Financial Performance of Indonesia Banking: The Impact of Digital Banking

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Abstract. The development of financial technology has now made the service sector of Ditigal Banking increase. This study aims to examine the influence of digital banking, namely mobile banking, on banking financial performance in terms of ROA, NIM and BOPO. The population in this study is the general banking industry that is registered and publishes its financial statements at the OJK during the period 2018 – 2020. The sample for this study amounted to 55 perbankan. The technique used is to score 1 in each feature in banking according to the indicators disclosed, and 0 for banks that do not have this feature. After getting the total score obtained by each bank, then the total score will be analyzed using the SmartPLS method. The use of mobile banking does not significantly affect the financial performance of banks, namely ROA, NIM and BOPO. Not optimal education about services through mobile banking to customers and large investment in banking technology for mobile banking services has caused bank profits to be eroded

Keywords: Mobile Banking, ROA, NIM, BOPO

1 Introduction

The development of technology in today's digital era has developed very rapidly. Various features of these technological developments are able to make it easier for people to access various information and interrupt their work effectively and efficiently. One form of technology service that is a concern and widely used by the public today is financial services or commonly known as Financial technology.

The development of Financial technology has now made the increase in the Ditigal Banking service sector starting from payments, lending, financial planning (financial planner), retail investment, financing (crowdfunding), remittances, financial research, and others.

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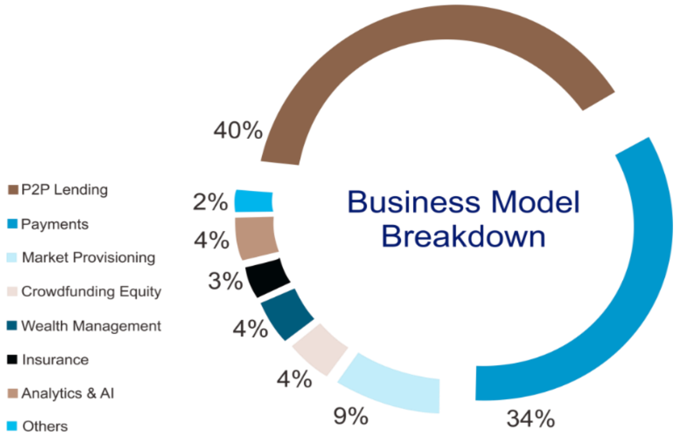

Fig. 1. Business Model Breakdown of Fintech Development
(Source: Indonesia Fintech Landscape Report 2019)

Based on data from the Indonesia Fintech Landscape Report 2019, it is known that the growth of Fintech Payments experienced a growth of 15% in the increase in e-money transactions for the period of June 2018 to June 2019, while the volume of e-money increased by 7% during the period June 2018 - June 2019 with the number of instruments in circulation as much as 209 million and total transactions in a value of Rp 47.1 trillion. Fintech Funding growth has grown by 97.6% for an increase in the number of loans disbursed from the period December 2018 – June 2019 with an increase in borrowers of 59.23% for the period March 2018 – June 2019. The increase is because fintech services are currently able to meet the public's needs for financial transaction services that are easier and more practical. The concept of financial technology has been widely adapted by various financial institutions, because it is hoped that the service can facilitate the financial transaction process to be more practical and modern. One of the financial institutions that uses financial technology in its services is banking.

Mobile banking is one of the latest mobile technology innovations. Although automated teller machines (ATMs), telephones, and internet banking offer effective delivery channels for traditional banking products, compared to other distribution channels, mobile banking in many developed and developing countries, tends to have a significant effect on the market (Safeena et al., 2012). Mobile banking is the main driving force for rapid acceptance of mobile devices, where the capabilities offered can provide efficient services, anytime and anywhere, including on the go (Veijalainen et al., 2006). Moreover, the increasing use of smartphones has driven the demand for mobile banking services, so more banks are offering innovative services from a series of banking products to expand the reach of their clients (including the unbanked public), improve operational efficiency, increase market share, and provide new job opportunities (Shaikh, 2013).

