www.bircu-journal.com/index.php/birci
Budapest International Research and Critics Institute-Journal (BIRCI-Journal)
Humanities and Social Sciences
ISSN 2615-3076 Online)
ISSN 2615-1715 (Print)

The Effect of Digital Banking on Banking Performance during the Covid-19 Pandemic

Sri Utami Nunik Chairita[1], Suharnomo[2]
[1,2]Universitas Diponegoro, Indonesia
utaminunikkhairita@students.undip.ac.id

Abstract

The purpose of this study was to determine the effect of digital banking on banking performance during the covid-19 pandemic. The research method that is considered appropriate for this research is descriptive quantitative with a cross sectional design of hypothesis testing using linear regression. There is a significant influence between digital banking (DB) on the return of assets at conventional banks in Indonesia during the COVID-19 pandemic, there is a significant effect between digital banking (DB) on the return on equity at conventional banks in Indonesia during the COVID-19 pandemic and There is a significant influence between digital banking (DB) on operating costs of operating income at conventional banks in Indonesia during the COVID-19 pandemic. In implementing digital banking innovation, it is hoped that banks will be able to implement risk management to deal with various risks with digital banking innovation.

Keywords
digital banking; return of assets; return on equity and operating costs operating income

I. Introduction

The corona virus attack in recent times, not only the health sector has become a concern for the Indonesian government, but the real sector and also the banking sector. Where if there is a problem with real deposits or the business world, it could also have the potential to cause problems in the banking sector. Of course, this is a big challenge for banks in the midst of the Covid-19 outbreak, as a supporting agency in terms of funding for the business world.

The economy of a country is closely related to the banking world. Congestion of economic activity will certainly have a negative impact on the banking sector, and vice versa. (Baroroh, U., 2012). In carrying out these efforts, Conventional Banks in Indonesia digitize the process of opening savings accounts and applying for credit. Thus the administrative process can be accelerated and also makes it easier for customers to eliminate the need for mobile banking transactions.

The outbreak of this virus has an impact of a nation and Globally (Ningrum *et al*, 2020). The presence of Covid-19 as a pandemic certainly has an economic, social and psychological impact on society (Saleh and Mujahiddin, 2020). Covid 19 pandemic caused all efforts not to be as maximal as expected (Sihombing and Nasib, 2020).

The state government is obliged to synergize with several related parties, Bank Indonesia and the Financial Services Authority as an effort to mitigate the impact of COVID-19 on the country's economy. BI, OJK and the government have also issued policies to provide stimulus to the economy. For example, the State Economic Recovery (PEN) program which was set in 2020 by the government to mitigate the impact of the pandemic on the country's economy.

Maximizing technology and information is an innovation carried out by banks as an effort to strengthen customer relationships and trust in the services they provide, this is also commonly called the new era bank or the era of digital banking (digital banking). The service fully utilizes digital technology that utilizes devices and applications as delivery channels. The existence of digital banking services makes banking services easier, faster and can be done anywhere so that it saves costs and minimizes meeting with bank employees. In this way transactions will be easier and more efficient while improving the quality of banking services. In accordance with PJOK Number 12/PJOK.03/2018 Article 3 regarding examples of distribution channels (delivery channels). There are several choices of Electronic Banking Services, including Automated Teller Machine (ATM), Cash Deposit Machine (CDM), Phone Banking, Short Message Services (SMS) Banking, Electronic Data Capture (EDC), E-money, E-payment, Internet Banking, Mobile Banking, E-wallet, and Wholesale Banking.

The Financial Services Authority (OJK) noted in September 2016 that banking investment in Indonesia reached Rp. electronic channel. The bank utilizes 86 percent of its activities using mobile banking applications for its development. Head of the OJK Banking Research and Regulation Department, Antonius Hari, also said that nearly 100 banks have utilized digital services for each of their respective customers. In addition, he also added that the trend of banking digitalization is increasing rapidly, which should be completed in 40 years to be 36 years faster. Digital Banking is considered as a new breakthrough that is able to improve quality and quality for the banking world, thus motivating every bank to apply it.

