THE ANALYSIS OF FINANCIAL TECHNOLOGY EFFECT ON THE FINANCIAL PERFORMANCE OF BANKING SECTOR COMPANIES IN INDONESIA

Ebhalina Wijaya[1], Felicia Audrey[2], Tamara[3], Yeni Ariesa*[4],
Mochammad Fahlevi[5]
[1234]Universitas Prima Indonesia
[5]Bina Nusantara University, Management Department
* Corresponding Email: yeniariesa@unprimdn.ac.id

Abstract

Banking performance is important to analyze so that we can know the effectiveness of banks in generating profit. This research to examine the effect of internet banking, mobile banking, and ATMs on banking financial performance for the period 2017 – 2021. The type of this research is quantitative research. The characteristic of this research is descriptive. The population of this research are companies that operating in bank sector and has been registered in OJK which is 72 company. This research have 250 samples. The analysis model of this research is multiple linear regression. The results of the research are that internet banking positively affects bank financial performance for the 2017 – 2021 period but not significant, mobile banking positively affects bank financial performance for the 2017 – 2021 period but not significant, ATM positively affects bank financial performance for the 2017 – 2021 period but not significant.

Keywords: Internet Banking, Mobile Banking, ATM, Financial Performance
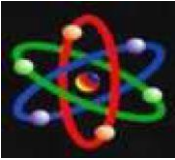
INTRODUCTION

Banking performance need to be analyzed so that we can find out the effectiveness of banking to create profit by utilizing bank asset, because investor and bank itself needs to know the banking condition in a period that measure by indicator. One of the banking performance such as profitability, can measure how well a bank can actively generate profits. Return on asset is one of the ratio that important to know that can be a parameter to measure how well a bank can manage asset to generate profit.The higher the value of return on assets, the higher the rate of return, which has a positive impact on the bank's position.

In the industrial era 4.0, everything have been digitalized, one of it is financial technology, which is collaboration between technology and financial services. Fintechmake it easier for people to get the business capital loans, money circulation, and investing. However, fintech also has risks, so people must be wise in borrowing and managing funds because digital change occurs quickly, but speed is not always accompanied by system perfection. The beginning of the development of fintech can be seen from the emergence of a machine that can make it easier for financial service users, Automatic Teller Machine (ATM). ATM machines make the work of bank officers easier, especially tellers, because customers can directly deposit small or large amounts of money outside bank operational hours directly using ATM without going through a teller, so customers don't have to queue. Other

fintech-based financial services such as internet banking and mobile banking have almost the same function in the form of bank services to facilitate transactions, both in checking balances, transferring money, checking mutations and so on digitally. The reason we chose the banking sector was because we saw opportunities for digital banking services in the future, where financial transactions can be carried out easily and practically using technology provided by banks in the current era of digitalization. The reason why researchers choose the 2017 - 2021 period is because there is problems were found in that period, where the return on assets (ROA) of banking sector companies with internet banking, mobile banking and ATM services was decreasing from year to year. The aim of our research is to see whether the increasing number of ATM units and internet banking and mobile banking users can increase return on assets.
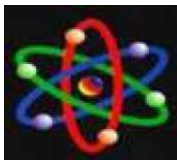
YEAR	ROA BANK VALUE		
	BRI	SINARMAS	UOB
2017	3.69%	1.26%	0.98%
2018	3.68%	0.25%	1.07%
2019	3.50%	0.23%	1.08%
2020	1.98%	0.30%	0.69%
2021	2.72%	0.34%	0.92%

Source :Financial Statements (Secondary Data)

Table 1. Banking ROA that provide Internet Banking services ,Mobile Banking and ATM in 2017-2021

From the table above, bank that provides banking service, such as ATM, internet banking and mobile banking, return on asset can experienced decreased and increased, for example Bank Rakyat

Indonesia that experienced decrease during 3 years consecutively from 2018-2020 and increased back 0.74 % in 2021.

RESEARCH METHODS

Researchers use a financial management research approach, especially in analyzing the influence of the number of transactions using internet banking and mobile banking and ATMin companies that operating in the banking sector on the company's financial performance. Researchers use a type of quantitative research, where research is carried out based on concrete data where the data are numbers that can be measured or processed using statistics (Sugiono, 2018:13). The nature of this research is descriptive.

