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Revitalizing Banking: An In-Depth Analysis of Business Model Performance in Indonesian Digital Banking – Neo-Banks Vs Unit Business Banks

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ABSTRACT: The study uses the Independent Test Analysis approach to calculate the business model bank performance of Indonesian commercial banks, focusing on digital banks. The research uses quarterly reports from 2020 to 2023 to collect secondary data. The study includes Digital Banks in Indonesia, including 4 neo-banks and 14 unit business banks. The results show a significant difference in bank business model performance between unit business banks and neo-banks. The Non-Interest Income (NII) results show no significant difference, but the mean results show a slight difference in performance. The author assumes that unit business banks have a diverse and comprehensive ecosystem in banking activities due to their wider scope of business activities compared to neo-banks.

KEYWORDS: Bank Business Model, Bank Performance, Ecosystem Digital Bank, Independent Test.

INTRODUCTION

The government has described in the Blueprint created by OJK, which explained the changes in the banking industry due to the use of various new technologies in the Industrial Revolution Era 4.0. Four aspects will drive changes in the future financial scene. First, there is a change in consumer expectations regarding banking products and services, meaning that the collection of products and services offered by banks is guaranteed to be safe, follow trends, and have convenience and quality. Second, the use of big data can provide explicit information to improve the quality of the product and services (data-enhanced products and services) so that it can form new business categories. Third, establishing new partnerships with big companies and start-ups can encourage new consumers, take advantage of partner innovation, and gain access to data on bank product and service development, thereby leading, to the emergence of a new business ecosystem. The last aspect, changing the operational model to a digital business model for the bank, transforming it into a fully digital bank can provide an efficient and effective business model, and is expected to increase the bank penetrations and reach all levels of society, thereby ultimately encouraging increased profitability, inclusiveness and maintaining its existence business amidst increasingly tight competition in the financial service sector.

Therefore, this research aims to analyze the comparison of bank business models and digital bank performance in Indonesia, with a special focus on whether the business models of bank and neo-bank business units have different performances. Our study distinguishes itself from previous research by considering different types of banks, including unit business banks and neo-banks. Additionally, most studies employ a regression model, and Data Envelopment Analysis (DEA), whereas our research incorporates a different approach using the Independent T-test analysis. By examining the period after and during digitalization, we want to know whether the bank business models of bank and neo-bank business units have differences and different performances. This allows us to gain insight into what factors differentiate banks in the form of business models applied to achieve good performance in each sector.

Our results demonstrate that every bank has a unique business model structure and range of performance metrics. Comparing the business models of the business units and neo-banks, we found that the business unit business model is more comprehensively sophisticated. Other than that, there is a difference in the performance % between the two banks, with the bank's business units reportedly performing better than the neo-bank. Our study's sample spans the years 2020–2023, or the digitalization age.

This paper is structured as follows: section 2 provides a comprehensive review of previous literature, focusing on the bank business model, ecosystem bank, and bank performance. In section 3, we outline the dataset employed in our analysis, comprising digital banks in Indonesia. Section 4 elaborates on the methodology employed to address our research objectives. Our study's findings are presented in section 5, while section 6 offers our concluding remarks.

LITERATURE REVIEW

A. Bank Business Model

The findings of Hanafizadeh & Marjaie (2021) provided micro-foundations to define a generic banking business model (Metamodel) to propose a general banking business model at the industry level, they were recognized and suggested as forms of banking business models there are four types of banking business models such as socialist banking business model is the kind of business model is one that banks use strategically to focus on business models that strive to distribute the money fairly and behave responsibly toward society, second is enabler banking business model is the business strategy adds value for companies by offering financial services, third is facilitator banking business model is bank provides a solution to a problem or necessity that arises in the day-to-day operations of people and organizations. Lastly, the financial banking business model is where banks carry out standard operations including marketing, client account management, and service and product sales.

