DETERMINANTS OF BANK CAPITAL STRUCTURE: EVIDENCE FROM INDONESIA

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Abstract –The capital structure in banking has become discussed due to the competition with the fintech and bank digital and debate about the efficiency of its choices. The purpose of this paper is to investigate the dynamics that go into determining a bank's capital structure in Indonesia. The capital structure of Indonesian banks is examined using a panel regression model. Profitability, corporate tax, growth, collateral, and bank size all influence banks' financing or capital structure decisions, according to the findings of this study. The study's most important result is that debts finance more than 87 percent of banks' assets, with short-term obligations accounting for more than three-quarters of bank capital. This emphasizes the importance of short-term borrowing in Indonesian bank funding over long-term debts. The fundamental contribution of this article is the identification of factors that influence the capital structure of Indonesian banks.

Keywords: Capital Structure Determinants; Banks; Trade-Off Theory; Pecking Order Theory

1. INTRODUCTION

1.1 Background

The capital structure is one of the most important decisions for a company. This determines one's company's cost of capital, thus impacting shareholders' return and the company's profitability. Since debt is connected to a firm's solvency, the capital structure also defines a company's survivability in a lot of business cycle phases. It's also important that companies are moving under uncertainties pressure from anywhere. Because of that, a study on how these uncertainties affect a company's financing behavior is needed to be done.

In 2008, a lot of banking sectors are impacted by the global financial crisis, thus directly affecting banking capital structure. Despite Nthat, Indonesia's banking sector has shown much better progress compared to when Monetary Crisis in 1998 was happening. This has led to fierce competition between banks with changes in banking regulatory capital. Obligations related to regulated capital are factors that determine the capital structure. Banks

typically have more capital than the minimum capital ratio required by the Financial Services Authority (hereafter FSA) provisions as a regulator. Regulation Number 11/POJK.03/2016 set by FSA regulates minimum capital requirement for commercial banks. The Bank's risk profile rating determines the Bank's minimum capital.

Bank's Capital Requirements determine the amount of bank capital. As regulated by FSA, 8% is the minimum amount of capital requirement and 6% as agreed by BCSC (Basel Committee on Banking Supervision). Decisions on capital structure appear to be not only the result of capital arrangements (Hoque & Pour, 2018), but the decisions themselves can be considered by managers (Kieschnick & Moussawi, 2017).

The banking industry sector has very high leverage compared to other industrial sectors (DeAngelo & Stulz, 2015), because liabilities, especially in the form of profit-sharing deposits are a source of income for most banks, which need to be managed appropriately to maximize profits. Bank's business continuity could be affected by a weak capital structure. Thus, that makes capital structure important for the company because it's related to bank performance to meet stakeholders' needs (Milken, 2013). Balance use of debt and equity is the key to optimal capital structure. But, the capital structure of the bank itself, however, is an area that has not yet been relatively studied in the banking literature. There is no clear grasp of how banks decide their capital structure and what element affect their corporate financing behavior.

The aforementioned difficulties have a significant impact on the total capital structure of banks. Because the capital structure may engage with the combination of debt and equity specifically appearing in the bank's balance sheet, excellent capital structure management becomes significant in which the banks not only obtain higher profitability but also improve the stability and reduce the impact of risks (Grais & Kulathunga, 2006; Sakti et al., 2017). Modigliani and Miller (MM) in their first paper (Modigliani and Miller, 1958) have come to the conclusions which were fundamentally different from the conclusions of traditional approach. Under assumptions that there are no taxes, no transaction costs, no bankruptcy costs, perfect financial markets exist with symmetry information, equivalence in borrowing costs for both companies and investors, etc., they have showed that choosing of the ratio between the debt and equity capital does not affect company value as well as capital costs (Brusov et al., 2018). As a result, banks should devote more attention to creating capital structure procedures. Furthermore, the capital structure theory, especially, the MM theory, explained that a firm's market value is completely independent of its capital structure (Modigliani & Miller, 1958). This is owing to the existence of a perfect capital market and the absence of corporate income tax, resulting in a stable capital structure (Sakti et al., 2017).

According to trade-off theory, a company's optimal capital structure is achieved by striking a balance between the costs of financial distress due to debt and the advantages of tax savings (Tomschik, 2015). It is for this reason that capital structure has a favorable relationship with profitability. As a result of asymmetric information between investors and managers, Pecking-Order Theory states that corporate managers prefer funding from sources with the lowest risk sequence (Chakraborty, 2010). The corporation first chooses internal financing through retained earnings, then debt, and finally equity as the final option (Myers & Majluf, 1984). According to the Pecking-Order Theory, capital structure harms business profitability (Oktavina et al., 2018)

The conflict of interest between management shareholders and shareholders-bondholders is the focus of agency theory (Jensen, 1986). The cost of capital at the time of need is the sole focus of the Market Timing Theory. These theories help to explain the impact

of crucial determinants on capital structure and to comprehend the financing patterns of businesses (Baker & Wurgler, 2002; Bie & Haan, 2007; Hovakimian, 2006; Jenter, 2005)

Banks' capital structure decisions are still not well understood, and regulatory constraints may not be the main factor. Modern empirical research reveals that a variety of bank-specific factors may influence capital structure. (Mohammad and Nishiyama, 2019; Ghosh and Chatterjee, 2018; Gropp and Heider, 2010). Available capital structure theories offer correlations between such elements and company capital structure to assist companies in making appropriate decisions about financing mix to achieve financial stability and sustainable growth (Mokhova & Zinecker, 2014). Understanding the capital structure of banks is crucial because there is a trade-off between producing liquidity and reducing default risk, as well as the indirect influence of large-scale capitalization on monetary policy transmission through the bank's capital channels.