Populations in the research were companies that operating in the banking sector and has been registered with the OJK, namely 72 companies. The researcher used a purposive sampling technique, namely a method used to determine the number of samples by paying attention to a certain criteria that previously had been determined by the researcher in taking research samples (Sugiono 2018; 138).

The research model contained in this research is a multiple linear regression analysis model because the researcher uses more than 1 (one) independent variable to find out how much influence the independent variable has on the dependent variable (Ghozali, 2018). Sugiono (2017:275) states that the formula for the multiple linear regression equation is as follows.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

Information :
Y = company performance
a = constant
b_1, b_2, b_3 = regression coefficient of independent variables
x_1 = mobile banking
x_2 = internet banking
x_3 = ATM
e = nuisance variable

RESULTS AND DISCUSSION

Outer Loadings
Convergent Validity Test

Description	Internet Banking (x_1)	Mobile Banking (x_2)	ATM (x_3)	ROA (y)
Internet Banking (x_1)	1,000			
Mobile Banking (x_2)		1,000		
ATM (x_3)			1,000	
ROA (y)				1,000

Source :SmartPLS Data Processing
Table 2. Outer Loadings

From Table above Internet Banking, Mobile Banking, and ATM isrelated to ROA which has a high correlation of 1,000 > 0.7 to ROA.
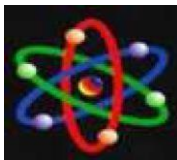
Discriminant Validity Test

Description	Average Variance Extracted (AVE)
Internet Banking (x_1)	1,000
Mobile Banking (x_2)	1,000
ATM (x_3)	1,000
ROA (y)	1,000

Source :SmartPLS Data Processing
Table3. AVE Measurement

From Table above the √AVE value for each variable is 1 indicating that √AVE>than the correlation value of each variable with its indicator.

Composite Reability Test

3	Composite Reliability
Internet Banking (x_1)	1,000
Mobile Banking (x_2)	1,000
ATM (x_3)	1,000
ROA (y)	1,000

Source :SmartPLS Data Processing
Table 4. Composite Reliability

From Table above, it can be seen that the composite reliability value for each variable is 1> 0.7, it count as high reliability.

Cronbach Alpha Test

Description	Cronbach's Alpha
Internet Banking (x_1)	1.000
Mobile Banking (x_2)	1.000
ATM (x_3)	1.000
ROA (y)	1.000

Source :SmartPLS Data Processing
Table 5. Cronbach Alpha

From Table above, the Cronbach alpha value for each construct 1 >0.7, means that each indicator is closely related to the latent variable.

Inner Model
R-square (R2)

	R-Square	R-SquareAdjusted
ROA (y)	0,001	-0,011

Source :SmartPLS Data Processing
Table 6. R-square

From Table above, R-Square ofROA is 0.001, it indicates that internet banking,mobile banking, ATMhave an influence of 0.1% on ROA where the interaction is still weak.

Hypothesis Test
In PLS testing, each relationship is tested using a bootstrapping method simulation on the sample. Bootstrapping can be seen from the t-statistic value with a significance value > 1.96. This test was carried out to minimize the problem of abnormal research data.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Internet Banking X1 → ROA Y	0,057	0,151	0,171	0,334	0,739
Mobile Banking X2 → ROA Y	-0,027	-0,085	0,141	0,194	0,846
ATM X3 → ROA Y	-0,011	0,008	0,051	0,209	0,834

Source :SmartPLS Data Processing
Table 7. Path Coefficient

Path coefficient is a value to indicate the direction of the variable relationship, whether the hypothesis we have has a positive or negative direction.
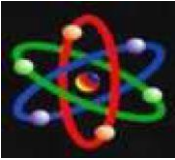
NEGATIVE	POSITIVE
-1	0

From the path coefficient table above, it can be concluded that:

1. P Values of internet banking on ROA 0.739> 0 which means that internet banking has a positive influence on banking financial performance, namely return on assets (ROA).
2. P Values of mobile banking on ROA 0.846> 0 means that mobile banking has a positive influence on banking financial performance, namely return on assets (ROA).
3. P Values of ATM on ROA 0.834> 0, meaning that ATM has a positive effect on banking financial performance, namely ROA.
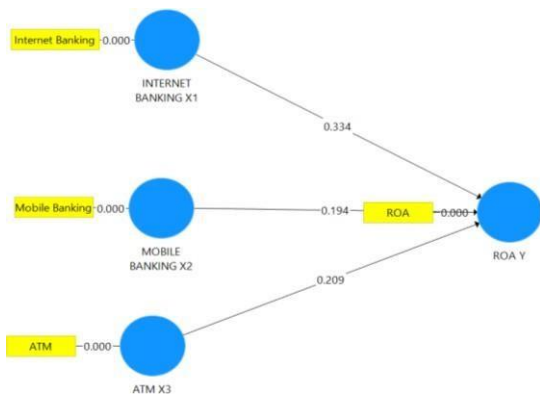
Source :SmartPLS Data Processing
Picture 1. Bootstrapping