The Financial Services Authority (OJK) noted that the number of e-banking user customers (SMS banking, phonebanking, mobile banking, and internet banking) increased by 270%, from 13.6 million customers in 2012 to 50.4 million customers in 2016. Meanwhile, the frequency of transactions of e-banking users increased by 169%, from 150.8 million transactions in 2012 to 405.4 million transactions in 2016. Bank Indonesia (BI) also recorded the value of digital payment transactions throughout 2018 reaching Rp47.19 trillion. This figure has quadrupled compared to the transaction value in 2017 which amounted to Rp12.37 trillion. Mobile banking shows its dominance over SMS banking, phonebanking, and internet banking. The company's internet banking users have reached 15.46 million and mobile banking 24.21 million. In addition, the latest McKinsey & Company report states that Indonesian consumers who actively use mobile banking make more purchases than those who do not use mobile banking.

Mobile banking users and transactions in Indonesia continue to increase. The increase is seen with the increasing number of banks in Indonesia adopting mobile banking, as shown in Figure 2

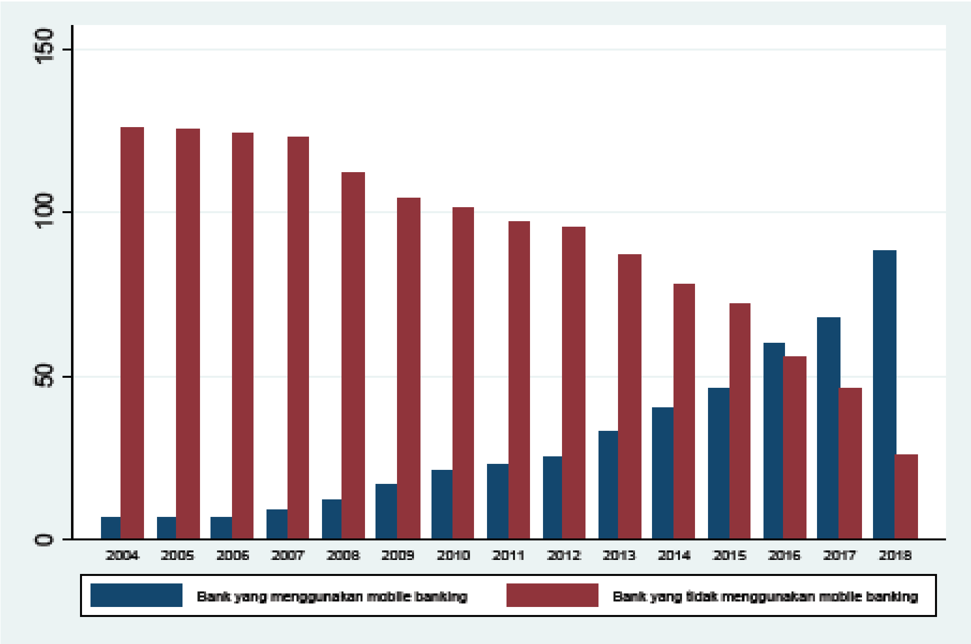

Fig. 2. Number of Banks Using and Not Using Mobile Banking in Indonesia in 2004 – 2018 (Source: Yudaruddin, 2020)

Figure 2 shows that from 2004 to 2018, banks that did not use mobile banking continued to decline, from 125 banks to 24 banks, while banks that used mobile banking continued to increase from year to year. Based on the results of a study from the Jenius Financial Study on Indonesia Digital Savvy Behaviour in collaboration with Nielsen, the number of banking depositors grew from 23% in 2014 to 36% in 2018. From the growth in the number of depositors, the number of mobile banking users grew from 28% in 2014 to 30% in 2018. Data from Bisnis.com at the end of 2020 showed that based on a study from UnaFinancial (2020), the number of mobile banking users in Indonesia increased from 52 million users in 2019 to 88 million users or an increase of

69.2% in 2020. This shows that mobile banking is one of the important and very much needed things for banking customers.

According to Turban et al.(2015), mobile banking, which is also often abbreviated as m-banking, is a system that allows users to view financial transactions from smartphones or other wireless mobile devices. Mobile banking services can be used with the menu that is already on the SIM (Subscriber Identity Module) or through USSD (Unstructured Supplementary Service Data), or through applications that can be downloaded andinstalled by customers, such as through the playstore or applestore Of course, this mobile banking refers to the provision and availability of banking services with the help of cellular telecommunications devices.

