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Determining Factors of Bank Profitability in Indonesia and Malaysia

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ABSTRACT: This stutdy analyzes the influence of financial technology on profitability in banks Indonesia and Malaysia for the 2017-2022. The influence of financial technology in this research is measured by the frequency of ATM, internet banking, mobile banking and E-Money transactions as independent variables, while bank profitability is measured by return on assets as the dependent variable. The type of data used is quantitative data. The data source used in this research is secondary data in the form of financial reports published on the banking company's official website. Purposive sampling was used to select five banks in Indonesia as samples. The analysis technique in this research uses Smart PLS 3.0 by analysing the inner model such as the coefficient of determination and hypothesis testing. The research result show that partially, ATM transactions have no effect on ROA in banks Indonesia and Malaysia, internet banking transactions have a positive effect on ROA in banks Indonesia but have no effect on banks in Malaysia, mobile banking transactions have a negative effect on ROA in banks Indonesia and Malaysia, E- Money transactions have no effect on ROA in banks Indonesia but have a significant positive effect on banks in Malaysia. Simultaneously, ATM transactions, internet banking, mobile banking and E-Money influence ROA in banking Indonesia and Malaysia

KEYWORDS: FinTech, ATM, Internet banking, Mobile Banking, E-Money, Return On Asset

1. INTRODUCTION

Financial technology activities in recent years have begun to bloom in Southeast Asia. The Financial Service Authority or Otoritas Jasa Keuangan definied fintech is an innovation in the financial services industry that utilizes the use of technology. Indonesia and Malaysia are ASEAN countries which have a larger number of financial technology companies with a share of 17% and 11% respectively. Bank Indonesia in its Indonesia Economic Report, (2017) stated that the development of financial technology is taking place rapidly, supported by rapid digital penetration in Indonesia. Total financial technology transactions in Indonesia in 2017 are predicted to reach 18.6 billion US dollars or an increase of 24.6% compared to conditions in 2016. This is in line with the number of financial technology players which has exceeded 180 prayers or grew by more than 65% compared to number of perpetrators at the end of 2016.

The value of digital banking transactions in Indonesia continues to increase every year. Based on data from Bank Indonesia (BI), throughout April 2023 the value of digital banking transactions in the country reached Rp4,624.8 trillion or almost Rp4.3 quadrillion. This value includes various digital banking transactions according to the classification of the Otoritas Jasa Keuangan (OJK), namely internet banking, SMS/mobile banking and telephone banking. Meanwhile, in April 2023 the value of digital banking transactions in Indonesia fell 11.8% compared to March 2023 (month-on-month/mom), and was 20.1% lower than April 2022 (year-on-year/yoy). However, if we look back five years, in April 2023 the value of digital banking transactions nationally had grown 158% compared April 2018.

The rapid growth of the global FinTech industry has changed the way banking the banking industry works to be more innovative. Aziz, Lestari and Furwanti (2020) argue that collaboration between FinTech and banks is a strategic step to achieve the goal of increasing financial inclusion for unbankable communities. However, how big and to what extent will banks be affected or will FinTech companie replace activities held by banks. Financial performance is one of the most important things in the business world regarding companies, both internally and externally. One of the banking sector indicators according to Bank Indonesia (2016) is Return On Assets, where this profitability ratio is an important indicator in the banking sector and is a comparison of earnings before tax with the average total assets of the bank. Therefore, banks are expected to be able to maximize the profits obtained so that profits increase and result Return On Assets also increasing. The level of bank profitability can be influenced by internal

and external factors. The banking sector needs to look at what factors can increase the Return On Asset ratio.

Based on previous research regarding financial technology, there are pros and cros regarding its effect on financial performance. The result of research conducted by Ogutu and Isola, (2019) show that e-banking as proxied by mobile banking, agency banking, ATM banking and online banking has an effect on Return On Assets in 11 Kenyan commercial banks for the 2013-2017 period. In this case e-banking can lead to increased bank performance in Kenya. In fact, in Kenya banks with high profitability are banks that are quick to adopt new technology. Similar research was conducted by Chhaidar, Abdelhedi and Abdelkafi, (2022) who analysed that fintech had a positive and significant relationship to profitability in 23 European banks for the 2010-2015 period, this was because the greater the banks digital involvement, the higher its profitability. Other research conducted by Indrianti, Gamayuni and Susilowati, (2022) shows that fintech services proxied by mobile banking, internet banking and SMS banking can improve the performance of 20 conventional bank listed on the Bursa Efek Indonesia in 2017-2021. In contrast to research by Karsh and Abufara, (2020) which shows that financial technology does nof affect the profitability of the banking sector in Kenya and Lithuania, where the results of statistical analysis show that the impact of financial technology oh the profitability of the banking sector is not statiscally significant. Yohani and Dita, (2018) in their research showed that internet banking had no effect on the financial performance of Conventional Commercial Banks listed on the Bursa Efek Indonesia (2015-2018 period).

