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Judul	:	Comparative Analysis of Banking Company Value due to the Implementation of the Digitalization System
Nama Media	:	Proceedings of the International Conference on Sustainability in Technological, Environmental, Law, Management, Social and Economic Matters, ICOSTELM 2022, 4-5 November 2022, Bandar Lampung, Indonesia
Penerbit	:	EAI
Volume/Tahun	:	-
URL Repository	:	<a href="https://eudl.eu/doi/10.4108/eai.4-11-2022.2328942">https://eudl.eu/doi/10.4108/eai.4-11-2022.2328942</a>

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Research Article

## Comparative Analysis of Banking Company Value due to the Implementation of the Digitalization System

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### Abstract

This study aims to determine whether there is an effect of implementing regulation number 12/POJK.03/2018 issued by the financial services authority regarding digital banking on the value of commercial banking companies in Indonesia. The research method is to do a comparative test between the company value proxied by Price to Book Value, Price Earning Ratio, and Tobin's Q before and after the implementation of banking digitalization. The population is 46 banking companies listed on the IDX in 2017 and 2019. 40 companies meet the purposive sampling criteria. Data analysis was carried out to test whether there was a difference in the value of the company before (in 2017) and after (in 2019) the implementation of the banking digitalization system. The results showed that there was no difference in the value of banking companies before and after the implementation of the digitalization system.

**Keywords** firm value digital banking price to book value price earning ratio tobin's q

Published 2023-09-11 Publisher EAI

<http://dx.doi.org/10.4108/eai.4-11-2022.2328942>

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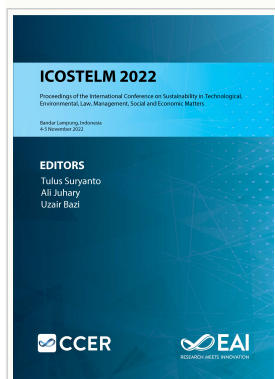
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Publisher EAI ISBN 978-1-63190-418-9 ISSN 2593-7650 Series CCER

Conference dates 4th–5th Nov 2022 Location Bandar Lampung, Indonesia

Appeared in EUDL 2023-09-11

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# Comparative Analysis of Banking Company Value due to the Implementation of the Digitalization System

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**Abstract.** This study aims to determine whether there is an effect of implementing regulation number 12/POJK.03/2018 issued by the financial services authority regarding digital banking on the value of commercial banking companies in Indonesia. The research method is to do a comparative test between the company value proxied by Price to Book Value, Price Earning Ratio, and Tobin's Q before and after the implementation of banking digitalization. The population is 46 banking companies listed on the IDX in 2017 and 2019. 40 companies meet the purposive sampling criteria. Data analysis was carried out to test whether there was a difference in the value of the company before (in 2017) and after (in 2019) the implementation of the banking digitalization system. The results showed that there was no difference in the value of banking companies before and after the implementation of the digitalization system.

**Keywords:** Firm Value, Digital Banking, Price to Book Value, Price Earning Ratio, Tobin's Q

## 1. Introduction

The financial services industry is one of the industries that plays an important role in the economic activities of a country, including in Indonesia. According to Law No.10 of 1998, the Bank has 3 main types of activities, namely as fundraising, managing funds, and providing services in payment traffic. Digital technology has become a new standard in the banking sector and provides an opportunity for the Bank to use it as a means to facilitate the Bank in carrying out its main activities.

In the current era of digitalization and the development of information technology, banks must be able to improve their services to support changes in people's behavior patterns by providing information technology-based financial services. Increasing competition in the Indonesian banking industry requires banks to increase service innovation in the use of information technology to entering the era of digital banking services. This is in line with the opinion of Lester et al. [1] which states that the wave of innovation in the current digital era not only opens up new business and industrial opportunities that have never existed before, but has the potential to disrupt and transform all industrial and economic sectors, and even change the industrial structure. According to Gries et al. [2], technological change and innovation can be the main driving force for economic growth and development through

opening up opportunities to increase welfare and social benefits for the community. This is supported by Fang et al. [3] which states that by adopting a business model innovation, in addition to expanding new market segments, it also generates a competitive advantage.

According to the innovation diffusion theory, the main focus of innovation is the communication channel, which is a means of transmitting information about an innovation into the social system. The information that is distributed can be a signal to the market regarding the functional attributes of a product, service, or technology innovation and adoption behavior that can be used by other potential adopters to make decisions about the adoption of an innovation, for example, with a large number of users, it can reflect better product quality [4], [5].

