Research Article

Analysis of Digital Bank Company Value on the Indonesian Stock Exchange

M. Al Hafis, and Jubaedah Nawir*
Faculty of Economics and Business, Universitas Pembangunan Nasional Veteran Jakarta, Jakarta, Indonesia

Abstract.
This study investigates how growth opportunity, investment opportunity set, and company size impact the valuation of digital banks that are publicly traded on the Indonesian Stock Exchange from 2018 to 2022. The sample selection method employed was full sampling, consisting of 13 companies as samples, and panel data regression analysis was utilized in this study with the assistance of E-views 12 software. According to the research findings, there are several discoveries. First, growth opportunities do not affect company value. Second, investment opportunity sets do affect company value. Third, the company size affects company value.

Keywords: growth opportunity, IOS, company size, company value

1. Introduction

The digital transformation in the banking industry goes beyond merely providing online or mobile banking services. The banking industry must innovate by integrating digital technology with customer activities, in this regard, banks must develop innovations that simplify and improve customer’s access to banking services [1]. Banking digitization transforms operational systems all the way down to the branch office level, eliminating the need for customers to physically visit the bank in person to open accounts or conduct transactions. The advent of digital banks provides a solution to time-consuming banking issues.

The Financial Services Authority (OJK), as the regulator, responds to substantial and structural changes occurring in the banking industry. This response is articulated in the Roadmap for the Development of the Indonesian Banking Sector 2020-2025 (RP21), which serves as the foundation for OJK’s policy direction to accelerate digital transformation in Indonesia. The policy direction pillars of OJK are further elucidated in the Blueprint for Digital Transformation of Banking. This blueprint is formulated with a focus on maintaining a balance between digital banking innovation and prudential aspects to safeguard the banking performance in a healthy condition [2].
In the blueprint of digital banking transformation, the prospects for this industry are significantly vast. Firstly, Indonesia boasts a substantial population of 275 million people, primarily dominated by a digitally savvy generation that constitutes the main consumer segment. Secondly, according to research by Temasek, Google, and Bain & Company, Indonesia’s digital economy is valued at $77 billion in 2022, making Indonesia a key player in the digital economy within ASEAN. Thirdly, the high internet usage in Indonesia serves as a pivotal factor supporting the digital banking industry. According to We Are Social and Hootsuite, the number of internet users in Indonesia is 204 million or 73.6% of the total population in 2022. Fourthly, a significant portion of Indonesia’s population still lacks access to financial services, as data from LPS indicates that 49% of Indonesians do not have a bank account.

Figure 1: Comparison of PBV in the Banking Sector from Indonesia Stock Exchange.

The Covid-19 pandemic indeed affected the performance of Indonesia’s banking sector. Social restrictions, which paralyzed the economy, resulted in a decline in credit and an increase in debt restructuring, affecting banks’ overall financial performance. The decrease in performance during the pandemic is reflected in banks’ declining Price Book Value (PBV) between 2020 and 2022. However, on the other side, digital banks consistently exhibited an upward trend in company valuation from 2019 to 2021. The growth prospects of digital banks serve as a strong sentiment, thus boosting the valuation of digital banks [3].

The financial performance of the companies does not consistently accompany the remarkably high valuation of digital banks. Several digital bank companies appear to face challenges in recording profits amidst intense competition. Conversely, digital
banks listed on the Indonesia Stock Exchange are experiencing a decline in performance. According to Amin Nurdin, Senior Researcher at LPPI, the sluggish performance and frequent losses of the companies are closely related to digital transformation [4].

The increase in the valuation of digital banks, when correlated between empirical conditions and agency theory and signals theory, reveals a discrepancy. The surge in the valuation of digital banks is attributed to excessively optimistic investor sentiments regarding the future prospects of digital banks. The purchasing demand for digital bank stock causes the valuation to reach a significantly high premium level, even though the company’s performance has not shown any improvement. This study plays a critical role in assisting investors with their decision-making process in the Indonesian capital market. If this trend continues without an improvement in company performance accompanying the rapid increase in valuation, it could create a market wave that may disadvantage investors.

A reputable company should have the ability to maximize its corporate value. Effective management that optimizes corporate value reflects the fulfillment of the company’s primary goals. Enhancing corporate value is a sought after achievement for shareholders, and the success of shareholders is directly linked to the growth of corporate value [5]. The fluctuation of corporate value can be impacted by several factors such as growth opportunity, investment opportunity set, and company size.