This research is a replication of research conducted by Anugrah (2021) and Medyawati, Yunanto and Hegarini (2021). Anugrah's (2021) research aims to analyse the influence of the use of financial technology on the financial peromance of banking companies in Indonesia. The results of this research indicate that the use of ATM technology partially influences ROA. Partial useof intenet banking technology has no effe t on ROA. Utilization of ATM technology, internet banking and mobile banking simultaneously influences ROA. Anugrah's (2021) research measures financial performance using the same ROA approach as Medyawati, Yunanto and Hegarini (2021) research, but the difference is the analysis method used. Anugrah (2021) uses multiple linear regression analysis methods, while Medyawati et al, (2021) research uses panel data regression analysis. The reseach result of Medyawati et al, (2021) show that ATM technology has no effect on Return On Asset, this is influenced by the internet and mobile banking. However, ATM technology as well as internet and mobile banking have a simultaneous effect on Retirn On Asset. This research uses measurement of financial performance levels with the Return On Assets (ROA) approach. The samples in this research are commercial banks listed on the Bursa Efek Indonesia and Malaysian banks for the 2017-2022 period. The measurement of fintech in this research uses the frequency of ATM transaction, internet banking, mobile banking and e-money. The analysis technique used is Smart PLS 3.0 by analysing the inner model such as the coefficient of determination and hypothesis testing.

2. LITERATUR REVIEW

2.1 Transaction Cost Theory

Commons (1931) introducted that transactions are parts from economic thpught. Individual activities are essentially transactional and it is not personal or even an exchange of goods in an economic system. Transaction cost theory is currently relevant for research on the impact of e-banking on the financial performance of commercial banks registered in Kenya. The use of technology in banking is for lowering prices associated with transactions for the benefit of customers and banking institutions. Lower transaction costs are expected increase the income of banking institutions (Ogutu & Isola, 2019).

2.2 Technology Acceptance Theory

Venkatesh and Davis (2000) stated perceived ease of use new technology refers to how easy it is for someone to learn or operate new technology or information systems. Uses of technology perceived personal beliefs indicate that the technology or system certain new information has the potential to increase work effort. The TAT model emphasizes how is the perceived ease of use of a new technology directly influence perceptions of the usefulness of the technology. External variables, such as environmental factors around an individual, influencing perceptions of usefulness and ease of use. Hence, the technology acceptance theory is based on important perception factors: perceived usefulness and convenience use.

2.3 Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is a technology acceptance model developed by Davis, Bagozzi and Warshaw (1989). TAM is a theory that offers a basis for describes how users use and receive technology. Davis, Bagozzi and Warshaw (1989) explained perceived usefulness as the extent to which a person believes there will be an increase in job performance as a result of better use of technology. Perceptions usability influences attitudes towards acceptance of information systems as well influenced by ease of use. Despite ease of use determine the acceptance and adoptions of information systems, this may not explains consumer behaviour in adopting internet banking (Mustiya & Atheru, 2019). Use of information technology in service companieswill improve service quality, reduce costs and is a standardization of offers in services to consumers. Liu and Arnett (2000) analysed important variables for emergence successful website based on TAM theory. Technology Acceptance Model (TAM) is the key theory

underlying recent research on how e-banking affects the performance of registered banks in Kenya.

2.4 ATM, Internet Banking, Mobile Banking and E-Money Financial Technology

Hsueh and Kuo (2017) stated that FinTech is a service model new finance developed through information technology innovation. Opinion another thing regarding the meaning of fintech was stated by Pribadiono (2016) regarding Financial Technology, which is a combination of technology and financial features or it can also be interpreted as innovation in the financial sector with a technological tpuch modern. Automathed Teller Machine (ATM) is a terminal /computer machine connected to the banks communication network, which allows customers carry out financial transactions independently without the help of a teller or other bank officers (OJK,2015). In accordance with technological developments, currently banks also provide three another type of ATM machine, namely an ATM machine that only serves non-transactions cash and ATM machines that serve cash deposit transactions such as Cash Deposit Machine/CDM.