According to Schumpeter's theory of growth, innovation and technological progress can drive economic growth. Along with the development of technological innovation, the need for information technology in digital service innovation in the banking world has become one of the main priorities. The government's role is urgently needed to establish banking regulations in innovating digital banking services. According to Niemand et al. [6], banks that have a high level of digitization will be able better to pursue business opportunities in meeting consumer needs more quickly and effectively than banks that have not utilized digitalization services.

Service innovation and strategic alignment in the use of information technology encourage the banking industry to enter the era of digital banking services. However, if the policy in implementing digital banking services is only left to the management of banking companies and is not supported by the government through clear regulations, then the expected economic growth will be difficult to realize.

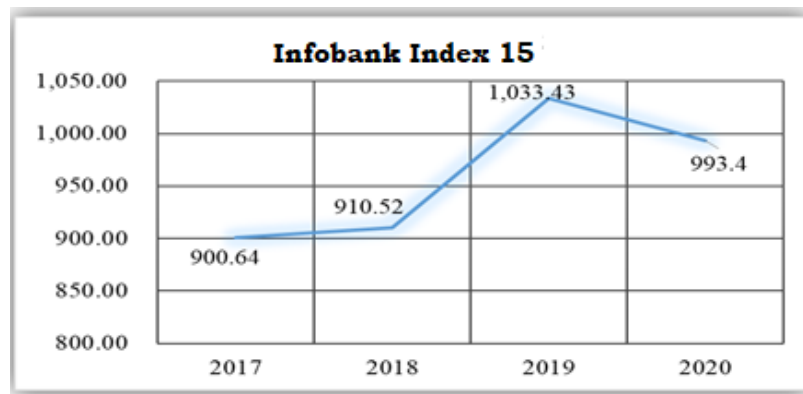
With the existence of a legal umbrella through regulation, the government hopes to encourage banks to be able to increase service innovation through the application of digital banking services in financial services in Indonesia. Based on the background described previously, a regulation is needed as a guideline for banking companies to jointly adapt technological developments to banking service innovations with measurable limits so as to minimize risk and be able to increase banking growth.

Through the Financial Services Authority, the government issued Financial Services Authority regulation number 12/POJK.03/2018 concerning the Implementation of Digital Banking Services by Commercial Banks. This regulation is expected to encourage banks to improve service quality and customer convenience. In addition, by improving digital banking services in the bank's business, it can also improve operational performance and efficiency as well as increase the range of services to the community, especially for people who have had difficulty accessing banking services.

The existence of this regulation is also expected to increase the interest of banks that have not applied digital banking in their services and the public's interest in adopting banking service innovations which will ultimately encourage the growth of the value of banking companies that have implemented it and can increase the country's economic growth. Despite the benefits of information technology that can increase company growth, there is the possibility of increasing several risks including operational risk, strategic risk and reputation risk that must be mitigated by Banks implementing digital banking services.

According to Dayag & Trinidad [7], the growth of a company can be measured through the value of the company. According to Hidayat et al. [8] and Alghifari et al. [9], firm value is the views and expectations of investors on the growth of the company's performance in the future and this is related to stock prices. The value of a banking company is important for shareholders, potential investors, government, management and the public because it involves security and risking huge amounts of funds and the economy of a country. Based on the

movement of the stock price index or the value of banking companies, it can be seen through the infobank index15. According to the Indonesia Stock Exchange, the infobank index15 is an index that measures the price performance of 15 banking stocks that have good fundamentals and high trading liquidity. The following picture shows the progress of the infobank15 index movement during 2017 to 2020



**Fig 1.** Infobank Index Movement Chart15

From **Fig 1** above, it can be seen that the infobank index15 which is an accumulation of 15 shares of banking companies listed on the IDX shows an increasing trend in the infobank index15 from 2017 to 2019. The index increase in 2018 recorded an increase of 1.1 percent compared to the index in 2017 while in 2019 it was recorded an increase of 13.5 percent compared to the infobank15 index in 2018. On this basis it can be concluded that there was an increase in the banking company composite price index on the infobank15 index by 14.6 percent in 2019 when compared to the infobank15 index in 2017 which indicates an increase in the value of banking companies through an increase in stock prices during the period from 2017 to 2019.