Currently, it is important to conduct research on the effect of the implementation of service digitalization by banks. Not even to reveal the advantages or advantages of using this new system, but rather to explain how the bank's performance is in the form of observations that have been made. So that a strategic step will be created in the form of digitizing services to survive during the current pandemic. Return of assets (ROA) is an important part as a measure of financial performance in the Bank (Nyoni, T., 2020). Hamidi (2019) also stated that increased sales and profitability could result in improved performance at the bank. Profit margin which is also interpreted as operating profit before gross divided by revenue as a performance measure (Scott, S. V., et all, 2017). In this case, the researcher uses banking performance, namely return of equity (ROE) and Operational Income Operational Costs (BOPO) for financial benchmarks that are observed to have an effect on digital banking.

Banks in Indonesia, ranging from conventional banks to Islamic banks, are required to properly anticipate adverse impacts, as well as carefully develop strategies to deal with uncertain situations due to the current pandemic. So that the banking sector can continue to run smoothly and be able to get out of adversity. Digital banking is one of the strategies for the banking sector. Digital banking services must be utilized in services and production. The process must be carried out consistently so that it does not stop in the middle of the road.

II. Review of Literature

2.1 Theoretical Framework and Hypotheses Formulation

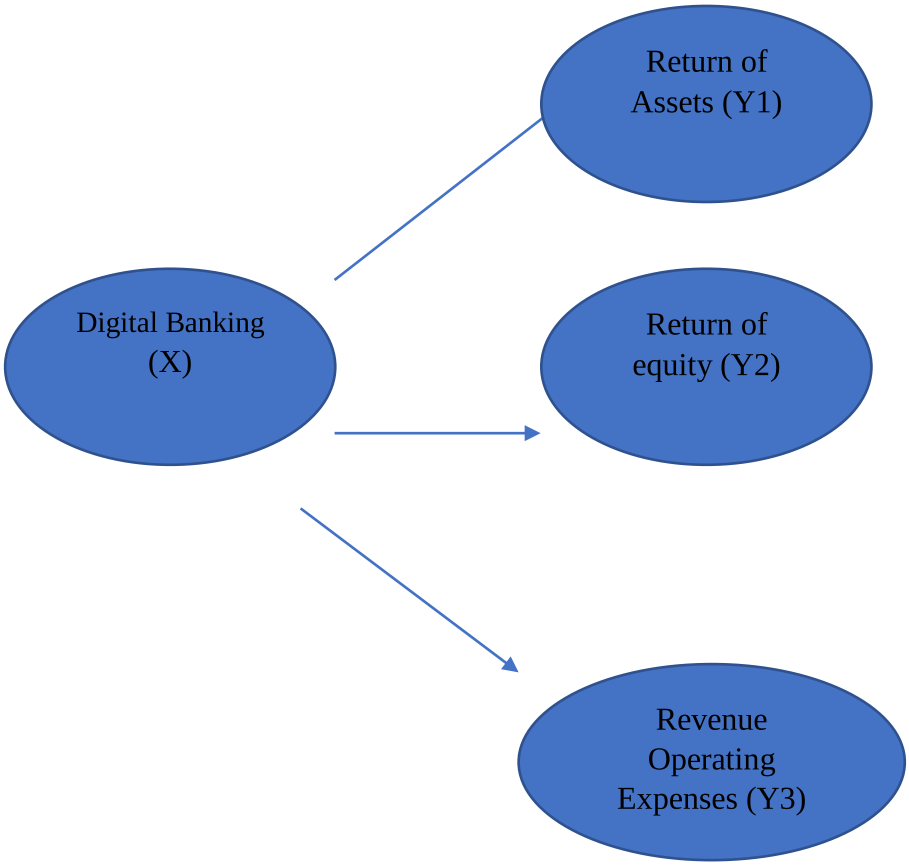

Figure 1. *Jun (2008), Hamidi, (2019) and Claeys & Arnaboldi (2011)*

2.2 H1 = effect of digital banking on the ROA of banks in Indonesia

Jun (2008) conveys a positive relationship between information and communication technology of digital innovation services on banking performance and presents results showing that information and communication technology investment in digital innovation services is associated with higher asset returns in a sample of 22 South Korean securities firms. In addition, Scott, S. V., et al, (2017) said that the adoption of SWIFT financial services has a positive and significant impact on banking profitability, this is measured by profit margins. Digital banking innovation improves banking performance in Indonesia by using a sample of 90 Conventional Commercial Banks as a proxy for ROA

