| RESEARCH ARTICLE

The Impact of Capital Structure on Digital Bank Valuation in Indonesia

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| ABSTRACT

The restricted activities during Covid -19 pandemic encourage people to spend more on online activities. One of the most shift activities happened in the banking sector activities. The high demand for digital services encourages banks to accelerate the transformation and development of their mobile banking to be more advanced. One exciting thing about the development of digital banks in Indonesia is the phenomenon of the high valuation of digital banks compared to other conventional banks. This study will answer whether the corporate action taken by large companies to buy small banks and transform them into digital banks is a factor in the high valuation of these digital banks. Moreover, will the high valuation persist or move into the normal range of other banks? This study used a quantitative research method. The approach of research used is a regression statistic model. Based on the Hausman test of 3 models used in this research, the best model used to identify the result is the fixed-effect model. The result showed a negative correlation between DER and PBV which was used as the variable in this research. There are many problems found in the ancient test statistic. There is no multicollinearity, autocorrelation, and heteroskedasticity. So, the result of fixed-effect regression in this research showed the BLUE analysis result.

| KEYWORDS

Capital Structure, Digital Bank Valuation

1. Introduction

The COVID-19 pandemic has changed various aspects of people's lives, including consumption patterns and transactions. Activity restrictions imposed by the government have prompted an increase in purchases through online platforms, which has also increased payment transactions through digital platforms. A study from Alpha JWC Ventures and Kearney reported that people's preference for using digital services doubled from the pre-Covid-19 number. The value of the digital economy in Indonesia is also estimated to soar to reach USD45 billion by 2025 (Alpha JWC Ventures and Kearney, 2021). According to McKinsey's Personal Financial Services 2021 survey, digital banking adoption in Indonesia is dramatically rising. About 78% of Indonesian customers now use digital banking actively, up from 57% in 2017 (McKinsey & Company, 2021).

The high demand for digital services encourages banks to accelerate the transformation and development of their mobile banking to be more advanced. Customers can do almost all their financial transactions through mobile banking, from basic queries such as account opening to more complex transactions such as investing in securities. As the banks offered similar features of mobile banking, the customers concern more about user experience and integration with another platform. Bank Mandiri launched Livin for their retail customer, Bank BRI introduced BRImo, Bank BSI came with the iconic BSI Mobile, and so did the other banks. As a result, several banks experienced exponential growth in their mobile banking users until Q3 2022, such as Bank Mandiri (60%), Bank BRI (136,7%), Bank BNI (33,6%), Bank BCA (49%), and Bank Syariah Indonesia (152%). However, what the big banks are doing is digitizing banking services. It does not necessarily turn them into digital banks because they still have many physical branch offices and run closed systems. This means the business model adopts the traditional approach where most financial transactions should be executed in the office.

In the area of digital transformation, banks have a diverse speed of digital adoption and change among each other. Big-size banks are far superior in the pace of transformation and lead the way. In contrast, small banks are trying to keep up with a minimum viable update on their digital services. The transformation from a traditional into a digital bank will take time and require a multi-stages of development. From an operational perspective, one of the characteristics of digital banks is a system built with an open banking approach, thus enabling more personalized engagement with the community, ecosystem, and third parties (Ramdani, 2020).

The vast business opportunity of digital transactions has attracted e-commerce companies' eye to integrate financial services into their retail ecosystem. Several companies have acquired small banks and then turned them into digital ones to optimize their ecosystem. It is more efficient than forming a new bank that needs high capital for the initial outlay. Indonesia Financial Services Authority has raised the minimum capital to establish a new bank from IDR3 trillion to IDR10 trillion. Therefore, acquiring existing banks becomes a more feasible strategy for entering the industry.