Internet banking is a service that allows bank customers to carry out banking transactions via the network internet (Bank Indonesia, 2003). In providing internet banking services, banks provide information regarding products and services via portals on the internet that provide access to customers to make transactions and update their personal data independent. According to the Otoritas Jasa Keuangan (2015), mobile banking is services that enable bank customers to carry out banking transactiobs via cell phone or smartphone. Mobile banking services can be used by using the menu that is available on the SIM (Subscriber Identity Module) card, USSD (Unstructured Supplementary Service Data), or visa applications that can be downloaded and installed by customers. Mobile banking offers convenience when compared to SMS banking for customers no need to rememberthe format of the SMS message that will be sent to the bank and also SMS banking destination number.Definition of electronic money according to Bank Regulations Indonesia No. 16/8/PB1/2014 is the value of money stored electronically on a media server or chip that can be moved for purposes payment transactions and.or fund transfers to obtain electronic money in this case, users must deposit or pay using money physical or cash to the electronic money issuing company for later stored in electronic media before using it for purposes transaction.

2.5 Profitability as a Bank

Profitability is a suitable indicator to measure company performance. Return On Asset (ROA), a ratio showing the return on the company's total assets. ROA measures the companys's proftbaility better because it shows the management's effective use of assets to earn income. (Kasmis, 2012). Assessment of bank performance in generating calculated profits through profit before tax to the average of total assets. The higher it is percentage of return on asset, the better the conditions for using the activity and the greater the profits obtained. Research that uses ROA as a reference the dependent variables are Yohani and Dita (2018),Ogutu and Isola (2019), Njoroge and Mugambi (2018), Medyawati, Yunanto and Hegarini (2021), Anugrah (2021).

2.6 The Effect of FinTech on Financial Perfomance

Ogutu and Isola, (2019) show that e-banking has an effect on profitability in 11 Kenya commercial banks for the 2013-2017 period. In terms of this e-banking can lead to improved bank performance in Kenya. Even, in Kenya banks with high profitability are banks that are fast in adopting new technology. This research uses a panel data regression analysis method. The independent variables used are mobile banking, agency banking, ATM banking and online banking. The dependent variable is return on asset. Jepchumba and Simiyu (2019) stated that e-banking positive effect on the financial performance of commercial banks in Nairobi, Kenya. E-banking system costs, e-banking ris management, service speed electronics and skills required in usinge-banking used as an independent variable. The dependent variable is return on asset, net profit and operating profit. The analytical method used is multiple linear regression analysis. Medyawati, Yunanto, and Hegarini, (2021) analyzed that fintech influence the performance of banks listed on the Indonesia Stock Exchange for the period 2014-2020. The independent variablesused in this research are ATM, Internet Banking and Mobile Banking. The dependent variable is Return On Assets (ROA). ATM technology shows no effect on return On Asset, this is influenced by the internet and mobile banking, but technology ATM as well as internet and mobile banking simultaneously influence Return On Assets. The analytical method used in this research is panel data regression analysis. Chhaidar, Abdelhedi, and Abdelkafi, (2022) analyzed that fntech positively and significantlyrelated to profitability in 23 European banks 2010-2015 period, because the greater the digital involvement of banks, the more high profitability. This research also provides evidence that bank size is a moderator factor in influencing the relationship between investment digital and profitability. Therefore, big banks earn more There are many benefits from investing in financial technology so that it can improve its performance. The analytical method used is the chow test with FMOLS model. The independent variables used are Digitalization (DIG) and the dependent variable is Return On Assets. In this research too using control variables, namely Bank Size, Solvency, Liquidity, Capital Adequacy Ratio (CAR), Annual Inflation Rate, (INF) and Growth Gross Domestic Product (GDP). From the previous findings, the hypothesis in this study is than ATM technology, internet banking,

mobile banking and e-money affect ROA

3. METHOD

This study was conducted on commercial banks listed on the Indonesia Stock Exchange and Malaysian banks. Period The research taken was six years, namely from 2017-2022. This research took the initial election year, namely 2017 for reasons that in 2017 fintech began to experience quite rapid growth in Indonesia and the final election year of 2022, due to 2023 data transactions from some banks cannot be obtained according to the variables researched. They selected from 2017 to 2022 using purposive sampling techniques. five banks in Indonesia were selected as samples based on certain criteria. Data sources were obtained from annual reports published on the sites www.idx.co.id and www.statista.com. Apart from that, banks must be usersof ATM, internet banking, mobile banking and e-money technology and have published them data on use of these services in the2017-2022 period. The dependent variable is financial performance as measured by Return on Assets (ROA). The independent variable is the number of transaction frequencies banking technology represented by the number of ATMs, internet banking, mobile banking and e-money. The analysis technique in this research uses Smart PLS 3.0 by analysing the inner model such as the coefficient of determination and hypothesis testing.

4. RESULT AND DISCUSSION

4.1 Research Data

This research was conducted on banks in Malaysia and banks listed on the Indonesia Stock Exchange in 2017-2022, using sixbanking entities as samples.