2.3 H2 = effect of digital banking on the ROE of banks in Indonesia

Hamidi, (2019) emphasized that the relationship between consumers and mobile banking has been able to grow profitability and value for consumers. Past research on M-banking shows a strong correlation between consumer linkage and profitability (Hollbeek, 2013). While Vivek et al. (2012) describe the M-bangking adoption model on consumer interaction, the positive effect of consumer interaction, including trust, effective engagement and loyalty, is expressed in profitability. When evaluating the services provided by the bank, consumers can feel satisfied. This can explain that with increasing competition and consumer participation, banks have introduced new breakthroughs in digital banking to lower costs and increase profits and services for consumers. Scott, S. V., et al, (2017) conveyed that digital banking innovation improves banking performance in Indonesia by using a sample of 90 Conventional Commercial Banks proxied by ROE

2.4 H3 = effect of digital banking on the BOPO of banks in Indonesia

Claeys & Arnaboldi (2011) show that to create repeated interactions by consumers, companies must be able to increase commitment to a product they own. Furthermore, research conducted by Gallup (2013) shows that the important value of the relationship between consumers and the bank's performance can be seen from the way the bank retains consumers and the amount of costs incurred each month. In addition, to increase the bank's income, it is obtained from repeated consumer purchases which causes the bank's performance to increase. One of the benchmarks of banking performance is to use all possibilities, to find out whether the company is in good condition, profit or loss. Companies that innovate digital banking have higher above average income (Westerman, 2011).

III. Research Method

The research method that is considered appropriate for this research is descriptive quantitative. Quantitative data is understood as data available in the form of data that can be calculated or information that can be expressed numerically (Sugiyono, 2010). The variable measurement technique in this study uses cross sectional, meaning that the measurement is only done once. The research sample is 90 Conventional Commercial Banks whose performance measures are ROA, ROE, and BOPO in 2021 which have been audited and published. Data analysis used descriptive analysis and hypothesis testing with regression analysis.

IV. Results and Discussion

4.1 Effect of Digital Banking on Return of Assets at Conventional Banks in Indonesia during the COVID-19 Pandemic

Table 1. Hypothesis Test Results 1

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2,169	0,116		-18,635	0,000
	DB	0,050	0,020	0,268	2,521	0,014

Based on the results of the first hypothesis test H1 contained in table a significance value of 0.014 (<0.05) means that there is a significant influence between digital banking (DB) on Return of Assets at Conventional Banks in Indonesia during the COVID-19 pandemic.

4.2 Effect of digital banking on Return On Equity at Conventional Banks in Indonesia during the COVID-19 pandemic

Table 2. Hypothesis Test Results 2

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1,544	0,128		-12,023	0,000
	DB	0,068	0,022	0,321	3,067	0,003

Based on the results of the first hypothesis test H2 contained in table a significance value of 0.003 (<0.05) means that there is a significant influence between digital banking (DB) on Return On Equity at Conventional Banks in Indonesia during the COVID-19 pandemic.

4.3 The Effect of Digital Banking on Operating Costs of Operating Income at Conventional Banks in Indonesia during the COVID-19 pandemic

Table 3. Hypothesis Test Results 3

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0,015	0,018		0,818	0,416
	DB	-0,016	0,003	-,476	-5,081	0,000

Based on the results of the first hypothesis test H3 contained in the table, a significance value of 0.000 (<0.05) means that there is a significant influence between digital banking (DB) on operating costs of operating income at conventional banks in Indonesia during the COVID-19 pandemic in 2020 The t-count value on the negative test result means that there is a negative influence between DB and BOPO so that the higher the digital banking, the lower the BOPO value.

Based on the data analysis above, the output of the first model shows that digital banking has a significant and positive effect on ROA with a probability level of 0.014 or less than 0.05 so that the first hypothesis can be accepted.