Growth opportunity is defined as the chance or opportunity for a company to grow or reach a specific growth point [6]. Companies that have significant growth opportunities often seek to broaden their operations, necessitating considerable funds to support their operational endeavors [7]. An expanding company conveys favorable messages to investors, which clearly impacts the corporate value. The research results from [8] show that growth opportunity affects the corporate value. However, results from the study by Hardiansyah & Laily [9] suggest that there is no impact of growth opportunity on corporate value.

Investment Opportunity Set pertains to a company’s decision making process concerning investments, which is derived from a blend of assets and prospective investment opportunities that are expected to generate a positive net present value, thereby contributing to an enhancement in the company’s worth [10]. The investment opportunity set provides an overview of investment opportunities for the company. A study from [11] showed the impact of investment opportunity set on corporate value, and the findings suggest a notable influence. Conversely, a study by [12] yielded contrasting outcomes, asserting that the investment opportunity set does not impact corporate value.
The size of a company mirrors the quantity of assets it currently holds [13]. The corporate value can be impacted by the company's size, which is determined by its capability to obtain funds for operational purposes [14]. Study from [15] found that company size can affect corporate value. A larger company size can facilitate easier access to funding, consequently leading to an increase in corporate value. Nevertheless, [13] research reveals contrasting findings, suggesting that the size of the company does not affect corporate value.

The difference between [8] research and this research lies in the use of variables. Research [8] uses independent variables, namely company size and growth opportunity, company value as the dependent variable and capital structure as an intervening variable. Additionally, this research incorporates the investment opportunity.

This research also has differences with [11] research which uses firm size, investment opportunity set (IOS), growth opportunity, and company value as dependent variables and capital structure as an intervening variable. The difference lies in the use of growth opportunity indicators in the [11] research, sales growth as an indicator, whereas this research uses total asset growth. In this study, no intervening variables were used.

Based on the unusual phenomenon observed in the valuation of banks, this study seeks to examine the influence of Growth Opportunity, Investment Opportunity Set, and Company Size on the Corporate Value of Digital Banks listed on the Indonesia Stock Exchange.

2. Literature Review

2.1. Agency theory

Study [16] conducted an analysis by questioning the implications of selling a portion of the company's ownership to external investors. If this is done, it will lead to the division of ownership and control of the company. In this situation, entrepreneurs become managers (agents) of the shareholders (principals) with the task of maximizing the company's value. The agency relationship between managers and shareholders creates conflict of interest [17]. Shareholders seek wealth and prosperity through an increase in the company's value, while managers also desire luxurious facilities from the company. The agency problem between management and shareholders gives rise to agency costs to minimize such conflicts. According to [18] these costs include monitoring expenses, bonuses (appreciation) for management, fidelity bonds, and poison pills.
2.2. Signalling theory

The conflict between the agent and principal can be addressed by the Signaling Theory proposed by [19], explaining why management, as the information sender, provides a signal or indication to shareholders regarding the actual condition of the company. Gumanti [17] elucidates the signaling theory, which posits that management generally possesses more comprehensive information about the actual condition of the company and its future prospects compared to external parties such as shareholders, creditors, or the government. In this situation, there is an asymmetric of information between management, which has more complete information, and external parties with interests.

Information asymmetry makes it challenging for investors to objectively distinguish between high-quality and low-quality companies. Therefore, management is encouraged to provide information about the company to investors for analysis and conduct a preliminary review of the information provided. The Signaling Theory relates to the corporate value. If management gives positive signals, corporate value will increase accordingly, and vice versa. This situation arises from the motivation of investors seeking profits from their investments, hence, investors may leave companies with poor evaluation.

2.3. Firm value

The goal of establishing a company is to enhance its corporate value while ensuring the desired prosperity for the owners of the company. Corporate value is the result of evaluation given by investors to measure how successfully the company has improved its performance which is reflected in the stock price [20]. Meanwhile, according to [21] the corporate value is the price that must be paid when an investor wants to buy a company. Considering corporate value is essential as it is the company’s performance that primarily draws investors to invest their capital in the company [22]. When the corporate value achieves a significant level, it can boosts investor confidence in the company’s outlook and performance [23].

