasticity in a research model then performed the Glejser test through SPSS. If the parameter coefficient beta> 0.05 then there is no heteroscedasticity problem. In this study, the significance value of each independent variable is more than 0.05 so that the heteroscedasticity assumption is fulfilled.

Multiple Linear Regression Test

Table 1. Equation of Multiple Linear Regression

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,120	1,468		.763	.447
	E-Payment	.462	.205	.185	2,256	.026
	CAR	-.004	.008	-,050	-.562	.575
	NPL	-398	.064	-433	-6,248	.000
	NIM	342	.477	.5221	7,355	.000
	LDR	-.002	.001	-.130	-1,514	.133
	Inflation	.124	299	.026	.415	679
	GDP	-094	.000	-.077	-970	.335

a. Dependent Variable: ROA

Source: Data processed with SPSS (2020)

The regression equation model in table 1.1 is as follows:

Y = a + b1x1 + b2x2 + b3x3 + b4x4 + b5x5 + b6x6 + e
ROA = 1,120 + 0,462X1 - 0,004X2 - 0,398 X3 + 0,342X4 - 0,002X5 + 0,124X6 - 0,094X7 + e

The following is a table of the coefficient of determination:

Table 2. Determination Coefficient Results

Summary Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.806a	649	.622	.74510

a. Predictors: (Constant), GDP, NPL, LDR, Inflation, NIM, E-Payment, CAR

Source: Data processed with SPSS (2020)

In this research the results of the coefficient of determination obtained R Square value of 0.622 means that the influence of the ROA variable caused by the E-Payment, CAR, and NPL variables is 62.2 percent, while the influence of the ROA variable caused by other factors is by 37.8 percent.

Determine of E-payment on Company Performance

Based on the regression test results in table 1.1, the value of t arithmetic (2.256) is greater than t table (1.986) or the significance value (0.026) is less than alpha (0.050) so that there is a significant influence between the E-Payment variable on the ROA variable. So, it can be concluded that digital-based services (Mobile banking, Internet Banking, and APMK) have a significant positive effect on ROA. This research is in line with research conducted by Hernando and Neito (2006) that internet banking and mobile banking service providers can reduce overhead costs.

Determine of Capital Adequacy Ratio (CAR) on company performance

Based on the results of the regression test in table 1.1, the value of t arithmetic (0.562) is less than t table (1.986) or the significance value (0.575) is more than alpha (0.050) so there is no significant effect between CAR variables on the ROA variable. So, it can be concluded that there is no significant effect between CAR variables on ROA. The results of this study are by following research conducted by (Sistiyarini and Supriyono, 2016). Theoretically, capital hurts harm's bankruptcy. Capital ratios can be measured by CAR. The higher the CAR, the stronger the bank's capital. The stronger the bank's capital, the lower the bank's potential bankruptcy, and of course the bank's performance will increase.

Determine of Net Performing Loans (NPL) on company performance

Based on the results of the regression test in table 1.1, the t value (6.248) is greater than t table (1.986) or the significance value (0.000) is less than alpha (0.050) so that there is a significant influence between the NPL variable on the ROA variable. This research was supported by Attar et al. (2014), Margaretha and Zai (2013), Eng (2013), Sabir et al. (2012), Akhtar et al. (2011) and Pramuka (2010). This ratio indicates that the higher the NPL ratio shows the worse the credit quality, and vice versa.

Determone of Net Interest Margin (NIM) Ratio on company performance

Based on the results of the regression test in table 1.1, the t value (7.355) is greater than t table (1.986) or the significance value (0.000) is less than alpha (0.050) so that there is a significant influence between the NIM variables on the ROA variable. So, it can be concluded that there is a significant influence between the NIM variables on the ROA variable. This study is in line with research by Alper & Anbar (2011) and Arimi & Mahfud (2012). Theory This ratio shows the ability of banks to obtain operational income from funds placed in the form of loans (credit). The higher the NIM shows the more effective the bank is in placing productive assets in the form of credit.

Determine of LDR on company performance

Based on the results of the regression test in table 1.1, the t value (1.514) is

less than the t table (1.986) or the significance value (0.133) is more than alpha (0.050) so there is no significant effect between the LDR variable on the ROA variable. So, it can be concluded that there is no significant effect between the LDR variable on the ROA variable. This research is by following research conducted by Arimi & Mahfud (2012) and Yhuda Chabacib (2017).

Determine of Inflation on Company Performance

Based on the results of the regression test in table 1, the t value (0.415) is less than the t-table (1.986) or the significance value (0.679) is more than alpha (0.050) so there is no significant effect between the Inflation variable on the ROA variable. So, it can be concluded that there is no significant influence between the Inflation variable on the ROA variable. This research is in line with research conducted by Kanwal & Nadeem (2013) which says that inflation can reduce the real value of savings so that bank profitability will also decrease.

Determine of Economic Growth (GDP) on company performance

Based on the results of the regression test in table 1 obtained value of t arithmetic (0.970) less than the t-table (1.986) or significance value (0.335) more than alpha (0.050) so that there is a significant influence between GDP variables on ROA variables. So, it can be concluded that there is a significant influence between the variables of GDP on the variable ROA. This study is by following research by Khizer Ali (2011) and Sahara (2013).

CONCLUSION

Based on the research that has been carried out obtained several conclusions as follows:

1. Digital e-payment based service variables (Mobile banking, Internet Banking, and APMK) have a significant positive effect on ROA. Because banks that have digital-based services (e-payment) can improve their performance better than banks that do not provide these services.
2. The Capital Adequacy Ratio (CAR) variable does not significantly influence ROA. The higher the CAR the stronger the bank's capital. The stronger the bank's capital, the lower the bank's potential bankruptcy, and of course the bank's performance will increase.
3. Variable NPL has a significant effect on the ROA variable, an increase in NPL causes the number of problem loans to increase with the increase in problem loans, the costs incurred by banks are greater, resulting in decreased bank capital and potentially resulting in losses to banks, as a result, the performance of bank companies will decline.
4. The NIM variable has a significant effect on the ROA variable. Thus it can be concluded that the greater the change in the Net Interest Margin (NIM) of a bank, the greater the profitability of the bank, which means the financial performance is increasing.
5. The LDR variable does not have a significant effect on the ROA variable. Due to the higher banks channeling funds to the public, what happens is

that banks suffer losses that have an impact on decreasing profitability so that company performance can decline.

6. The Inflation variable has a significant influence on the ROA variable. This research shows a positive relationship between inflation and company profitability, meaning that the higher the inflation value, the profitability will rise so that the company's performance can increase, and vice versa.

7. The GDP variable has a significant effect on the ROA variable. The increase in gross domestic income has a positive effect on consumer income because it can increase saving patterns for banking companies so that it has a good impact on company performance.

8. E-Payment, CAR, NPL, NIM, LDR, Inflation, and GDP variables on ROA simultaneously have a significant effect. This shows that a significant change in profitability (ROA) will occur if E-Payment, CAR, NPL, NIM, LDR, Inflation, and GDP experience changes together.

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