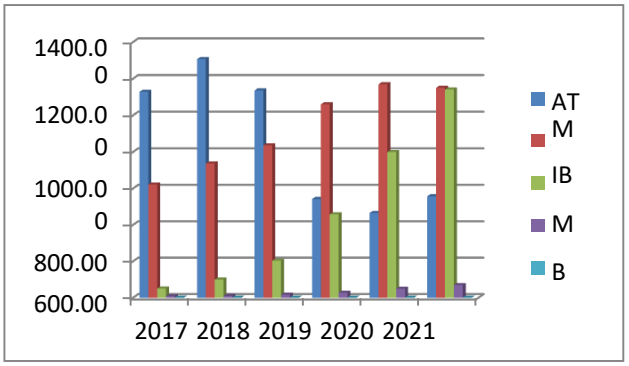

Figure 1. Number of transactions and Return on Assets (ROA) of Bank Malaysia period 2017-2022

ROA from year 2017-2022, Bank Malaysia in 2020 experienced a decline from 1.45 to be 0.92. Then in 2021 it will increase to amounting to 1.21 and in 2022 it will be 1.40. For transaction amount via ATM, in 2018 it achieved the highest number of transactions of 1,307.00 billion Malaysian Ringgit or if converted into rupiah it becomes 4,456,177.29 billion transactions. Next, for the number of transactions through Internet Banking, in 2021 received the highest number of transactions, namely amounting to 1,169.84 billion Malaysian Ringgit or if converted into rupiah it is equal to 3,988,534.38 billion transactions. Then the number of transactions via Mobile Banking, in 2022 will receive the highest number of transactions by number amounting to1,141.41 billion Malaysian Ringgit or if converted into rupiah it becomes equal to 3,891,603.15 billion transactions, and for the number of transactions via E-Money, 2022 will be the highest year to obtain an amount of 69.40 billion Malaysian Ringgit or if converted into rupiah it is 236,617.22 billion transaction.

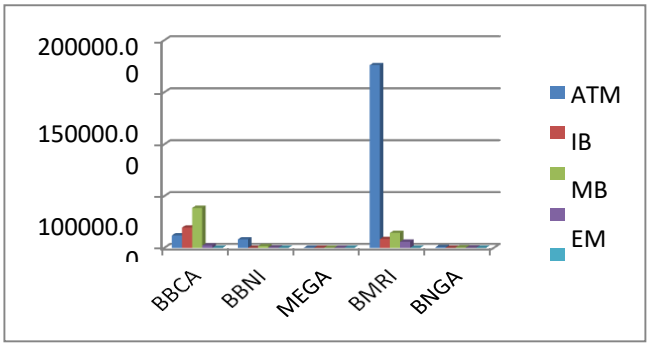

Figure 2. Number of transactions and Return On Assets (ROA) of Bank Indonesia period 2017-2022

Return On Assets (ROA) from 2017-2022, BCA bank has the highest total compared to other banks with a value of 21.80. For the number of transactions via ATM from 2017-2022, Bank Mandiri was the bank with the highest number of transactions with a total of 176,043.57 million transactions. Then for the number of Internet Banking transactions from 2017-2022, BCA bank is the bank with the highest number of transactions with a total of 19,562.00 million transactions. Furthermore, for the number of Mobile Banking transactions from 2017-2022, BCA bank is the bank with the highest number of transactions with a total of 38,576.00 million transactions. Meanwhile, for the number of transactions via E-Money from 2017-2022, Bank Mandiri is the bank with the highest number of transactions with a total value of 5,870.40 million transactions.

4.2 Inner Model Analysis

The results of the coefficient of determination for Malaysian banks and Indonesian banks are presented in tables 1 and 2. The R Square values of 0.67, 0.33 and 0.19 indicate that the model is strong, moderate and weak. (Ghozali, 2014)

Table 1. Coefficient Determination bank Malaysia

Variabel	R Square	R Square Adjusted
ROA	0.986	0.929

Return on assets variable (ROA) has an R-Square value of 0.986. This indicates that the number of financial technology transactions proxied by the number of transactions ATM, Internet Banking, Mobile Banking and E-Money have an impact on Returns On Assets is 98.6%, the remaining 1.4% (100% - 98.6%) is explained by other variables not examined in this research. Therefore, it can It is concluded that the strength of the model is the company's return on assets variable Banks in Malaysia can be categorized as strong.