This trend was started by one of the first unicorn start-ups in Indonesia, Gojek, which acquired a 21.4% stake in Bank Artos Indonesia (ARTO) in December 2020 to turn it into Bank Jago, which focuses on digital services in the Gojek ecosystem. CT Corp followed this step by acquiring Bank Harda Internasional (BBHI) in March 2021 and transformed it into a digital bank called Allo Bank Indonesia. Aladin Global Venture came next, which turned Bank Net Syariah Indonesia into Bank Aladin Syariah. One of the major e-commerce companies, Aku Laku, also became the controller of Bank Yudha Bhakti (BBYB) in July 2021 and turned it into Bank Neo Commerce. Finally, a slightly different step was taken by Bank BRI, which transformed its subsidiary, Bank BRI Agroniaga (AGRO), into a digital bank called Bank Raya Indonesia.

One exciting thing about the development of digital banks in Indonesia is the phenomenon of the high valuation of digital banks compared to other conventional banks. For example, at the end of 2021, Allo Bank's valuation was recorded at 63.42, Aladdin Syariah Bank's at 28.98, Bank Jago at 26.87, and Bank Raya Indonesia at 16.75. When compared with the top five national banks, like BRI (2,49), Bank Mandiri (2,3), BCA (5,31), BNI (1,35), and BTN (0,76), a very significant gap will be seen. The high valuation of digital banks has attracted attention, although the company's assets are relatively small compared to the big five national banks. Their newly running business operations have yet to show the sustainability of long-term performance, like the five big national banks.

This phenomenon raises the query of what factors shape the high valuation of digital banks. Several approaches are used to evaluate companies: market-oriented, asset-oriented, cash-flow-oriented, and residual income-oriented. One common approach to valuing banks is using the dynamic dividend discount model, which measures the long-term Price Book ratio to fundamental variables such as cost of equity (COE), expected net profit growth (NI), and dividend payout ratio (DPR). The model is dynamic because it allows short-term deviations of the PB ratio from its long-term fundamental value (Bertsatos, 2016).

Nevertheless, the equity-based approach is the most qualified to measure bank shareholder value among the many approaches. The bank's valuation using the equity model means that all debt is considered part of operations rather than financing. Therefore, debt is not considered capital, and interest paid on debt is an operating expense (Gross, 2006). Another study shows that a bank's capital structure positively and significantly affects firm value. Conversely, if the capital structure is lower, the influence on firm value will be lower (Linawati, 2022).

Thus, this study will answer whether the corporate action taken by large companies to buy small banks and transform them into digital banks is a factor in the high valuation of these digital banks. Moreover, will the high valuation persist or move into the normal range of other banks?

2. Literature Review
2.1 Digital Bank
Covid-19 drove the rapid technological evolution of the financial industry. Banks are shifting from traditional, interpersonal service forms to digital financial services to stay relevant to the customer appetite. These digital technologies are increasingly becoming today's standard in the banking sector, challenge conventional business models, and provide opportunities for banks to capitalize (Niemand, 2021). In the transformation phase from traditional services to digital, most banks gradually start automating the manual operating process and running side-by-side until all possible fields have been automated. This phase is a hybrid period for the bank until the state, where all aspects are fully digitalized, not only the business process but also the organization (Sajić, 2018a). In the race for digital transformation, the technological leap in financial services has driven the rise of Shadow banking activity; the system consists of a web of specialized financial institutions that conduct credit, maturity, and liquidity transformation without direct, explicit access to public backstops (Adrian & Ashcraft, 2021).

Against the dynamic of all trends and changes, banks need an innovative business model where bank introduces a secure way to give financial service companies consensual access to a bank's customer financial information, called open banking. For example, a bank provides regulated API permission to access its banking website securely. Banking then uses that as a service entity to make direct payments or download financial data to provide a solution (Broby, 2021). This new business model of open banking creates a new ecosystem comprised of financial institutions, retailers, high-tech companies, social media, crowdsourcing platforms, and potentially anything that involves financial information or transactions (Premchand, 2019).