Mobile banking, which is part of the banking digitization process, continues to increase also because it is supported by various regulations so that banking digitalization continues to be improved, including: Law Number 11 of 2008 concerning Electronic Information and Transactions, Law Number 21 of 2011 concerning the Financial Services Authority, Regulation of the Financial Services Authority Number 1 / POJK.07 / 2013 concerning Consumer Protection in the Financial Services Sector, Presidential Regulation of the Republic of Indonesia Number 82 of 2016 concerning the National Strategy for Financial Inclusion, Regulation of the Minister of Communication and Informatics of the Republic of Indonesia Number 4 of 2016 concerning Information Security Management Systems, Guidelines for the Implementation of Digital Branch by Commercial Banks through letter number S-98 / PB.1 / 2016 on December 21, 2016, Financial Services Authority Regulation Number 12 / POJK.03 / 2018 concerning the Implementation of Digital Banking Services by Commercial Banks, Regulation of the Financial Services Authority of the Republic of Indonesia Number 13 /POJK.02/2018 concerning Digital Financial Innovation in the Financial Services Sector.

The financial performance of the banking industry is part of the overall performance of the bank. Overall performance is a picture of the achievements achieved by a bank in its operations, both regarding aspects of finance, marketing, raising and disbursement of funds and technology as well as human resources. Financial performance is a picture of the results of bank activities in a certain period to generate maximum profits that can be measured by analyzing the financial data of a bank. According to Abdullah (2013), the analysis of banking financial performance has the objective of a) Knowing information on the success of bank financial management in a certain period. b) Knowing information on the will of a bank in terms of the use of all capital and assets owned in making profits and efficiency. c) Knowing information on the level of security and trust of customers when depositing their funds in the bank.

Empirical studies conducted by Kathuo S et al. (2015), Kiprop Too et al., (2016), Wadhwa (2016), Bagudu et al. (2016) showed that Mobile Banking has an effect on bank financial performance. Research in Indonesia conducted by Syarifuddin and Viverita (2014) the insignificant influence of mobile banking due to the small number of mobile banking application downloads compared to the number of bank customer accounts in Indonesia, Sudaryanti, et al. (2018) focused on 36 banks in 2017, found that mobile banking had an insignificant impact on bank performance in Indonesia. and Yudaruddin (2020) had a positive and significant effect on banking performance in Indonesia. This study aims to examine the influence of digital banking, namely mobile banking, on banking financial performance in terms of ROA, NIM and BOPO

2 Research Methods

The population in this study The general banking industry registered and published its financial statements at the OJK during the period 2018 - 2020. The method used in sampling is the purposive sampling method, which is a sampling that pays attention to a certain criterion as a consideration. The sample for this study amounted to 55 perbankan.

Independent variables are variables that are manipulated by the researcher and thus cause effects or alterations in the dependent variables. The independent variable used in this study, namely mobile banking. Scoring analysis is used to test the extent of the quality and completeness of bankung digital services, especially mobile banking in banking. The indicators used are based on the features contained in mobile banking services. Several sources are used to assess the standards of the features that must be present in mobile banking services, such as the book issued by the Financial Services Authority (OJK) on the Wise Book of Electronic Banking in 2015.

The technique used is to score 1 in each feature in banking according to the indicators disclosed, and 0 for banks that do not have this feature. After getting a score, the calculation of the total score obtained by each bank will be carried out, which then the total score will be used in the calculation in SmartPLS 3.

3 Result and Discussions

3.1Scoring Techniques

The scoring technique is carried out to determine the quality and completeness of the features in internet banking and mobile banking services in each bank. The indicators used in assessing service features are taken based on the sources in the Electronic Banking Wisdom Book issued by the OJK.