2.4. Growth opportunity

The optimization of corporate value can be determined by the company’s Growth Opportunity, which reflects the development of the corporate resourch used in businnes
operation. Growth opportunity is the company’s ability to leverage investment opportunities that can drive an increase in corporate value [7]. Based on the conclusions drawn earlier, it can be hypothesized that the growth opportunity factor influences the valuation of the company. This hypothesis aligns with the findings of [8] who discovered that growth opportunity significantly impact corporate value. Another study with similar results is by [24], indicating that if Growth Opportunity increases, the Corporate Value will follow suit.

H1 : Growth opportunity impact the value of company

2.5. Investment opportunity set

The Investment Opportunity Set heavily influences the growth opportunity of a company, representing current expenditure for the future with stock returns and future prospects as advantageous returns on investment to generate future value. The Investment Opportunity Set can provide information about the potential income a company can gain in the future. Based on the perspective of the Signaling Theory, the investment expenditures by a company indicates positive indications regarding the future growth of the company, potentially leading to an increase in stock prices which serves as an indicator in assessing the company’s value. The research findings from [25] based on statistical analysis demonstrate that the Investment Opportunity Set has an impact on the Corporate Value. This aligns with the findings from other studies by [26] and [12] indicating that a rise in the investment opportunity result in a higher company valuation because of increased investment prospects.

H2 : Investment opportunity set impact the value of company

2.6. Firm size

A company’s investment opportunity set is influence by its scale, which can be gauged by evaluating its assets, capital or sales [14]. Company size provides a positive representation indicating the company’s capability to manage its operational activities effectively. Investor are more likely to be drawn to large companies because they perceive it as easier to access the capital market. Research by [27] shown that the size of company positively impacts its corporate value, consistent with the findings of research by [15].

H3 : The size of a firm influence its value
3. Methodology

3.1. Operational definition and variable measurement

The Corporate Value is a condition that reflects public trust in the company after undergoing operational activities. This corporate value has a direct correlation between stock prices and the company’s value. Growth Opportunity indicates the potential for the company’s future growth, which can be manifested through an increase in the company’s assets. The Investment Opportunity Set is a collection of investment options that encompass equity and assets for future periods. Company size reflects the dimensions of the company, whether it is large or small, assessed based on the amount of assets it owns (Table 1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement</th>
<th>Measurement Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Value</td>
<td>Stock Price, Book Value</td>
<td>Ratio</td>
</tr>
<tr>
<td>Growth Opportunity</td>
<td>Total asset (t)−Total Asset (t−1) / Total Asset (t−1)</td>
<td>Ratio</td>
</tr>
<tr>
<td>Investment Opportunity Set</td>
<td>asset−total equity+number of outstanding shares x stock price / Total Equity</td>
<td>Ratio</td>
</tr>
<tr>
<td>Company Size</td>
<td>Natural logarithm of asset</td>
<td>Ratio</td>
</tr>
</tbody>
</table>

3.2. Population and sample

The study’s population comprises all digital banks that are listed on the Indonesian stock exchange. The research covers companies from 2018 to 2022, with total 14 digital banks. The sampling method used in this study is complete sampling, with includes all 14 digital banks throughout the specified timeframe.

3.3. Model analysis

Data analysis for this study employs panel data regression using e-views 12 software, which includes conducting model tests like the chow test, hausmant test, and the lagrange multiplier test. The panel data regression can be computed using the equation (1).

\[ Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \mu_{it} (1) \]

Where
Yit : Firm Value  
\( \beta \) : Constant  
X\(_1\) : Growth opportunity  
X\(_2\) : Investment opportunity set  
X\(_3\) : Firm size  
i : Digital bank company name  
t : Period/time  
\( \mu \) : Error term

The hypothesis testing techniques utilized include the partial test and the determination coefficient test, which are used to gauge the level of correlation between the independent variable and the dependent variable. Typically, the coefficient value falls within the range 0 to 1, where higher values signify a more robust explanatory capability, and conversely. The values can be observed in the Adjusted R-Squared, which is used to address any bias that may arise due to the addition of observation data and variables in the regression analysis.

4. Result and Discussions

4.1. Data description

Description statistics were carried out to present a summary of the mean, maximum, minimum, and standard deviation. The outcome are displayed in the table 2.