2.2 Capital Structure

All the assessment and study about the capital structure was derived from the theory of cost of the capital, where the funds are used to acquire assets whose yield are uncertain and in which many different media can obtain money, ranging from pure debt instruments, representing money-fixed claims, to pure equity issues (Modigliani & Miller, 1958). The capital structure is the mix of a firm's various debt and equity capital (Ross, Westerfield, Jaffe, & Jordan, 2019). Others defined capital structure as the mix of long-term sources such as equity shares, preference shares, debentures, long-term loans, and retained earnings (Manurung, Capital Structure of Company: A Reading, 2022).

To obtain debt as part of the capital mix, companies can access funds from external or internal sources by retaining a portion of net income rather than distributing it in dividends to shareholders (Aldubhani, Wang, Gong, & Maudhah, 2022). From the perspective of pecking order theory, managers will prioritize retained earnings to finance company activities. If they still need more funds, companies can issue debt securities as a last resort. Banks also prioritized internal funding over external funding as the internal cost of capital is lower than the external cost (Bitar, Walker, & Pukthuanthong, 2018).

The bank's ability to determine its effective capital structure will be effective in reducing bank risk and improving efficiency and profitability (Bitar, Walker, & Pukthuanthong, 2018). Specifically, in the digital bank, the mediating role of capital structure affects firm value positively and significantly (Linawati, Moeljadi, Djumahir, & Aisyah, 2022).

2.3 Pecking Order Theory

The pecking order theory is learned from asymmetric information among managers and investors. Managers more understand the risk of enterprise than investors. Companies' financial activities retained earnings whenever possible. If the earnings are insufficient, borrowed capital will be used. Only in extreme cases will companies turn to new equity financing. Therefore, the order of funding sources used was internal funding of earnings, short-term securities, debt, preferred stock, and common stock. Sequence theory predicts that equities (common stock) issuance is the last alternative funding source. Hierarchy theory suggests that companies initially prefer internal funding sources and adjust their target payout ratios to suit investment opportunities. When companies seek external funding for generous dividend policies, unpredictable fluctuations in profitability, or investment opportunities, companies choose debt (as the safest option), convertible bonds, etc., select hybrid securities, and, as a last resort, equities. The pecking order theory explains why companies reasonably tolerate cash flow leverage. This suggests that companies are turning to debt financing under internal cash shortages.

The documented pecking order theory research revealed that commonly, first, the firms prefer internal to external finances. Second, the dividend is "sticky" To ensure that dividend cuts are not used to finance capital expenditures, and short-term dividend changes do not absorb cash changes requirement. Third, when external funds are needed for capital expenditures, companies issue the safest securities first: debt rather than equity. Fourth, the firm's debt ratio reflects its cumulative requirement for external financing (Sembel, 2001).

2.4 Firm Value

Firm value has become one of the main approaches to measuring company performance, representing how the business is carried out (Gross, 2006). Because the value of a firm equals the present value of its future cash flows, its value is maximized when the cost of capital is minimized. It will drive the company to reduce the cost of capital to the lowest level (Aljamaan, 2018). Another common approach to measuring firm value is dividing the market value of a company by the replacement value of the firm's assets, broadly known as Tobin's Q (Tobin & Brainard, 1976). Tobin's q ratio significantly affected the firms' future operating performance and was used as a proxy for future investment opportunities. Firms with higher q ratios mean superior operating performance in the long run (Singhal & Parkash, 2016). Tobin's Q can also measure ownership concentration to the firm value (Busta, 2014).

When it comes to the specific valuation of a bank, there are broad approaches and financial modeling such as market-oriented, net asset value, discounted income, discounted cash flow, and residual income (Gross, 2006). There is also a development of an equity valuation model for the bank, which establishes a long-run equilibrium price-to-book (P/B) equity ratio with fundamental variables such as the cost of equity (Bertsatos, 2016).

One widely used approach to value the bank is the Price to Book (P/B) ratio, which compares the market value to book equity. The P/B multiple is forward-looking and relates the market's expectations concerning future performance to invested capital (Gross, 2006). In addition, valuation using the Price Book approach is the simplest method, calculated by comparing the market price to the book value per share (Manurung, 2022).