Table 1. Score Results

NO.	BANKING NAME	MOBILE BANKING	
		Score	**Items**
1	BRI	22	29
2	Mandiri	22	29
3	BNI	21	29
4	BTN	18	29

NO.	BANKING NAME	MOBILE BANKING		
5	Danamon	17	29	
6	Permata	21	29	
7	BCA	28	29	
8	Maybank	20	29	
9	PAN Indonesia Bank	14	29	
10	CIMB Niaga	22	29	
11	OUB Indonesia	11	29	
12	OCBC NISP	21	29	
13	Bumi Arta	18	29	
14	HSBC New Zealand	19	29	
15	Jtrust New Zealand	14	29	
16	Muamalat Indonesia	15	29	
17	Mestika Dharma	15	29	
18	Shinhan Indonesia	17	29	
19	Sinarmas	16	29	
20	Maspion Indonesia	11	29	
21	Ganesha	15	29	
22	QNB Indonesia	20	29	
23	Woori Saudara Indonesia	15	29	
24	Bank Mega	21	29	
25	BNI Syariah	11	29	
26	Bank Bukopin	13	29	
27	Syariah Mandiri	18	29	z
28	Keb Hana Indonesia	19	29	

NO.	BANKING NAME	MOBILE BANKING	
29	MNC International	17	29
30	SBI Indonesia	16	29
31	Mega Syariah	19	29
32	Index Selindo	12	29
33	Bank Mayora	9	29
34	Bank CCB Indonesia	10	29
35	Bank DBS Indonesia	15	29
36	BNP Paribas Indonesia	15	29
37	IBK Indonesia	6	29
38	CTBC Indonesia	13	29
39	Commonwealth	21	29
40	BTPN	21	29
41	BRI Syariah	14	29
42	BJB Syariah	19	29
43	Jasa Jakarta	10	29
44	Nationalnobu	14	29
45	Panin Dubai Syariah	11	29
46	Sahabat Sampoerna	14	29
47	OKE Indonesia	13	29
48	BCA Syariah	15	29
49	Mandiri Taspen	5	29
50	Artha Graha International	15	29
51	Mayapada	11	29
52	ICBC Indonesia	14	29

NO.	BANKING NAME	MOBILE BANKING	
53	Capital Indonesia	9	29
54	INA Perdana	12	29
55	Multiarta Sentosa	9	29

Here are the results of testing using T-Statistics:

Table 2. T Statistics Test Results

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
MB -> ROE	0.209	0.212	0.243	0.859	0.391
MB -> NIM	0.172	0.182	0.197	0.875	0.382
MB -> BOPO	-0.265	-0.264	0.19	1.392	0.165

Effect of Mobile Banking on Return On Asset (ROA). Based on the test results, the use of mobile banking has no effect on ROA because the T-Statistics value is 1,199 (<1.96). This research shows that currently the use of digital banking has become commonplace for customers, this happens because mobile banking has been used since the 2000s. Since its inception, there have been many features that make it easier for customers to carry out various financial transactions so that the implementation of mobile banking in the present does not affect banking ROA. Return on Asset (ROA) is a measure of profitability used to measure the extent to which a bank can make a profit based on the level of assets it owns. Therefore, the factors that affect ROA are not only in the use of digital banking services but also from several things outside the research variables including sales.

Effect of Mobile Banking on Net Interest Margin (NIM). Based on the test results, it is known that the use of mobile banking has no effect on NIM with a T-Statistics value of 0.875 (<1.96). This research shows that the use of mobile banking in lending is still not optimally used by customers. Education about mobile banking credit services to customers can also be a trigger for this, because most people do not knowthat they can apply for credit through digital banking services so they prefer to make transactions directly in banking.

Effect of Mobile Banking on Operating Expenses and Operating Income (BOPO). Based on the test results, it shows that the use of mobile banking has no effect on BOPO with a T-Statistics value of 1,392 (<1.96). This research shows that BOPO is very dependent on how well the management of the bank is in managing its revenue in order to cover its operating expenses. The existence of digital banking should be able to make banks reduce operational costs because with the ease of access to financial transactions through mobile banking, banks do not need to create too many new branches anymore. However, with the rapid use of mobile banking, this statement has no effect anymore. Other things are caused by large investments causing bank profits to be eroded. The level of security that must be high, long-term maintenance and the ability of banks to maintain mobile banking are also still experiencing problems. Indeed, with mobile banking, banks are able to generate greater operating income, but this income has not been able to cover the costs incurred for the operation of mobile banking technology.

4 Conclusion

The use of mobile banking does not have a significant effect on the financial performance of banks, namely ROA, NIM and BOPO, this is because 1) digital banking services such as mobile banking have existed since the 2000s so that for customers these services are the thing that ordinary. 2) not yet optimal education about credit services through mobile banking to customers 3) large investment in banking technology for mobile banking services causes bank profits to be eroded.

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