The value of banking companies is also seen as representing economic stability and is relevant to the effectiveness of policies issued by the government. This study examines whether there are differences in the value of banking companies, especially after the regulations related to digital banking. According to Pinto et al. [10], Nezlobin et al. [11] and Hidayat et al. [8], there are several proxies used to measure firm value including Price Book Value (PBV), Price Earning Ratio (PER), Earning Per Share (EPS), Stock Price, Stock Return, and Tobin's Q. In this study, proxies for company value through Price Book Value (PBV), Price Earning Ratio (PER), and Tobin's Q because the Earning Per Share (EPS) and Stock Price proxies are also included in the PER and PBV proxy calculation methods.

PBV has a significant role in investors' considerations when making investment decisions. The PBV ratio shows the company's ability to achieve revenue efficiency and sustainable growth capacity in the business [12]. According to Marangu & Jagongo [13], the measurement of company value indicators through PBV is more stable because it uses book value, it can be compared to the value of shares of similar companies in undervalued or overvalued conditions and PBV can still be used even though the company posted losses.

PER is the ratio most often used by investors in assessing the company before investing. PER is often used to see the long-term average return on investment in the stock [10]. The



PER ratio is based on the premise of being a proxy for securities prices by investors. A large number of investors make investment decisions by predicting future stock performance through the PER ratio (Dhankar, 2019). PER is an important ratio because it is a link in analyzing market performance (through stock prices) with company performance (earnings). PER is also called the earning multiplier approach, which means that the stock price is a multiple of the company's earnings. The PER value shows how long the investment is for the purchase of shares [14].

Another proxy for company value is Tobin's Q. According to [15], Tobin's Q is the ratio of the market value of the company's assets (as measured by the market value of outstanding shares and debt) divided by the replacement cost of the company's assets. Based on [16] research on PBV or Tobin's Q which is better for measuring firm value, it is found that the Tobin's Q measurement shows better statistical test results. Companies that have a ratio of Q greater than 1 (one) means that the company's stock price is overvalued, investors in the market value the company higher than the company's book value. Conversely, a company that has a ratio of Q smaller than 1 means that the stock price is undervalued where the market value of the company is lower than the company's book value. If the ratio Q equal to 1, the stock price is valued fairly where the company's market value reflects the company's listed assets. In conclusion, using the PBV, PER, and Tobin's Q proxies have represented the valuation in terms of equity (book value), revenue, market and company management performance.

Based on several studies related to digitization and its effect on firm value, it is stated that research related to digitization affects firm value conducted by Salvi et al., [17] which states that information about the level of corporate digitization has a positive effect on firm value. Mbama and Ezepeue [18] state that the implementation of bank digitalization has an impact on increasing customer satisfaction due to increased service quality.

Several other related studies, namely research by Niemand et al., [6] on banks in several European countries, namely Germany, Switzerland, and Liechtenstein stated that the development of digital technology has become a standard in the banking sector and provides opportunities for banks to take advantage of it. Anna [19] conducted a study on how digital transformation affects business models in the Russian and Austrian banking sectors stating that digitalization has a global socioeconomic impact. According to Schallmo & Williams [20], digitalization can create and deliver new value to customers.

Based on the theoretical approach that has been described and the research above, it can be concluded that innovation through digital banking services has a positive effect on the value of banking companies. With the increase in company value, it is expected to increase the interest of banks to implement or improve digital banking services. With the increase in digital banking services, it will improve customer service and convenience as well as expand public financial access, especially people who have had difficulties or have not received banking services so that in the end this can encourage economic growth.

In this study, researchers are interested in proving whether after the enactment of regulation number 12/POJK.03/2018 regarding the implementation of digital banking services by commercial banks, it can encourage higher growth in the value of banking companies. Therefore, the researcher conducted a different test of the value of banking companies listed on IDX with an observation period of one year before the issuance of regulations on banking digitalization and one year after the issuance of digitalization of digital banking service rules.