3. Methodology

Because there is no standard definition of digital banking in Indonesia, we use several approaches to determine the object of research in this study. Among these is the use of open APIs, relatively few physical office networks compared to the industry average (Sajić, 2018b), and those who declare themselves as digital banks. To make it easier to find data, we sort from banks listed on the Indonesian stock exchange. The result is as follows.

Bank	Open API	Physical Office
Bank Raya Indonesia Tbk PT (AGRO IJ)	Yes	30
Bank Amar Indonesia Tbk PT (AMAR IJ)	Yes	6
Bank Jago Tbk PT (ARTO IJ)	Yes	5
Bank MNC Internasional Tbk PT (BABP IJ)	Yes	41
Bank Aladin Syariah Tbk PT (BANK IJ)	Yes	1
Allo Bank Indonesia Tbk PT (BBHI IJ)	Yes	16
Bank Neo Commerce Tbk PT (BBYB IJ)	Yes	25

a. Among the seven digital banks, the earliest declared digital Bank is Bank Amar Indonesia back in January 2020, while the latest is bank Neo Commerce, which was proclaimed as a digital Bank in December 2021, which we set as the first period of observation. The data we employ is the price-book value ratio (PBV) and debt-to-equity ratio (DER) as a proxy of capital structure from 2021 to 2022. All the financial data was obtained from the Bloomberg system terminal.

b. Because the object of the study is time series data from multiple companies (cross-section), we use data panel analysis. Furthermore, since some companies are going public lately, they need to have available market value information or price to book value (Gujarati, 2004). The goal is to examine capital structure's influence on digital bank valuation and observe the movement of firm value. In the formula structure, bank valuation will be the dependent variable, while capital structure plays an independent role.

c. To estimate panel data, three models are often used.

d. a. Common Effect Model. This is the most straightforward technique for estimating the parameters of the panel data model by combining cross-section and time series data as a single unit without looking at differences in time and entities (individuals). The approach often used is the Ordinary Least Square (OLS) method.

e. b. Fixed Effect Model. The fixed effect model approach assumes that the intercept of each individual is different while the slope between individuals is static (the same). This technique uses dummy variables to capture differences between individuals.

f. Random Effect Model. The approach to the Random Effect assumes that each company has a different intercept, where the intercept is a random or stochastic variable. This model is advantageous if the individual (entity) taken as a sample is chosen randomly and representative of the population. This technique also considers that errors may be correlated across cross-sections and time series.

We adopt the market approach reflected in the price-to-book value (PBV) ratio to determine bank valuation.

$$PBV = \frac{Market\ Price\ per\ Share}{Book\ Value\ per\ Share}$$

And to determine the bank's capital structure, we employ the classic approach by comparing non-deposit debt to the bank's total equity, known as the Debt-to-Equity Ratio (DER).

$$DER = \frac{Total\ Non-Deposit\ Debt}{Total\ Equity}$$

Once we calculated the PBV and DER, we began the descriptive analysis to find the pattern and movement between the two variables. The result will tell the story of the explicit aspect, besides the foundation to further econometric analysis to unleash the implicit of the bank.

This study used the single-stage least square method with panel data to examine the influence of capital structure on firm value.

The determinant model for the firm value is as follows.

$$FV = \beta_0 + \beta_1 \cdot CS_{it}$$

where FV = Firm Value; β_0 = Constant; β_1 = Regression coefficient of capital structure; *CS* = Capital Structure, *i* = denote the cross-section identifier, and *t* = time identifier.