In another research by Sudrajad (2021), the author examines the impact of Basel II on bank business models in emerging markets of ASEAN member states. The study uses a difference-in-differences estimation approach and defines bank business models using a modified Herfindahl-Hirschman Index. Results show that Basel II only affects income diversification, without leading to funding and asset diversification. The study suggests that the implementation of the Basel II framework induces higher intensity for non-interest income activities, including trading and derivatives, and financial authorities should be cautious.

B. Bank Performance

Based on the research I. Erins and J. Erina (2013) analyzed bank business models using different techniques from 2006 to 2011 and evaluated the business models employed by the top five banks in each of the Central and Eastern European (CEE) nations. Wholesale banks, investment banks, retail banks, and universal banks are the four distinct business model types that are distinguished by using descriptive statistics to identify the constituent cluster components. The majority of the banks in the sample, according to the authors' analysis of the data based on metrics like Return on Equity (ROE) and Return on Asset (ROA), are universal banks.

Research by (Lagasio & Quaranta, 2022) investigated a 1.237 bank business model started from 2011 to 2017 worldwide with approach cluster analysis with ratios from the balance sheet and the income statement of the bank. Based on their analysis they assume that there is a link between the adoption of a specific business model and size, profitability, efficiency, and risk profile. In this research, the business models that they analyze are retail banking, traditional banking, and financial banking orientation. The finding is the business model with high profitability and efficiency levels it cause that the bank doing an adoption of retailbanking and financial banking orientation

C. Ecosystem in Digital Banking

Based on Judith Böb & Maier's (2017) research grouping customers on the digital platform into three service categories: nonfinancial items, core financial goods, and non-core financial products. In the core banking system, the customer can obtain information about their account, a clear picture of the customer balance sheet, and quick access to all of the bank's financial services, including transactions, savings accounts, loans, investments, funds, mortgage, advisory services, and more, through the online platform. Second, with extended expertise, banks can cooperate with fintech startups to offer non-core financial goods and services that are connected to consumers' bank accounts through APIs. Last, support network banks can collaborate on a website with non-financial service providers to give access to services such as food, electricity, and transportation.

The hypotheses are based on the following study problems:

$\boldsymbol{H_0}$: There are no significant differences in bank business models in the digital banking sector (unit business bank and neo-bank)

$\boldsymbol{H_1}$: There are significant differences in bank business models in the digital banking sector (unit business bank and neo-bank)

As explained previously, banks in Indonesia are already active and some of them are starting to dominate their operational systems with digital with the aim of time efficiency and being able to reach a wider range of customers. Therefore, the main focus of this study revolves around an in-depth study of the effects of digitalization on three main things, namely, bank business models, bank ecosystems, and banking performance.

METHODOLOGY

The data is obtained from quarterly reports of the banking industry published by the Indonesian Financial Service Authority websites for the period 2020 to 2023. The population in this research is Digital Banks in Indonesia, which includes 4 (four) neobanks and 14 (fourteen) unit business banks that have been complete data in four quarters for four years of observations. An independent sample t-test is used to determine whether there are any significant differences in the variable's mean between the two groups (Sekaran Uma & Bougie Roger, 2009). Independent samples are when two group's means are independent of one another, the t-test is utilized to compare them (Gerald, 2018). The researcher can determine whether or not there is a statistically significant difference between the mean scores for the two groups using an independent sample t-test. To put it statistically, it means that the researcher is attempting to determine the likelihood that the two sets of data originated from the same individual. Stated otherwise, an independent sample is one in which each group's members are unrelated to one another.

Rijali (2018) explains that a "table" is a method for gathering data that is a reflection of actual social situations; in qualitative research, the process of gathering data may be analyzed, interpreted, and concluded. Miles & Huberman (1994) define qualitative analysis as including three concurrent streams of work, Data reduction is a type of analysis that streamlines categorizes, focuses, eliminates extraneous information, and arranges data so that conclusions may be made and validated, Data presentation restricts a presentation to an assortment of organized facts from which inferences and actions can be taken, and Research results are checked for accuracy, resilience, and applicability. This verification may be field notes, ideas from colleagues, or substantial efforts to duplicate findings. To evaluate the business models, we measure the income side of banking activities, we use non interest revenue and its components as a proxy on the income side, as opposed to a standard interest-based metric (Sudrajad & Hübner, 2019).