## **2. Theoretical Background**

### **2.1. Innovation Diffusion Theory**

Theory of Diffusion of Innovation (DOI) was popularized by Everett Rogers [21], by explaining Diffusion is the stage where innovation is conveyed to the social environment through a certain channel from time to time. In management science, diffusion is defined as the transmission and penetration of innovation aimed at the social system through communication channels related to innovation that are able to provide positive hope for economic actors in the private sector, public sector and non-profit organizations to improve business performance to be more effective and efficient ([22],[23]). Innovation is defined as an idea, practice, or object with a new characteristic [24]. The diffusion of technological innovations can be interpreted as the process of spreading and accepting a technological innovation in society because it has produced a positive impact on people's lives and increased economic productivity [25]. Sahin states that when an innovation appears, what will be of concern is the individual's decision to try or refuse to adopt the innovation [26]. Rogers describes the innovation decision process as an information seeking and information processing activity, in which an individual is motivated to reduce uncertainty about the advantages and disadvantages of an innovation [21]. According to Dash et al. [27], human perception of the attributes of an innovation affects how fast the rate of adoption of the innovation is. In conclusion, in this study, digitalization is likened to a new product or service innovation in the banking industry which is expected to improve customer service and convenience in using the service or product.

### **2.2. Growth Theory**

Growth theory is a theory about the economic development of a country. Growth theorists initially tried to understand the various factors that contribute to economic growth in developed countries and tried to apply these theories to create a universal model for economic development. According to the theory developed by Joseph Alois Schumpeter [28] explains that entrepreneurs have an important role in economic growth with ideas and turning them into an innovation in technology, the discovery of new products and the opening of new markets [29]. Schumpeter's theory also emphasizes that the spirit of entrepreneurship (entrepreneurship) encourages economic growth [30]. Business actors who dare to take risks in expanding their business through innovation and the use of new technologies will have more opportunities to increase their business growth ( [31], [32]. Based on Schumpeter's growth theory, it can be concluded that innovation and technological progress can drive economic growth. The research of Zhu et al. [33] shows things that are in line with the theory where R&D costs have a positive impact on innovation performance for all industries except the electronics and communication equipment manufacturing industry.

### **2.3. Banking Digitalization and Corporate Value**

Digitalization or often known as digital transformation reflects any changes in the company's business model to increase the business scope and performance of the company through system integration and the use of digital technology [19]. Digital technology provides a useful perspective for businesses because it has an impact on increasing efficiency through reducing costs and optimizing resource utilization, work productivity, increasing customer

satisfaction and loyalty, increasing new market share, and optimizing the company's supply chain [34]. Digital banking will be able to increase the reach of banking access for the public, as well as increase banking efficiency so that it will encourage increased economic activity. The high growth of digital transactions around the world, the Covid-19 pandemic that drives digital acceleration, and changes in people's consumption patterns towards digital, have forced banks to inevitably accelerate the transformation process towards digital banking. In Indonesia, the development of digital transactions grew quite high, which was 1,556 percent in the period 2017 – 2020. The total electronic transactions in Indonesia in 2017 was only Rp. 12.37 trillion, and increased to Rp. 204.9 trillion in 2020 [35]. The availability of information about digitization can be a signal that is distributed by the company to investors in the hope that it can have a positive effect on the value of the company [6]. This is supported by Salvi et al. [17], that information about the level of company digitization has a positive effect on company value. Reschiwati et al. [36]. Company value is an investor's perception of the company's success in managing its resources in the current year which is reflected in the company's stock price. The higher the stock price, the better the value of the company. Meanwhile, according to Setiawati & Lim in [37] the value of the company is an important component that investors must know because the value of the company is a tool for the market to measure the value of a company as a whole. In addition, the value of the company is also a tool to describe how well the performance of a company can be a benchmark for investors before deciding on their investment. Based on the explanation above, it can be concluded that the value of the company can provide a very important function to potential investors, because the value of the company is a reflection of the good or bad of a company managing its capital, and the value of the company also describes the value of the assets owned by the company. The higher the value of the company, the better the image of the company in the eyes of investors so that investors do not hesitate to invest their funds

Firm value in this study is measured through Price to Book Value (PBV), Price Earning Ratio (PER), and Tobin's Q. PBV is the ratio used to compare stock prices to the company's book value [38]. A price to book value ratio that is smaller than 1 can indicate that the company's stock is cheap because it is still lower than the book value. Price Earning Ratio (PER) is a ratio that is used to assess the price of shares based on the company's ability to generate net income. Net income in this case is earnings per share. A high price earning ratio indicates that investors expect high net profit growth from the company. A high price earning ratio on shares can be interpreted as expensive shares if in the future period the company is not able to achieve higher net income [39]. Tobin's Q ratio is a measuring tool that defines the value of the company as a form of the combined value of tangible assets and intangible assets. Tobin's Q value of a company is considered high if it has a value greater than one ( $> 1$ ). This indicates that the value of the company is greater than the value of the listed company assets. This also shows that the market gives more value to the company [40].