4. Results and Discussion

As the result of the estimation model exploration, below are the common-effect model estimation, fixed-effect estimation, and random-effect estimation.

```
      Source |       SS           df       MS      Number of obs   =        50
-------------+----------------------------------   F(1, 48)        =      4.96
       Model |  9.17981772         1  9.17981772   Prob > F        =    0.0307
    Residual |  88.8729297        48  1.85151937   R-squared       =    0.0936
-------------+----------------------------------   Adj R-squared   =    0.0747
       Total |  98.0527474        49  2.00107648   Root MSE        =    1.3607
```

```
         pbv | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         der |  -.1660613    .0745788    -2.23   0.031    -.3160121   -.0161105
       _cons |   2.434295    .3868672     6.29   0.000     1.656447    3.212144
```

Figure 1. Common Effect Model Estimation

```
Fixed-effects (within) regression          Number of obs     =        50
Group variable: bank                       Number of groups  =         5

R-squared:                                 Obs per group:
    Within  = 0.1042                                   min =        10
    Between = 0.0177                                   avg =      10.0
    Overall = 0.0936                                   max =        10

                                           F(1,44)           =      5.12
corr(u_i, Xb) = -0.1138                    Prob > F          =    0.0287
```

```
         pbv | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
         der |    -.18105    .0800461    -2.26   0.029    -.3423723   -.0197278
       _cons |   2.501746    .4093407     6.11   0.000     1.676774    3.326718
-------------+----------------------------------------------------------------
     sigma_u |  .38006645
     sigma_e |  1.3748529
         rho |  .07099453   (fraction of variance due to u_i)
```

F test that all u_i=0: F(4, 44) = 0.75   Prob > F = 0.5606

Figure 2. Fixed Effect Model Estimation

```
Random—effects GLS regression              Number of obs     =         50
Group variable: bank                       Number of groups  =          5

R—squared:                                 Obs per group:
    Within  = 0.1042                                    min =         10
    Between = 0.0177                                    avg =       10.0
    Overall = 0.0936                                    max =         10

                                           Wald chi2(1)      =       4.96
corr(u_i, X) = 0 (assumed)                 Prob > chi2       =     0.0260
```

pbv	Coefficient	Std. err.	z	P>|z|	[95% conf. interval]	
der	−.1660613	.0745788	−2.23	0.026	−.3122331	−.0198895
_cons	2.434295	.3868672	6.29	0.000	1.67605	3.192541
sigma_u	0					
sigma_e	1.3748529					
rho	0	(fraction of variance due to u_i)				

Figure 3. Random Effect Model Estimation

The standard effect model estimation showed a negative correlation between the debt-to-equity ratio (der) and the price-book value ratio (pbv). It can be seen in the der coefficient value. The der coefficient is -0,17. It can describe that when the der increases by one point, the pbv will decrease as much as 0,17 points and is significant at 5% degree. Adj. R Squared, and the F test result showed that the influence of the independent variable on the dependent variable is 7% and significant at 5% degree. The same result also occurred in fixed-effect model estimation and random-effect model estimation. The result showed a negative correlation between the debt-to-equity ratio (der) and the price-book value ratio (pbv). The difference between them is placed on the signification value.

The most significant result was shown in the random effects model. It can be concluded that the individual entity influences the pbv shift more significantly. The der coefficient value is -0.17, which means that when the der increases by 1 point, the pbv decreases at 0,17 point. Overall, the standard effect model estimation is the best result model used in this research. So, the decision of which model to use in this research was decided by Hausman Test. When the result of the Hausman Test showed significant value, it is indicated that the Fixed Effect model estimation is better for this research.

Conversely, if the Hausman Test value showed a nominal value, the Random Effect model estimation is better for the research. The result of the Hausman Test on this research is shown in Figure 4 below. By the test result, the best model used in this research is Fixed Effect Model Estimation.

```
                    ——— Coefficients ———
                       (b)          (B)          (b—B)      sqrt(diag(V_b—V_B))
                       fe           re         Difference       Std. err.

            der     −.1660613    −.1660613         0                0
```

```
                    b = Consistent under H0 and Ha; obtained from xtreg.
             B = Inconsistent under Ha, efficient under H0; obtained from xtreg.


Test of H0: Difference in coefficients not systematic

    chi2(0) = (b—B)'[(V_b—V_B)^(−1)](b—B)
            = 0.00
Prob > chi2 =    .
(V_b—V_B is not positive definite)
```