The output of the second model shows that digital banking has a significant and positive effect on ROE with a probability level of 0.003 or less than 0.05 so that the second hypothesis can be accepted. In accordance with previous research in several countries, Jun (2008) conveys a positive relationship between information and communication technology of digital innovation services on banking performance and presents results showing that information and communication technology investment in digital innovation services is associated with higher asset returns in the sample. 22 South Korean securities companies. In addition, Scott, S. V., et al, (2017) said that the adoption of SWIFT financial services has a positive and significant impact on banking profitability, this is measured by profit margins. In line with this research conducted in Indonesia, that digital banking innovation improves banking performance in Indonesia by using a sample of 90 conventional commercial banks as proxied by ROA and ROE.

The output of the third model shows that digital banking has a significant and positive effect on BOPO with a probability level of 0.000 or less than 0.05 so that the third hypothesis can be accepted. BOPO variable can be explained by digital banking variable.

Based on banking statistics in Indonesia, banking transactions through delivery channels increased by 600% from 2 billion transactions in 2013 to 14 billion transactions in 2020. 2013 to IDR 820,646 billion in 2020. This is in accordance with previous research that companies that innovate digital banking have higher incomes above the average (Westerman, 2011). As stated in Appendix I, banks BRI, BNI, Bank Mandiri, and Bank BCA carry out 100% digital banking innovation by providing delivery channels for their customers in accordance with government-supported operations, and their income and net profit are much higher than average. average compared to other banks in Indonesia.

The existence of the COVID-19 pandemic has become an uncertainty that can threaten the ability and capacity of a bank to achieve its goals. According to the Global Web Index, there are more than 76 percent of internet users aged 16-64 years spending time using smartphones during the pandemic. This strengthens the argument that there is a change in the pattern of people's activities turning to online media. If the banking sector is unable to adjust to these conditions, the phenomenon of banking without the banks will continue to develop. This term has also become popular since transaction activities that are usually in the banking industry are replaced with technology-based platforms (fintech). It can be assumed that organizations that are ready to face the changing times, such as Fintech, will benefit more from the COVID-19 pandemic.

On the other hand, digital transformation in banking or open banking can be the main solution for banks in avoiding bank runs. The context of implementing bank digitalization is not new to the banking sector. In 2019, Bank Indonesia introduced the term Indonesia Payment System Blueprint 2025 (BSPI), which is a guide to Bank Indonesia's policy direction in the payment system sector in the digital era in order to support the establishment of a conducive digital economic and financial ecosystem. The trend of bank digitization has become a target for the banking industry, even before the onset of COVID-19.

For the banking industry, COVID-19 has actually become a catalyst that accelerates the maturity of bank digitalization. If designed properly, it will certainly increase the output of the economy. With the principles and framework of risk management integrated with business processes, a bank will certainly create and protect good value for external parties (customers), as well as internal parties. Every decision will have new consequences; as well as implementing new strategies towards targets that are adapted to the conditions of "new norms"

V. Conclusion

1. There is a significant effect between digital banking (DB) on Return of Assets at Conventional Banks in Indonesia during the COVID-19 pandemic in 2020 with a significance of 0.014 (<0.05)
2. There is a significant effect between digital banking (DB) on Return On Equity at Conventional Banks in Indonesia during the COVID-19 pandemic in 2020 with a significance of 0.003 (<0.05)
3. There is a significant influence between digital banking (DB) on operating costs of operating income at conventional banks in Indonesia during the COVID-19 pandemic in 2020 with a significance of 0.000 (<0.05)

References

Ahmad, K., & Krisnadi, I. (2020). *Digitalisasi Koperasi dalam Penyempurnaan Konsep Pasar Digital Nasional sebagai Penangkal Resesi Ekonomi di Masa Pandemi Covid-19*. 1–12.