<table>
<thead>
<tr>
<th></th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.266154</td>
<td>9.211846</td>
<td>30.93631</td>
<td>4.337846</td>
</tr>
<tr>
<td>Median</td>
<td>0.070000</td>
<td>6.670000</td>
<td>30.64000</td>
<td>1.430000</td>
</tr>
<tr>
<td>Maximum</td>
<td>4.650000</td>
<td>65.36000</td>
<td>33.17000</td>
<td>62.79000</td>
</tr>
<tr>
<td>Minimum</td>
<td>-0.210000</td>
<td>1.400000</td>
<td>27.22000</td>
<td>0.290000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.684851</td>
<td>9.349361</td>
<td>1.937726</td>
<td>9.936965</td>
</tr>
<tr>
<td>Observation</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
</tbody>
</table>

Source : E-views 12, Data processed

Table 2 displays the outcomes of the descriptive statistical analysis for each research parameter in the following manner.

1. The Corporate Value which calculated through PBV for the period 2018-2022 is 4.337846, out of this average, there are four companies with values above
the industry average. The highest Corporate Value is achieved by PT. Allo Bank Indonesia Tbk with a value of 62.79, attributed to an increase in profit leading to a rise in stock prices. On the other hand, PT. Bank KB Bukopin Tbk has the lowest value i.e. 0.29, affected by the decrease in the company performance and the declaration of a right issue. The standard deviation of the corporate value is higher at 9.936965 > 4.337846, indicating a high level of data variation.

2. The Growth Opportunity value which is calculated from the asset growth during the period 2018 – 2022 is 0.266154, out of this average, five companies have values above the industry average. The highest Growth Opportunity is achieved by the issuer PT. Bank Jago Tbk at 4.65, influenced by factors such as the growth of third-party funds and the company’s rights issue. On the other hand, PT. Bank Aladin Syariah Tbk becomes the issuer with the lowest Growth Opportunity, -0.21, indicating a decrease in assets due to the company’s losses. The standard deviation value exceeds the average Growth Opportunity, 0.684851 > 0.266154, causing a high level of data variation. Meanwhile, the issuer has the lowest IOS, i.e. 1.40, as a result of losses and a decrease in stock prices. The average of the standard deviation is higher compared to the average of IOS 9.3493 > 9.2118, resulting in high data variability.

3. Investment Opportunity Set which calculated from the market book of value of equity (MVBVE) has an average value of 9.21. The highest value is held by the issuer PT. Allo Bank Indonesia Tbk at 65.36, attributed to a surge in the company’s asset and stock values.

4. The Company Size which calculated from the natural logarithm of assets has an average value of 30.93. Out of 14 companies, only five that have assets above the industry average. The issuer PT. Bank Permata Tbk is the company with the highest assets i.e. 33.17, while the issuer PT. Bank Aladin Syariah Tbk has the lowest assets as 27.22. The company size has low deviation because its value is lower than the average company size, 1.93 < 30.93.

The accepted model for the study is the fixed effects model. Hence, classical assumption tests were conducted, including tests for heteroskedasticity and multicollinearity. It is confirmed that neither heteroskedasticity nor multicollinearity occurred. The findings from the T-test in this study are displayed in the table 3.

Based on the results, the data can be interpreted as follows:
Table 3: T-Test Results.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-33.91262</td>
<td>14.31291</td>
<td>-2.369373</td>
<td>0.0219</td>
</tr>
<tr>
<td>X1</td>
<td>0.297650</td>
<td>0.399030</td>
<td>0.745934</td>
<td>0.4593</td>
</tr>
<tr>
<td>X2</td>
<td>1.008251</td>
<td>0.022893</td>
<td>44.04276</td>
<td>0.0000</td>
</tr>
<tr>
<td>X3</td>
<td>0.933640</td>
<td>0.463683</td>
<td>2.013532</td>
<td>0.0497</td>
</tr>
</tbody>
</table>

Sumber: E-views 12, Data processed

1. Growth opportunity shows a significant value of 0.4593, which is greater than 0.05. Thus, according to the findings, the researcher rejects $H_1$ and accepts $H_0$.

2. Investment Opportunity Set exhibits a significance value of 0.000, which is less than 0.05. Drawing from these findings, the researcher embraces $H_1$ and dismisses $H_0$.

3. The significance value for company size is 0.0497, which is less than 0.05. Therefore, based on this outcome, the researcher supports $H_1$ and dismisses $H_0$.

Table 4: Coefficient of Determination Test Results

<table>
<thead>
<tr>
<th>Item</th>
<th>value</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
<td>0.985553</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.980737</td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>1.379174</td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>91.30174</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-103.2739</td>
</tr>
<tr>
<td>F-statistic</td>
<td>204.6489</td>
</tr>
<tr>
<td>Prob (F-statistic)</td>
<td>0.00000</td>
</tr>
</tbody>
</table>

Source: E-views 12, Data processed

The Adjusted R-Squared employed in this research elucidates the extent to which the independent variable can impact the dependent variable. Findings indicate that growth opportunity, investment opportunity and company size collectively account for 98.07% of the explanation, leaving 1.97% attributed to variables not explored in this study.