#### **2.4. Relationship between Corporate Value and Banking Digitization**

The existence of technological developments is rapidly changing the financial industry, especially banks, which are faced with a shift from the traditional form of interface services to digital financial services. Digital technology has become a standard in the banking sector and provides opportunities for banks to take advantage of it [6].

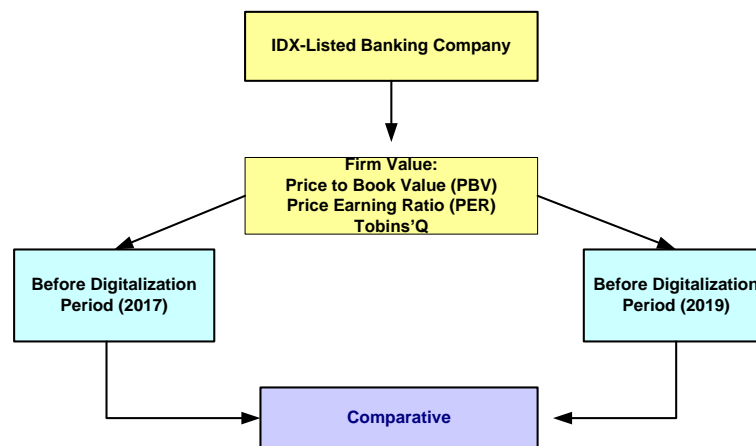
Currently, customers are faced with many choices of banking products that are provided to meet the diverse needs of customers. In the tight competition in the banking industry, banks

must be able to act innovatively in order to excel and be able to compete to increase the number of customers and maintain their satisfaction. According to Mbama & Ezepue [18], the implementation of bank digitalization has an impact on increasing customer satisfaction due to the increase in service quality so that satisfied customers will have the potential to become loyal customers and can indirectly increase bank profits.

According to Schallmo & Williams [20], digitalization not only enhances what has been provided to customers but also aims to be able to create and deliver new value to customers. Stepantseva [19] states that digitalization has a global socioeconomic impact. Based on the research results of Salvi et al. [17] shows the same thing that information about the level of company digitization has a positive effect on company value.

## 2.5. Research Framework and Hypotheses

Based on the theory described above, it will be tested whether there is a difference in firm value through Price Book Value (PBV), Price Earning Ratio (PER), and Tobin's Q proxies for banking companies listed on the Indonesia Stock Exchange before the digitization period (2017) and after the digitization period (2019) or 1 financial year after the issuance of regulation number 12 / POJK.03/2018, the following research model is made:



**Fig 2.** Research Model

### Research Hypothesis

Based on the description of the theory as well as several previous studies, in this study there are hypotheses to be tested, namely:

- H1 : There is a difference in the value of banking companies through PBV proxies listed on the Indonesia Stock Exchange before the digitization period (2017) and after the digitization period (2019).
- H2 : There is a difference in the value of banking companies through PER proxies listed on the Indonesia Stock Exchange before the digitization period (2017) and after the digitization period (2019).

H3 : There is a difference in the value of banking companies through the Tobin's Q proxy which is listed on the Indonesia Stock Exchange before the digitization period (2017) and after the digitization period (2019).

### 3. Research Method

#### 3.1. Population and Research Samples

This research was conducted on the Indonesia Stock Exchange (IDX) by extracting financial statements from the IDX website. The research population is a general banking group of 46 companies and the research sample was selected using a purposive sampling method with the criteria of companies including general banking sub-sector banking companies listed on the Indonesia Stock Exchange in 2017 and 2019, and publishing financial statements in Rupiah. There are 40 companies that meet the criteria

#### 3.2. Operationalization of Variables

This study uses only one variable, namely firm value. The value of banking companies is measured by three kinds of measurements, namely using PBV, PER, and Tobin's Q. Operationalization of variable measurement is shown in the following table

The measurement of this research variables is described as follows:

**Table 1:** Operationalization of Variables

Variable	Operational definition	Measurement	Scale
Price Book Value (PBV)	Measuring stock value by comparing the stock price with the book value of the stock	Share Price Share Book Value Source: Marangu & Jagongo (2014)	Ratio
Price Earning Ratio (PER)	Earning multiplier, which means the stock price is a multiple of the company's earnings	Share Price Earning Per Share Source: Vijayakumar & Aravanan (2004)	Ratio
Tobin's Q	Measuring the level of effectiveness and efficiency of a company in utilizing all its assets	$\frac{\text{Equity Market Value}}{\text{Equity Book Value} + \text{Liabilities Book Value}}$ Source: Ali et al. (2014)	Ratio

#### 3.3. Data Analysis

The data analysis used in this research is quantitative descriptive analysis. The tests carried out include:

1. Normality Test. If the sample is not normally distributed, an alternative Wilcoxon Signed Rank Test can be performed.
2. Paired Sample t-test, aims to compare the average of two groups that are paired with each other.