From Table and Picture above it explains:

1. Internet banking has a P values of 0.739> 0 and T statistics of 0.334 < 1.96 that mean internet banking has a positive but not influence significantly on banking financial performance in 2017-2021.
2. Mobile banking has a P values of 0.846> 0 and T statistics of 0.194 < 1.96, which means that mobile banking has a positive but not influencesignificantly on banking financial performance in 2017-2021.
3. ATM have a P values of 0.834> 0 and T statistics of 0.209 < 1.96, it means that ATM have a positive but not significant effect on banking financial performance in 2017-2021.

The Influence of Internet Banking on Banking Financial Performance

Based on the results of the research, it can be seen that internet banking has a positive but not significant effect on banking financial performance, namely return on assets. So the relationship between the exogenous variable (x), namely internet banking, and the endogenous variable (y) shows that as the number of internet banking transactions increases, the return on assets also increases. On the other hand, the exogenous variables (x) has an impact on bank performance which is more efficient, for example in terms of minimizing bank operations (paper, time, energy, etc.) because it is through a web-based application which is more practical and is also of course one of the additional banking income from service fees charged to customers. However, the disadvantages of internet banking are security issues such as cyber crime where customer's data can be stolen by hackers, it is prone to online crime, it is difficult to reach in remote areas so that from the things detailed
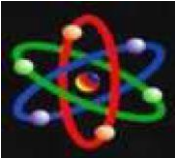
above, internet banking has a positive but not significant influence on improving banking financial performance. The state above is not related with research conducted by Yohani and Dita in 2018 stating that "the internet banking variable has no significant effect on financial performance". Mayasari et al in 2021 stated that "the large number of internet banking transactions can affect the decline in banking ROA."

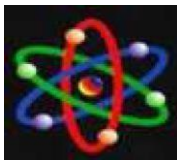**The Influence of Mobile Banking on Banking Financial Performance**

Based on the results of the research conducted, it can be seen that mobile bankinghas a positive but not significant effect on banking financial performance, namely return on assets. Where the relationship between the exogenous variable (x), namely mobile banking, and the endogenous variable (y) shows that as the number of mobile banking transactions increases, return on assets will also increase. The relationship between exogenous variables (x) has an impact on banking performance that is more practical and more efficient, such as being easily accessible anywhere and anytime in just one hand, features that are easier to understand and also the fees charged to customers are generally lower compared to internet banking. Disadvantages of mobile banking include that bank's customers are vulnerable to "smishing" fraud, namely hackers who pretend to impersonate the relevant banking institution and ask for details regarding the bank account owned by the customer, the network system is sometimes down that make the use of mobile banking for transactions get

distrub, which is the reason why mobile banking can improve banking financial performance, although not significantly. This is related with research conducted by Bagudu and Roslan (2017) which stated that "the results showed that mobile banking positively affected bank financial performance".

The Influence of ATM on Banking Financial Performance

Based on the results of the research conducted, it can be concluded that ATM(Automated Teller Machines) have a positive but not significant influence on banking financial performance, namely ROA. Where the relationship between the exogenous variable, namely variable x and the endogenous variable (y), proves that as the number of ATM transactions increases, ROA will increase. ATM have many advantages, where with an ATM, customers do not need to queue and waste time depositing money at the teller, more efficient both for the bank and for the customers themselves. The disadvantage of the ATM itself is that its location cannot be accessed anywhere because it is not always available anywhere, it is prone to skimming, namely former customer pin data being intercepted by data thieves, which is one of the reasons why ATM improve banking financial performance positively, although not significantly. This is related with research conducted by Mary and Isola in 2019 that the increasing ATM will improve banking financial performance.

CONCLUSION

Based on the research results, the following conclusions were drawn:

1. Internet banking has a positive but not significant influence on banking financial performance in 2017 – 2021.
2. Mobile banking has a positive but not significant influence on banking financial performance in 2017 – 2021.
3. ATM have a positive but not significant effect on banking financial performance in 2017 – 2021.