4.2. Discussion
4.2.1. The influence of growth opportunity on firm value

The regression analysis findings from this study reveal that there is no significant impact of growth opportunity, given the probability value of 0.4593, which is greater than the significance level of 0.05. This is supported by a coefficient value of 0.297650 and a t-statistic of 0.745934. This finding aligns with [28] who found that the Growth Opportunity does not influence company’s value. Signaling theory suggests that a company’s growth is the best sign for an investor to invest in it. Essentially, investors expect their invested capital to grow in line with the company’s growth. Nevertheless, the findings of this study suggest that growth opportunity does not influence the value of the company, which goes against the predictions of the signaling theory. These conclusions are backed by a global study carried out in Vietnam by [27] which affirmed that the growth factor does not impact the value of a company. Similarly, a research by [29] in the banking sector, obtained a similar result. This occurs because a high growth rate requires strong financing to support the company’s operational activities.

4.2.2. The influence of investment opportunity set on firm value

The regression panel data values demonstrate a significant positive influence explained through the probability of the investment opportunity set, with a value of 0.00000 > 0.05, a coefficient of 0.957690, and a t-statistic of 27.21482. The Investment Opportunity Set (IOS) can provide information about potential profits in the future. The statistical data indicating a positive correlation implies that a rise in IOS will lead to a subsequent increase in the company’s value. Therefore, a high level of investment opportunity is expected to yield maximum returns. The results of this study are consistent with research carried out in Indonesia by [25] which indicates that the investment opportunity set influences company’s value. Similar results have been found in other countries, such as Pakistan by [30] and Iran by [31], both studies conclude that the investment opportunity set influences the value of a company. If a company has the ability to maximize IOS from its current investment options to generate profits through its equity, thus it can create an increase in company’s value.

4.2.3. The influence of firm size on firm value

The regression panel data shows a noteworthy positive impact attributed to the probability of company size, with a value of 0.0497 > 0.05, a coefficient value of 0.933640,
and a t-statistic of 2.013532. Signaling theory suggests that a large company size has a positive impression on investors. Yanti & Darmayanti [15] stated that company size is a signal of management’s success in managing company activities. Companies with a larger size exhibit superior operational stability compared to smaller-sized companies. The findings from this study align with a study conducted in Indonesia by [8] where they found that the company’s size has an impact on its value. Furthermore, this study aligns with findings from several Asian countries, including research by [27] in Vietnam, [30] in Pakistan, and [32] in Jordan. Investors in various Asian countries tend to favor investing in larger-sized companies as it can lead to an increase in company’s value.

5. Conclusion

This research produces several conclusions. First, growth opportunity assessed by the alteration in total assets does not yield a substantial impact on the corporate value of digital banks from 2018 to 2022. The research findings suggest that fluctuations in growth opportunity, whether an increase or decrease, do not impact the corporate value of digital banks.

Second, investment opportunity set, as measured by the market value of book value of equity, demonstrates a notable influence on the corporate value of digital bank between 2018 and 2022. The study imply that each increase in IOS enhances the corporate value. Therefore, IOS is a crucial factor that investors should consider when investing in digital banking.

Thirdly, the size of the firm, assessed by the logarithm of assets, exerts a meaningful impact on the corporate value of digital bank from 2018 to 2022. The research findings indicate that each increase in company size contributes to an increase in Corporate Value. In empirical conditions, the size of the company should be considered by investors when investing in the digital banking sector.

In this study there are data gaps and are beyond the control of the researcher. There are two new digital banks that will IPO in 2020, namely PT. Bank Ammar Indonesia Tbk and in 2022 namely PT. Bank Aladin Syariah Tbk. This causes some data such as share price, number of shares outstanding, and book value to be incomplete. Apart from that, there are other limitations such as the small number of digital banking issuers in this study that are listed on the Indonesia Stock Exchange and the small number of previous studies that examined digital banking companies.

Advice for investors, when making investment decisions, it is very important to consider the company’s fundamental analysis, business prospects and the ecosystem.
owned by the digital banking company. Apart from that, investors also need to pay attention to corporate actions from digital banking companies to find out the direction of company policy.

References