3. The Wilcoxon Signed Rank Test, aims to measure the significance of the difference between two groups of paired data on an ordinal or interval scale but not normally distributed.

## 4. Results and Discussion

### 4.1. Normality Test.

The normality test results are summarized in the following table:

**Table 2:** Normality Test Result

Firm Value	Kolmogorov-Smirnov <sup>a</sup>		
	Statistic	df	Sig.
PBV-2017	.148	40	.028
PBV-2019	.193	40	.001
PER-2017	.537	34	.000
PER-2019	.381	34	.000
Tobin's Q-2017	.156	40	.016
Tobin's Q-2019	.251	40	.000

Based on the **Table 2** above, for the PBV-2017 and Tobin's Q-2017 data groups, it shows that the sig. Kolmogorov-Smirnov is greater than 0.05, so the PBV-2017 and T Tobin's Q-2017 data are normally distributed, while for the PBV-2019 data group, PER-2017, PER-2019, and Tobin's Q-2019 show that the sig. Kolmogorov-Smirnov is smaller than 0.05, or the data is not normally distributed so that the hypothesis test used in this study is the Wilcoxon signed ranked test.

### 4.2. Paired Sample T-test Result

The results of hypothesis testing are summarized in the following table:

**Table 3:** Summary of Comparison Test Result

Period	Measurement	Sig (2-tailed)	Description
2017 and 2019	PBV	0.156	Hypothesis Rejected
2017 and 2019	PER	0.784	Hypothesis Rejected
2017 and 2019	Tobin's Q	0.104	Hypothesis Rejected

The results of the Wilcoxon Signed Rank Test above show that the firm value measured using PBV, PER and Tobin's Q has an Asymp Sig (2-tailed) greater than 0.05, which are 0.156, 0.784, and 0.104, respectively. Based on the results of the difference test, it can be concluded that H1, H2, and H3 were rejected because there was no significant difference in the value of the company after the digitization period (1 fiscal year after the issuance of regulation number 12/POJK.03/2018 regarding the implementation of digital banking services).

### 4.3 Discussion

The results of this study indicate that there is no significant difference between the value of banking companies before and after digitization. This can be seen from the value of the Wilcoxon Signed Rank Test on the value of the company before and after the digitization period through the PBV proxy with a value greater than the 5 percent significance level, which is 0.156. Although based on infobank index data15, it was found that the index value increased by  $\pm 14.60$  percent during the period 2017 to 2019 which indicated an increase in banking share prices during the period 2017 to 2019 but the results of the research on company value based on the PBV proxy found that there was no significant difference to the value of the company in the research period before and after the issuance of regulation number 12 / POJK.03/2018 ( period after digitalization) so that H1 is rejected.

In **Table 2** for the value of the company before and after the digitization period through the PER proxy also obtained a value greater than the 5 percent significance level of 0.784, so it can be concluded that there is no difference in the value of the company before and after the digitization period or H2 is rejected. The indication of an increase in the value of stock prices through infobank index data15 during 2017 to 2019 has not been able to encourage a difference in the value of banking companies in the two periods. This is supported by data from the PER calculation that based on the sample data, 52 percent (21 banks) experienced a decrease in the value of the PER ratio while the remaining 48 percent (19 banks) had an increasing PER value so that it could not encourage a significant difference in firm value. banking as a whole in the period after digitization in 2019

For the value of the company through the Tobin's Q proxy, Wilcoxon Signed Rank Test results were also obtained with a value greater than the 5 percent significance level of 0.104 so that it can be concluded that there is no difference in the value of banking companies before and after the digitization period or H3 is rejected.