Table 2. Coefficient Determination bank Indonesia

Variabel	R Square	R Square Adjusted
ROA	0.353	0.249

Return On Assets (ROA) has an R-Square value of 0.353. This shows that the number of financial technology transactions proxied by the number of ATM, Internet Banking, Mobile Banking and E-Money transactions has an impact on Return On Assets of 35.3%, the remaining 64.7% (100% - 35.3%) explained by other variables not examined in this study. Therefore, it can be concluded that the strength of the model on the Return On Assets variable for banking companies in Indonesia can be classified as moderate.

4.3 Hypotesis Test

Partial test results for Malaysian banks and Indonesian banks are shown in tables 3 and 4

Table 3. Partial test results on Malaysian banks

Hypotesis	Causal relationship	Original Sample (O)	T-Statistics	P-Value	Results
H1	ATM -> ROA	0.133	0.082	0.937	Not accepted
H2	IB -> ROA	-0.357	0.250	0.811	Not accepted
H3	MB -> ROA	-11.167	2.519	0.045	Accepted
H4	EM -> ROA	11.321	2.949	0.026	Accepted

Path coefficients show T-Statistics results of 0.082 ≤ 1.96 and p-value of 0.937 ≥ 0.05, which means the number of ATM transactions does not have a positive effect on Return On Assets at banks in Malaysia. Path coefficients show T-Statistics results of 0.250 ≤ 1.96 and p-value of 0.811 ≥ 0.05 so it can be concluded that Internet Banking does not have a negative effect on Return On Assets at banks in Malaysia. Path coefficients show T-Statistics results of 2.519 ≥ 1.96 and p-value of 0.045 ≤ 0.05. Thismeans that the number of Mobile Banking transactions has a negative and significant effect on Return On Assets at banks in Malaysia. Path coefficients show T-Statistics results of 2.949 ≥ 1.96 and p-value of 0.026 ≤ 0.05 so it can be concluded that the number of E-Money transactions has a positive and significant effect on Return On Assets at banks in Malaysia.

Table 4. Partial test result on Indonesian Banks

Hypotesis	Causal relationship	Original Sample (O)	T-Statistics	P-Value	Results
H1	ATM -> ROA	0.060	0.206	0.837	Not accepted
H2	IB -> ROA	1.363	4.168	0.000	Accepted
H3	MB -> ROA	-0.893	2.878	0.004	Accepted
H3	EM -> ROA	-0.177	1.498	0.135	Not accepted

Path coefficients show T-Statistics results of 0.206 ≤ 1.96 and p-value of 0.837 ≥ 0.05, which means the number of ATM transactions does not have a positive effect on Return On Assets in banking in Indonesia. Path coefficients show T-Statistics results of 4.168 ≥ 1.96 and p-value of 0.000 ≤ 0.05, which means the number of Internet Banking transactions has a positive and significant effect on Return On Assets in banking in Indonesia. Path coefficients show T-Statistics results of 2.878 ≥ 1.96 and p- value of 0.004 ≤ 0.05 so it can be concluded that the number of Mobile Banking transactions has a negative and significant effecton Return On Assets in banking in Indonesia. Path coefficients show T-Statistics results of 1.498 ≤ 1.96 and p-value of 0.135 ≥ 0.05 so it can be concluded that the number of E-Money transactions has no effect on Return On Assets in banking in Indonesia.

4.4 Impact of ATM Transaction, Internet Banking, Mobile Banking and E-Money

The calculated F value is 6.237 which is greater than the table F value (α = 0.05) of 4.54. The resulting coefficient of determination (R^2) between the number of ATM, Internet Banking, Mobile Banking and E-Money transactions and Return On Assets is 0.353 or 35.3%, which shows that the ability of the FintTech influence variable to explain the Return On Asset variableis quite high. So it can be concluded that the variable influence of Financial Technology transactions which is proxied by the number of ATM, Internet Banking, Mobile Banking and E-Money transactions simultaneously influences bank profitability as shown through the level of Return On Assets (ROA) in public banking entities in Indonesia.

Likewise, the results of the F test on banks in Malaysia show that the calculated F value is 17.60, which is greater than the F table (α = 0.05) of 5.12. The resulting coefficient of determination (R^2) between the number of ATM, Internet Banking, Mobile Banking and E-Money transactions and Return On Assets is 0.986 or 98.6%, which shows the ability of the FintTech influence variable to explain the Return On Asset variable is very high. So it can be concluded that the variable influence of Financial Technology transactions which is proxied by the number of ATM, Internet Banking, Mobile Banking and E-Money transactions simultaneously influences bank profitability as shown through the level of Return On Assets (ROA) at banks in Malaysia.