Akhisar, İ., Tunay, K. B., & Tunay, N. (2015). The Effects of Innovations on Bank Performance: The Case of Electronic Banking Services. *Procedia - Social and Behavioral Sciences*, *195*, 369–375. https://doi.org/10.1016/j.sbspro.2015.06.336

Annur. (2022). Bank Indonesia: Transaksi Uang Elektronik RI Tembus Rp 35 Triliun per Desember 2021. https://databoks.katadata.co.id/datapublish/2022/01/31/bank-indonesia-transaksi-uang-elektronik-ri-tembus-rp-35-triliun-per-desember-2021

Claeys, P., & Arnaboldi, F. (2011). Internet Banking in Europe: A Comparative Analysis. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1343684

Darsono dan Ashari. 2005. Pedoman Praktis Memahami Laporan Keuangan. Yogyakarta : CV. Andi Offset

Dendawijaya, Lukman. 2009. Manajemen Perbankan. Jakarta : Ghalia Indonesia.

Gallup. (2013). The State of the American Workplace: Employee Engagement Insights for U.S. Business Leaders. Gallup, 68. Tersedia di http://employeeengagement.com/wp-content/uploads/2013/06/Gallup-2013- State-of-the-American-Workplace-Report.pdf

Ginovsky, John. "What really is "digital banking"? Consensus on this oft-used term's meaning eludes". Banking Exchange. Retrieved 9 May 2017

Hamidi, M. Luthfi. (2019) Jejak-Jejak Ekonomi Syariah. Jakarta: Senayan Abadi Publishing

Husnan, Suad., *Enny* Pudjiastuti, 2012. Dasar-Dasar Manajemen Keuangan. Edisi. Keempat, Yogyakarta

Kontan.co.id.2021. BI Catat Nilai Transaksi Digital Banking Capai Rp 39.841,4 Triliun di 2021. https://keuangan.kontan.co.id/news/bi-catat-nilai-transaksi-digital-banking-capai-rp-398414-triliun-di-2021

Manurung.2021. Percepatan Digitalisasi Perbankan di Masa Pandemi COVID-19. https://crmsindonesia.org/publications/percepatan-digitalisasi-perbankan-di-masa-pandemi-covid-19/

Mawarni, R., & Fasa, M. I. (2021). Optimalisasi Kinerja Digital Banking Bank Syariah di Masa Pandemi Covid-19. *Jurnal Manajemen Bisnis (JMB)*, *34*(1), 10–22.

Ningrum, P. A., et al. (2020). The Potential of Poverty in the City of Palangka Raya: Study SMIs Affected Pandemic Covid 19. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Volume 3, No 3, Page: 1626-1634

Pandia, Frianto. (*2012*). Manajemen Dana dan Kesehatan Bank. Jakarta: Rineka. Cipta.

Peraturan Otoritas JasaKeuangan (POJK) Nomor. 12/POJK.3/2018 tentang Penyelenggaraan Layanan Perbankan Digital Oleh Bank Umum

Saleh, A., Mujahiddin. (2020). Challenges and Opportunities for Community Empowerment Practices in Indonesia during the Covid-19 Pandemic through Strengthening the Role of Higher Education. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*. Volume 3, No 2, Page: 1105-1113.

Scott, S. V., Van Reenen, J., & Zachariadis, M. (2017). The long-term effect of digital innovation on bank performance: An empirical study of SWIFT adoPTion in financial services. Research Policy, 46(5), 984-1004

Shahabi, V., & Faezy Razi, F. (2019). Modeling the effect of electronic banking expansion on profitability using neural networks and system dynamics approach. *Qualitative*

Research in Financial Markets, *11*(2), 197–210. https://doi.org/10.1108/QRFM-11-2018-0117

Sihombing, E. H., Nasib. (2020). The Decision of Choosing Course in the Era of Covid 19 through the Telemarketing Program, Personal Selling and College Image. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Volume 3, No. 4, Page: 2843-2850.

Tripalupi, R. I., & Anggahegari, P. (2020). The Impact of Covid-19 Pandemic: Challenges and Opportunities of Syariah Financial Technology. *International Journal of Nusantara Islam*, *8*(1), 119–128. https://doi.org/10.15575/ijni.v8i1.10207

Tunay, K. B., Tunay, N., & Akhisar, İ. (2015). Interaction Between Internet Banking and Bank Performance: The Case of Europe. *Procedia - Social and Behavioral Sciences, 195,* 363–368. https://doi.org/10.1016/j.sbspro.2015.06.335