The results of the study show that there is no difference in the value of the company in the period after digitization because the new research period includes a comparison of 1 year before and after the digitization period. In the early years after the issuance of regulation number 12 / POJK.03/2018, banking companies were still in the planning and adjustment phase to form network infrastructure so they were considered unable to take full advantage of digital technology, while from the customer side, they had not been able to feel the convenience of digital services. According to Niemand et al.[6], banks that are digitizing in the early phase will face challenges in investment costs and transformation of network infrastructure to support digital systems. Banks are expected to be able to pass this phase well and carry out the adaptation process quickly and focus on increasing the growth of corporate value.

Rambocan & Arjoon [24] explained that the use of new technology is very dependent on its superiority over existing technology, being able to be consistent in line with existing values and having a level of technological complexity that is in accordance with the capabilities of the target user. Innovation requires adoption time until it can be utilized properly by its users so that before being adopted, it is necessary to conduct a trial process. The trial process related to the level of complexity of the product innovation will affect the attitudes and views of consumers in assessing the product innovation ([41],[42]).

This research is motivated by several previous studies related to digital banking that can have a positive influence on business growth, namely Lester et al. [1] that this innovation not only opens up new business and industrial opportunities that have never existed before, Gries

et al. [2] states that technological change and innovation can be the main driving force for economic growth and development through opening up opportunities to increase welfare and social benefits for the community. However, this study found that the existence of regulation number 12/POJK.03/2018 can encourage the growth of the value of banking companies in Indonesia so that there is no significant difference between the period before and after the issuance of regulation number 12/POJK.03/2018. The main purpose of the implementation of banking digitalization is to provide convenience to customers in utilizing banking services so that customer satisfaction with digitalization is expected to give a positive signal to investors to be able to invest and increase the value of banking companies in the future. The current research period that can be carried out is still quite short, namely (one) year before the digitization period and 1 (one) year after digitization, so it tends not to be able to demonstrate the successful adoption of an innovation which is described by increasing the entire value of banking companies.

## **5. Conclusion**

Based on the results of the analysis that has been carried out on the research sample, conclusions can be drawn on testing the Impact of the Implementation of the Digitalization System on the Value of Banking Companies as follows:

1. There is no difference in firm value measured using the PBV proxy between before (2017) and after the period of digitalization (2019). This indicates that the implementation of POJK Number 12/POJK.03/2018 has not been able to have an impact in increasing banking growth. Banks that are digitizing in the early phase will face challenges in investment costs and transformation of network infrastructure to support digital systems so it can be concluded that in the first year after the issuance of the regulation, banking companies are still in the early phase of preparing investment costs and network infrastructure transformation.
2. There is no difference in the value of the company measured using the PER proxy between before (2017) and after the period of digitization (2019). This indicates that the implementation of regulation number 12/POJK.03/2018 has not been able to have an impact in increasing banking growth. This is in accordance with the innovation diffusion theory which states that human perception of the attributes of an innovation affects how fast the rate of adoption of the innovation is (Dash et al., 2014). When innovation is still in the adoption stage, innovation has not been able to encourage growth so that there has not been a significant difference in the value of banking companies in the 1 (one) year period after POJK Number 12/POJK.03/2018.
3. There is no difference in the value of the company measured using the Tobin's Q proxy between before (2017) and after the digitalization period (2019). This indicates that the implementation of regulation number 12/POJK.03/2018 has not been able to have an impact in increasing banking growth. Management performance in managing company assets has not seen a significant difference in the 1 (one) year period after the issuance of POJK Number 12/POJK.03/2018.

The challenges in the initial phase of investment costs and the transformation of network infrastructure to support digital systems and the dimensions that affect the speed of community adoption in accepting an innovation (digital banking services) have resulted in no difference in the value of banking companies in period of 1 (one) year after the issuance of regulation number 12/POJK.03/2018.



Based on the results of the research and the conclusions above, the following suggestions can be given:

1. For banking companies that have or will implement a digitalization system, they should be able to optimize digital banking services which are expected to increase customer satisfaction and company profits. This is expected to have an impact on increasing the growth of banking value.
2. For investors, it would be better to consider choosing a banking company that has implemented a digitalization system or has digital banking services when investing
3. For further similar research, it is better to conduct research with a longer period to find out the impact of the implementation of regulation number 12/POJK.03/2018 regarding the implementation of digital banking services by commercial banks in the long term and can take into account other factors in assessing the impact of the implementation of regulation number 12/POJK.03/2018 on the growth of company value or measurement of banking performance through CAMELS or other financial ratios so that the company's financial performance assessment will provide more accurate results.

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