The results of this research are in line with research conducted by Anugrah, (2021) and Medyawati et al., (2021) which concluded that ATM, Internet Banking and Mobile Banking have a joint (simultaneous) influence on the financial performance of banking companies. listed on the Indonesian Stock Exchange. This shows that the use of Financial Technology in the banking sector plays an important role in improving customer service on an ongoing basis. As in the Indonesian Economic Report, (2021) Bank Indonesia continues to accelerate the digitalization of payment systems to encourage national digital economic and financial integration. Digitalization of the payment system is emphasized on 3 (three) important priorities and achievements, namely regulatory reform, retail payment system infrastructure and payment system standardization. Financial Technology services also enable banks to reduce operational costs. Banking and other financial transactions can also be easier, faster, more effective and efficient by using Financial Technology to increase a bank's income or profits and support economic inclusion in thedigital era. Therefore, the larger the transaction that uses the four Financial Technologies simultaneously, the higher the Return On Asset value

The lack of influence of ATM transactions on Return On Assets is caused by banking customers in Indonesia and Malaysia who have not maximized the use of ATM technology in carrying out banking financial transactions. The results of this research are in line with the results of research conducted by Kasmir, (2019) and Medyawati et al., (2021). In his research, it was stated that the number of ATMs had no effect on the bank's financial performance.

The influence of Internet Banking transactions on Return On Assets in banking in Indonesia is because bank customers in Indonesia have increasingly trusted Internet Banking services as an option for carrying out various kinds of banking financial transactions. The convenience offered through internet banking in making transactions is one of the factors for bank customers in Indonesia to continue using internet banking services. As in the Indonesian Economic Report, (2017) this positive performanceis supported by the rapid rate of digital technology penetration in Indonesia along with the increasing number of middle class residents. Internet users in Indonesia reached 88.1 million people, or 34% of the total population, with 64.1 million of them being active users. The growth of internet users is estimated to reach 8% per year and is estimated to reach 113.5 million in 2022. In this case, the use of online banking technology is efficient in Return On Assets, meaning that the income generated from Internet Banking transactions can also offset bank operational costs due to online technology. banking. The larger the transaction via Internet

banking, the higher the Return On Asset value. The results of this research are in line with research conducted by Wijayanti et al., (2021) which shows that Internet Banking has an effect on Return On Assets in Conventional banks in Indonesia.

Then the lack of influence of Internet Banking transactions on Return On Assets at banks in Malaysia could be caused by customers who have not used Internet Banking services much in carrying out their transaction activities. This can also be caused by inefficient use of online banking technology so that the income generated from internet banking transactions does not offset bank operational costs due to online banking technology. The results of this research are in line with research conducted by Yohani and Dita, (2019) which states that internet banking variables do not have a significant effect on financial performance.

Mobile Banking technology transactions have a negative effect on Return On Assets in banking in Indonesia and Malaysia, this could be because its use is not comprehensive or every customer does not necessarily use Mobile Banking facilities. Of all Indonesian people, only 25% of the adult population understands and makes transactions using mobile banking. This means that as many as 75% of adults do not understand mobile banking. In addition, many customers do not use adequate devices and are limited to areas without internet, so this service is not yet fully used in many areas. The use of online banking can generate revenue and profits, but the use of mobile banking technology affects ROA because banks cannot cover operating and maintenance costs to improve services. Therefore, the more transactions using mobile banking, the higher the ROA value. The results of this research are in line with research conducted by Sudaryanti et al., (2019) and research conducted by Thio and Yusniar, (2021) which shows that mobile banking has a negative effect on the performance of conventional banking sector companies listed on the Indonesia Stock Exchange.

The lack of effect of E-Money transactions on Return On Assets in banking in Indonesia can be caused by the majority of people who have not used E-Money transactions due to a lack of knowledge about electronic money or public awareness of using electronic money is still low, then it is also possible for banks in Indonesia to bear large costs for maintaining the E-Money technology. If the bank cannot control it well, it will have a negative impact on the bank's profitability. However, on the other hand, Bank Indonesia in its Indonesian Economic Report, (2022) states that electronic money payment instruments continue to grow 30% in line with the wider ecosystem connected to e-commerce, ride-hailing and food delivery, as well as the increase in toll road use cases. and parking. The results of this research are in line with research conducted by Alwarni et al., (2023) which concluded that Electronic Money (E-Money) has no influence on banking financial performance.

The influence of E-Money transactions on Return On Assets at banks in Malaysia can be concluded that many Malaysian bank customers have used E-Money services for transactions. With increasingly sophisticated technological developments, non-cash systems are also becoming more sophisticated. Currently, electronic money has developed, so many people have switched to using cashless payments, including customers in Malaysia. An increase in the number of E-Money transactions will affect banking profitability. If E-Money increases, banks will obtain fee-based income from fees charged by customers when making E-Money transactions. The results of this research are in line with research conducted by Febriani, (2023) which shows that the E-Money variable has a positive effect on bank profitability.