BIBLIOGRAPHY

Bahri, Syaiful. 2018. Metode Penelitian Bisnis Lengkap dengan Teknik Pengolahan Data SPSS.Yogyakarta : CV Andi Offset

Brigham, F. Eugene dan Houston, Joel F, 2016.Fundamentals Of Financial Management, Dasar-dasar Manajemen Keuangan.Buku 1, Edisi 10, Penerbit Salemba Empat; Jakarta.

Duli, Nikolaus. 2019. Metode Penelitian. Yogyakarta: Deepublish (Grup Penerbitan CV Budi Utama).

Egan,R. &Prawoto, H.2013. Pengaruh Internet Banking Terhadap Kinerja Perbankan di Indonesia (Studi Empiris Pada Bank yang Listing di BEI).Jurnal Akutansi Bisnis

Fadlan, A. 2018.Pengaruh Persepsi Kemudahan Persepsi Kegunaan Terhadap Penggunaan Mobile Banking (Studi Pada Mahasiswa Pengguna Mobile Banking Universitas Brawijaya). 121.

Ghozali, Imam. 2016. Aplikasi analisis multivariate dengan program IBM SPSS 23. Semarang: BPFE Universitas Diponegoro.

Hery. 2014. Analisis Kinerja Manajemen. PT.Grasindo.Jakarta.

Hutabarat, R.M. 2010."Mobile Banking Security Analysis Based WAP".Diunduh dari anakkebo.wordpress.com/.../mobile-banking-security-analysis-based-wap-ronaldm-hutabarat-113040275/
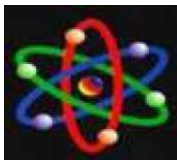
Kasmir. 2014. Analisis Laporan Keuangan Jakarta: PT. Rajawali Persada. Jakarta.

Khitaka, E. 2014.The Effect of Mobile Banking on Financial Performance of Commercial Banks in Kenya.

Kuswara, D. P. 2016. Pengaruh Pembiayaan Syariah, Jaringan Konvensional, dan Jumlah ATM Terhadap Return on Assets (Studi Kasus Bank Umum Syariah di Indonesia).(Doctoral dissertation, Universitas Terbuka).

Kustina, K.T., &Sugiarto, Y.W. 2020.Pengaruh Penerapan Branchless Banking dan E-Banking Terhadap Kinerja Keuangan Sektor Perbankan di Indonesia.Jurna lilmiah Akutansi dan Bisnis,5 (1), 2528-1216.

Mary, O., & Isola, F. O. 2019.Effect of e-banking on financial performance of listed commercial banks in Kenya. Global Scientific Journals (GSJ), 7(1), 722-738.

Mwange, J. A. 2013. The Impact of Mobile Banking on Financial Performance of Commercial Banks in Kenya.

Nurastuti, Wiji. 2011. Teknologi Perbankan: Penerbit Graha ilmu.Yogyakarta

Otoritas Jasa Keuangan. 2015. Bijakber-electronic banking. Jakarta: Otoritas Jasa Keuangan.

Putra, TofanKimoro. 2016. Pengaruh Kualitas Layanan Anjungan Tunai Mandiri dan Citra Perusahaan Terhadap Kepuasan Nasabah Bank BRI Syariah.Falkultas Ekonomi dan Bisnis Islam Jurusan Ilmu Ekonomi Islam Universitas Islam Negri Sunan Kalijaga. Yogyakarta

Rimbani, R. P. 2016. Analisis Pengaruh ROE, EPS, PBV, DER, dan NPM Terhadap Harga Saham Pada Perusahaan Real Estate Dan Property Di Bursa Efek Indonesia (BEI) Periode 2011-2013.Jurnal Bisnis dan Manajemen. Vol.53 - No.12, 182-228

Sugiyono. 2016. "Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, Dan R&D)." Jakarta: Rajagrafindo Persada.

Sugiyono. 2018. Metode Penelitian Kuantitatif Kualitatif R&D. Bandung : Penerbit Alfabeta

Tirtana, Irwan dan Shinta Permata Sari. 2014. Analisis Pengaruh Persepsi Kebermanfaatan, Persepsi Kemudahan Dan Kepercayaan Terhadap Penggunaan Mobile Banking. Seminar Nasional Dan Call For Paper. Program StudiAkuntansi-FEB UMS