FINDINGS AND DISCUSSION

We categorize the digital banking ecosystem involved in 3 (three) types such as core banking system, extended expertise, and support network (Indonesia Financial Service Authority (OJK), 2021). In Indonesia, we analyze the institutions as a Core Banking System are bank institutions and regulators, furthermore the funding, credit, and deposits as the main functions of the bank activities. The regulators and financial institutions create virtual accounts, barcode payments, ATMs, and other instruments to support digital transactions in each bank (Hie Prawira, 2021). In the Extended Expertise, we group into four types of financial technology companies there are payment and money transfer, lending and peer-to-peer lending, financial inclusion and microfinance, and investment and financial planning. Lastly, the third category is the Support Network, there are Financial and Development Supervisory Agents (BPKP), the Ministry of Communication and Informatics (Kominfo), the Deposits Insurance Agency (LPS), the Ministry of Research and Technology (Kemnristek/BRIN), and Investors. In summary, the new digital ecosystem improves user experience, drawing in new customers and keeping hold of current ones and banks can use it to cut back on branch services, cross-sell goods and services, and dismiss employees in the middle and back offices.

The parent bank adjusted its system due to the digitalization revolution by creating a banking platform, as previously mentioned in the literature about the bank's digital environment. In greater detail, platform banking is designed to enable banks to provide a better range of banking services and products to their clientele by allowing them to select from a variety of financial institutions' offerings in a marketplace-style setting. A customer's connection with their bank was the sole one-to-one relationship in the banking ecosystem before it changed to a one-to-many relationship made possible by the lead bank (James, 2021). In addition to creating a new ecosystem of banking platform operations, the establishment of a parent bank-managed banking platform would provide new income sources.

The business model neo-bank is different compared to bank business units which have more complex activity illustrations**.** the scope of the neo-bank business focuses on customers only, including youth, small business people, or other individuals, so it will increase success in this scope (Judith Böb & Maier, 2017). However, this success is still insufficient to boost the performance of digital banks, because neo-banks have not maximized the presence of other industries to carry out partnerships or collaborations (James, 2021). While regulators and core service providers need to work together to improve the business model neo-bank and promote financial inclusion, this study demonstrates how much more involvement is needed to fully utilize the various actors in the business model neo-bank. Because they develop the tech-based bank system itself, the bank needs to do a maintenance system so they need the IT infrastructure, human resources, and partnership with customer acquisition and retention, product development risk, management compliance, and marketing to know the condition of their performance in their system.

CONCLUSION AND RECOMMENDATION

In this paper, we have conducted an analysis of the differences in business models using the Independent Test with bank performance measurements, as represented by return on assets, return on equity, capital adequacy ratio, and non-interest income. Our sample comprises 18 digital banking in Indonesia, including 4 neo-banks and 14 unit business banks that have implemented a digital banking system. The study spans the period from 2022 to 2023.

According to the results of the independent test, three of the performances of digital banks have significant differences between unit business banks and neo-bank. When the unit business banks' performance is compared to the neo-banks' performance, the unit business banks' performance is higher than the neo-bank's performance from 2020 to 2023. The findings of the Independent Test show that there are differences in ROA, ROE, and CAR but there is a slight difference in performance in NII.

Based on the findings and discussions, the following suggestions are given: The central bank will be able to modify regulations and ensure that unit business banks and neo-banks contribute to wider economic development goals through regular evaluation of the impact of technology improvements on financial inclusion. It is important to develop specific regulations for neo-banks taking into account their distinct risk profiles and business structures. A robust and adaptable financial ecosystem may be ensured by establishing a framework for continuous monitoring and assessment, which can assist in identifying and addressing issues.

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