CONCLUSIONS

This research analyzes the influence of ATM, internet and mobile banking and e-money technology on Return of Assets (ROA). ATM technology does not affect ROA at banks in Indonesia and Malaysia, Internet banking does not affect ROA at Malaysian banks but does not affect banks in Indonesia, mobile banking has a negative effect on ROA at banks in Indonesia and Malaysia, E-money has an effect on banks in Malaysia but does not influence on banks in Indonesia. ATM technology too internet and mobile banking as well as E-money, simultaneously influence ROA. The results show that fintech influences banking performance, one of them the indicator is profitability. The findings of this research reaffirm that mobile banking and internet banking also influence bank profitability. It is hoped that these findings can contribute to science by enriching models that analyze factors that influence bank performance. The limitation of this research is that it has not been used

all variables that can be used as benchmarks for Fin-tech. Banking must improve the quality of digital services, especially internet and mobile banking. Suggestions for further research, research should add other Fin-tech variables which are believedto influence ROA, for example such as e-wallet and BI-Fast.

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REFERENCES

1) Almurni, S., Fatin, A.S., & Mustika, M. (2023). Pengaruh electronic banking dan electronic money terhadap kinerja keuangan perbankan yang terdaftar di Bursa Efek Indonesia. *Akuntansi Dan Manajemen*, *32*(1), 30–45.

doi.org/10.36406/jam.v18i02.1323

2) Amali, L. M., & Selvi, S. (2021). Pengaruh e-banking terhadap kinerja keuangan perbankan yang terdaftar di Bursa Efek Indonesia. *Jurnal Manajemen & Organisasi Review (Manor)*, *3*(1), 36–47. doi.org/10.47354/mjo.v3i1.284
3) Anugrah, T. (2021). Pengaruh financial technology terhadap kinerja keuangan pada perbankan yang listing di Bursa Efek Indonesia. *Skripsi*. Universitas Gunadarma.
4) Ayuningtyas, M., & Sufina, L. (2023). Pengaruh penggunaan mobile banking, internet banking, dan ATM terhadap kinerja keuangan perbankan (studi kasus sektor bank konvensional yang terdaftar di Bursa Efek Indonesia) Tahun 2017- 2021. *Jurnal Keuangan Dan Perbankan*, *19*(2), 119–130. doi.org/10.35384/jkp.v19i2.394
5) Aziz, A., Lestari, D. M., & Furwanti, R. (2020). Sinergitas perbankan dan financial technology: Ikhtiar menuju inklusifitas keuangan masyarakat unbankable. *Jurnal Dinamika Ekonomi & Bisnis*, *17*(1), 37–47. doi.org/10.34001/jdeb.v17i1.1058
6) Bank Indonesia. (2017). Laporan perekonomian Indonesia. Jakarta: Bank Indonesia. Retrieved from: https://www.bi.go.id/id/publikasi/laporan/Documents/11_LPI2017_BAB9.pdf
7) Bank Indonesia. (2021). Laporan perekonomian Indonesia. Jakarta: Bank Indonesia. Retrieved from: https://www.bi.go.id/id/publikasi/laporan/Documents/8_LPI2021_BAB6.pdf
8) Bank Indonesia. (2022). Laporan perekonomian Indonesia. Jakarta: Bank Indonesia. Retrieved from: https://www.bi.go.id/id/publikasi/laporan/Documents/8_LPI2022_BAB7.pdf
9) Bank Indonesia, T. P. P. P. (2003). Internet banking di Indonesia. *Buletin Ekonomi Moneter Dan Perbankan*, *5*(1), 37–64. doi.org/10.21098/bemp.v5i1.304
10) Booz, A., & Hamilton. (1997). Internet banking: A global study of potential. *Booz, Allen & Hamilton Inc., New York, NY.*
11) Chhaidar, A., Abdelhedi, M., & Abdelkafi, I. (2022). The effect of financial technology investment level on European banks' profitability. *Journal of the Knowledge Economy*, *0123456789*. doi.org/10.1007/s13132-022-00992-1
12) Commons, J. R. (1931). Institutional economic theory. *American Economic Review*, *21*, 648–657.
13) Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of twotheoretical models. *Management Science*, *35*(8), 982–1003. doi.org/10.1287/mnsc.35.8.982
14) Fuadi, A. M., & Munawar. (2022). Analisis pengaruh fintech adoption terhadap profitabilitas bank umum konvensional diIndonesia. *Contemporary Studies in Economic, Finance and Banking*, *1*(1), 13–24.
15) Hsueh, S. C., & Kuo, C. H. (2017). Effective matching for P2P lending by mining strong association rules. *ACM International Conference Proceeding Series*, *Part F1309*, 30–33. doi.org/10.1145/3133811.3133823
16) Hsueh, S. C., & Kuo, C. H. (2017). Effective matching for P2P lending by mining strong association rules. *ACM International Conference Proceeding Series*, *Part F1309*, 30–33. doi.org/10.1145/3133811.3133823
17) Jepchumba, P., & Simiyu, D. E. (2019). Electronic banking adoption and financial performance of commercial banks in Kenya,Nairobi city county. *International Journal of Finance and Accounting*, *4*(2), 19–38. doi.org/10.47604/ijfa.985
18) Karsh, S. A., & Abufara, Y. (2020). The new era og financial technology in banking industry. *Journal of Southwest Jiaotong University*, *55*(4), 1–13. doi.org/10.35741/issn.0258-2724.55.4.54
19) Liu, C., & Arnett, K. P. (2000). Exploring the factors associated with website success in the context of electronic commerce.*Journal of Information and Management*, *1*, 23–33.
20) Mary Ogutu, & Fatoki Olanrewaju Isola. (2019). Effect of e-banking on financial performance of listed commercial banks in Kenya. *Global Scientific Journals*, *January 2019*.
21) Medyawati, H., Yunanto, M., & Hegarini, E. (2021). Financial technology as determinants of bank profitability. *Journal of Economics, Finance and Accounting Studies*, *3*(2), 91–100. doi.org/10.32996/jefas.2021.3.2.10
22) Mills, C. W. (1959). The sociological imagination. In *The Sociological Imagination*. Oxford University Press. books.google.co.id/
23) Mohamed Abdullai, H. (2018). Effect of internet banking on operational performance of commercial banks in Nakurucounty, Kenya. *International Journal of Economics, Finance and Management Sciences*, *6*(2), 60. doi.org/10.11648/j.ijefm.20180602.14
24) Mutisya, M. M., & Atheru, G. (2019). Electronic banking and financial performance of commercial banks in Kenya.*International Journal of Current Aspects*, *3*(II), 293–304. doi.org/10.35942/ijcab.v3iii.24
25) Njoroge, M. N., & Mugambi, F. (2018). Effect of electronic banking on financial performance in Kenyan commercial banks : Case of equity bank in its Nairobi central business district branches, Kenya. *International Academic Journal of Economics andFinance*, *3*(2), 197–215
26) Otoritas Jasa Keuangan. (2015). Bijak ber-ebanking. Jakarta: Otoritas Jasa Keuangan. Retrieved from: https://www.ojk.go.id/Files/box/buku%20bijak%20ber-ebanking.pdf