Figure 4. Hausman Test Result

The regression method required some old assumptions tests. The test's purpose is to make the data sure that there is no bias assumption condition happening on the data. Bias conditions are some conditions that possibly make the data not suitable as data references. The unbiased conditions are called BLUE conditions. It is the Best Linear Unbiased Estimation. The BLUE conditions contained some requirements. The first requirement is normality. The data distribution on regression must be distributed normally. Second, the data must include homoskedasticity. Homoskedasticity is a condition where the data spreads constantly. It can figure out that there is an axis. If the data is homoscedasticity, the data spreading will be there around the axis. If data spreading is random or desultory, it reveals a heteroskedasticity condition. The heteroskedasticity makes the regression result contain bias. Third, the BLUE conditions necessitate no correlation between the residual in the t period with the residual in the previous period. The correlation among residuals on the t period with the previous period caused an autocorrelation condition. Fourth, the BLUE condition only happens if there is no correlation among independent variables. The high correlation between independent variables caused multicollinearity, which indicates one of the regression troubles.

The multicollinearity test in this research used the VIF test. The value of VIF revealed the correlation between independent variables. If the value of VIF is less than 10, it can consider that there is no multicollinearity. The Multicollinearity test is shown in Figure 5.

Variable	VIF	1/VIF
der	1.00	1.000000
Mean VIF	1.00	

Figure 5. Multicollinearity Test

The second test is the heteroskedasticity test. The test used in this research is Breusch-Pagan/Cook-Weisberg test. The measurement of test results is seen by Probability Chi2 value. If the value of Probability Chi2 is more than 0,05, it can consider that the data spread homogeny. The homogeny indicates the homoskedasticity condition. The result of the test on this research showed that Probability Chi2 is more than 0,05, and the data is freeing from the heteroskedasticity problem. The result of the test is shown in Figure 6.

```
Breusch—Pagan/Cook—Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of pbv

H0: Constant variance

    chi2(1) =   3.59
Prob > chi2 = 0.0582
```
Figure 6. Heteroskedasticity Test

The last ancient assumption of statistic test in this research is the autocorrelation test. The test result shows that there is no autocorrelation happened on this regression. The result is shown in Figure 7.

```
Cross-sectional time-series FGLS regression

Coefficients:   generalized least squares
Panels:         homoskedastic
Correlation:    no autocorrelation

Estimated covariances     =        1       Number of obs     =        50
Estimated autocorrelations =       0       Number of groups  =         5
Estimated coefficients    =        2       Time periods      =        10
                                           Wald chi2(1)      =      5.16
Log likelihood            = -85.32654      Prob > chi2       =    0.0231
```

pbv	Coefficient	Std. err.	z	P>|z|	[95% conf. interval]	
der	−.1660613	.073072	−2.27	0.023	−.3092799	−.0228428
_cons	2.434295	.3790509	6.42	0.000	1.691369	3.177221

Figure 7. Autocorrelation Test

PBV (Price Book Value) ratio is the ratio between stock page prices by the book value of each sheet of stock, while DER (Debt to Equity Ratio) is a comparison between total debt to the capital itself. The hypothesis mentioned that DER and PBV had a positive correlation. The regression result showed that, in this case, DER and PBV had a negative correlation. The DER and PBV correlation result in this research rejects the hypothesis. Some of the study that indicates the same result is research from (Hidayati, 2010), in contrast with the research from (Firdaus, 2019), which revealed that the correlation between DER and PBV is positive. The negative correlation can be affected by many things. The first thing that caused the negative correlation is that digital banking may use the debt ratio more than its capital.

The higher use of debt will cause some bankruptcy because of the more significant interest burden. The higher cost of bankruptcy will affect the profit level decided by stockholders. The cost of debt capital will also be higher because lenders will charge high-interest rates to compensate for the increased risk of bankruptcy. Therefore, companies will continue to use debt if the benefits of debt (tax savings from debt) are still more significant than bankruptcy costs. The company will lower its debt if bankruptcy costs are higher than the tax savings from debt. The optimal debt level occurs when the additional tax savings equal the additional bankruptcy costs. Before reaching the top position or maximum point position, the debt will be cheaper than selling the stock because of the tax shield's presence. This condition usually calls a Trade-Off.