27) Omoruyi, A., & Orobator, B. (2022). Electronic banking and financial performance of deposit money banks in Nigeria. *Journalof Economics and Development Studies*, *July*. researchgate.net/publication/358890223
28) Peraturan Bank Indonesia. (2017). Peraturan bank Indonesia No. 19/12/PBI/2017 tentang penyelenggaraan teknologi finansial. Jakarta:Peraturan Bank Indonesia. Retrieved from:https://www.bi.go.id/id/publikasi/peraturan/Pages/PBI_191217.aspx
29) Statista. (2024). Statistics and market data on Malaysia. Statitsta. Retrieved from: https://www.statista.com/study/48369/malaysia/
30) Sudaryanti, D. S., Sahroni, N., & Kurniawati, A. (2019). Analisa pengaruh mobile banking terhadap kinerja perusahaan sektor perbankan yang tercatat di Bursa Efek Indonesia. *Jurnal Ekonomi Manajemen*, *4*(2), 96–107. doi.org/10.37058/jem.v4i2.699
31) Thio, J. C., & Yusniar, M. W. (2021). Pengaruh mobile banking terhadap kinerja keuangan perbankan Indonesia. *Jurnal Ilmiah Manajemen* , *Vol XII No*(3), 1–12.
32) Venkatesh, V., & Davis, F. D. (2000). Theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, *46*(2), 186–204. doi.org/10.1287/mnsc.46.2.186.11926
33) Wijayanti, R. P., Salma, U., Azizah, A., Daulay, Y., & Nugroho, A. W. (2021). *Ijeba the effect of digital banking innovation on the perfromance of conventional commercial banks in Indonesia*. *2*(2), 2021. ijeba.makarioz.org/
34) Yohani, SE, M.Si, Ak, C., & Dita, S. F. I. (2018). Pengaruh internet banking terhadap kinerja keuangan pada bank umum konvensional yang terdaftar di Bursa Efek Indonesia (Periode 2015 –2018). *Foreign Affairs, 91(5)*. doi.org/10.1017/CBO9781107415324.004