The theory of capital structure showed that if the capital in the banking sector is more significant than the capital by its capital, the DER variable will show a positive correlation on PBV. On the other hand, when the capital used by the banking sector is more significant than the debt, the correlation between DER and PBV will be negative. The capital structures determine the banking effectiveness. The stock's prices are determined by firm value. PBV is one of the measurement techniques used to look at the firm value, which will affect the stock prices.

Investment decisions took on many factors. To be able to choose a safe investment, an analysis that is careful, thorough, and supports accurate risk is required. Selection of the correct technique in the analysis will reduce investors' risk. One of the analyzes that potential investors can use is fundamental analysis. This analysis is closely related to the condition of the company. The data used is historical, namely past risks. The tools used to carry out the analysis are financial ratios, which look at the relationship between items in the company's financial statements that reflect the company's financial condition and operational results. In modern financial management theory, it is stated that the company's goal is to maximize shareholders' wealth. To be able to realize these goals, financial managers must be able to utilize available funds for investment in a profitable investment.

The investors also decided the investment decision by the risk and return expectations. Risk is commonly the result of an outcome that does not match expectations. Risk is the chance of losing finances. The assets with more significant chances of loss are riskier than the lesser ones. When the investors decide on the investment, they do not know the actual return rate because the expected return seems to have yet to happen. Since that condition, the rate of risk is one of the measurement return techniques. The risk and the return have a positive correlation. These reasons likely made the large companies buy small banks and transform them into digital ones, so the digital bank reaches a high value. Digital banks, as the new sector, have a big chance to develop more and get up to the top position to influence the economic sector. This big change same as significant as the risk to get failure. Large companies realize this condition and cause the ability to buy digital banking stock rises.

In modern investment management, it is known that the entire investment risk is divided into two types of risk: systematic risk and unsystematic risk. Systematic risk is the risk associated with changes that occur as a whole, where market changes will affect the variability of returns on investment. Meanwhile, unsystematic risk is a risk that is not related to changes in the market as a whole but is more related to changes in the micro condition of the company issuing the shares. Unsystematic risk can be minimized by diversifying investments in each type of stock. Return or return on investment is the main goal for investors. The stock investment will provide benefits or returns in two ways: selling shares until the price strengthens, often referred to as capital gains, or waiting for dividends, namely the share of company profits that is distributed to shareholders.

Besides estimating the expected return from a stock investment, investors need to calculate the risk associated with investing in the stock in question. Risk, as the other side of return, indicates the possibility of deviation of the expected return from the actual return obtained. Many methods are available to measure risk, although no standard method exists. Risk is generally measured in probabilistic form or variance (standard deviation). The variance or standard deviation is the most common measuring instrument used to explain the extent to which the expected return deviates from the actual return. The variance and standard deviation are the magnitude of the spread of the random variable between the averages, the greater the spread, the greater the variance or standard deviation of the investment. For these reasons, the high valuation of the digital bank has no longer extended period, and the investment rate will slowly move into the normal range like the other bank.

5. Conclusion

This research concluded that DER and PBV had a negative correlation. The regression model used in this research is classified as 3 trial model. It is a standard effect model, fixed effect model, and random effect model. Based on the Hausman-test result, it can be identified that the best model to use in this research is the fixed-effect regression model. The fixed effect model regression showed a negative correlation between the DER and PBV. The coefficient values of DER are -0.18. The F value is significant at 5% degree. The negative correlation happened because there is some probable condition that indicates that the banking sector uses debt as capital more than their capital. This condition encourages negative stigma about the stock's prices and the firm value. The firm's value indeed affects PBV. It can be concluded that the capital structure will build the firm value, and the firm value will form the stock prices. Stock prices affect the banking sector's valuation.

Conflicts of Interest: The authors declare no conflict of interest.
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