However, recent studies have shown that special variable for the bank also plays an important part in determining capital structure. Factors of capital structure are not only limited to Bank Indonesia's regulation (Fauziah & Iskandar, 2017). The banking sector holds an important role in the Indonesian economy, thus banks should choose and tune the mix of capital strategies for maximizing the value of the firm and guarantee that operations are directed to obtain optimal results for capital structure (Hoque & Pour, 2018). Lack of capital will be seen as the primary cause of business risk. Banks must combine debt and equity to achieve optimum capital structure (Dv Tran et al. 2020).

Capital structure is measured by leverage with accounting-based and market-based, which is book leverage is procyclical (Adrian et al. 2016), meaning that declining debt can affect total assets that decrease and vice versa and market leverage is countercyclical (Adrian et al. 2016), meaning that declining debt holders or customers can affect book equity, market equity, and total assets are declining and vice versa. The value of market leverage is smaller than the value of book leverage influenced by two factors, namely book equity and market equity caused by "fluctuations in stock prices" (Welch, 2004). Even though equity financing is more expensive than using debt, at least the public can evaluate a company's value from its share price. Bank's health condition is reflected through the balance between the debt and equity.

Bank capital structure decisions are still not well understood, and regulatory constraints may not be the primary factor. According to recent empirical findings, it might be determined by a variety of bank-specific characteristics (Ghosh and Chatterjee, 2018; Gropp and Heider, 2010; Mohammad and Nishiyama, 2019). Because there is a trade-off between liquidity generation and default risk reduction, and because high capitalization has an indirect impact on monetary policy transmission through the bank capital channel, understanding bank capital structure choice is critical.

In particular, this study contributes to the empirical literature of previous research. First, this study investigates whether the banking capital structure results from banking capital regulations or capital structure theories. By using a sample of 44 Indonesian listed banks, this study investigates whether bank characteristics such as Profitability, firm size, and collateral, growth opportunity, net tax debt shield explain several variations of banking capital structure variables. Research shows that a bank capital structure by capital regulations and theories of banking capital structure. The 2009 financial crisis showed that several banks had banking regulations as a fundamental weakness and could not prevent banks from going bankrupt. Some banks also say that banking regulations are a savior for banking when banks experience a financial crisis.

The remainder of the paper is organized as follows. The next part is a review of the literature on capital structure determinants. This research then goes into the methodological techniques for data screening, sampling, measure development, and empirical models. The next section details our empirical findings. The final portion of our research summarizes our findings and discusses the key theoretical and managerial implications of our findings.

1.2 Formulation of The Problem

Berdasarkan latar belakang penelitian, maka rumusan masalah penelitian ini adalah sebagai berikut:

1a. Does profitability affect book leverage?
  b. Does profitability affect market leverage?
2a. Does firm size affect book leverage?
  b. Does frim size affect market leverage?
3a. Does collateral affect book leverage?
  b. Does collateral affect market leverage?
4a. Does Tobin's Q affect book leverage?
  b. Does Tobin's Q affect market leverage?
5a. Does Non-Debt Tax Shield affect book leverage?
  b. Does Non-Debt Tax Shield affect market leverage?
6a. Does Tier 1 Capital affect book leverage?
  b. Does Tier 1 Capital affect market leverage?

1.3 LITERATURE REVIEW AND HYPOTHESIS

1.3.1 Capital Structure Theories

Three primary theoretical methods, including the trade-off, agency, and pecking order, are particularly essential in determining the drivers of the company's level of leverage. In contrast to Modigliani and Miller's (1958) thesis about a perfect market, these theories argue that a firm's leverage can be determined by several internal and external circumstances. Depending on the theoretical framework, certain elements may be favorable or bad. As a result, the drivers of capital structure in the banking industry are examined in this study. Within the static trade-off framework, companies may weigh the tax advantages of using debt (Miller, 1977). This advantage arises because interest payments on debt are tax-deductible, whereas payments on equity, such as dividends, are appropriated from earnings. Because additional debt raises the after-tax revenues to the owner, this tax impact encourages enterprises to employ debt.

Agency expenses can also be caused via debt financing. Costs incurred as a result of principal-stakeholder interactions, such as those between shareholders or firm managers and debt holders, are known as agency costs. Given the incentives for businesses to benefit shareholders at the expense of debt holders, Myers and Majluf (1984) argue that debt holders must regulate and oversee company behavior. This contractual conduct raises the firm's capital cost of capital. As a result of the conflict between the company and the loan holders, firms with substantially greater agency costs should have lower debt levels. The pecking order hypothesis, which is based on Myers's (1984) and Myers & Majluf (1984) research, outlines a stage of preference in the selection of funding sources that are characterized by the extent of information asymmetry. Retained profits, debt, and external equity are the three options in this situation,

1.3.2 Determinants Of Capital Structure

Assessment of banking capital structure evaluates capital adequacy and management capital. Bank Indonesia's provisions regulate the minimum capital requirements for banks. Banks must also link the capital with a risk profile. Banks also need to pay attention to trends and levels of capital and evaluate by evaluating the evaluation of capital management.

1.3.3 Profitability

In prior capital structure analyses, profitability has been the most important determinant. Because poor Profitability might raise the danger of bankruptcy, the trade-off theory predicts a positive link between Profitability and leverage (Fama and French, 2002; Kayo and Kimura, 2011). The trade-off hypothesis states that the higher a company's profitability, the more likely it is to issue debt to decrease its tax liability. Furthermore, businesses with high profitability ratios are less likely to go bankrupt or face financial troubles. Furthermore, because the risk of default is low, debt providers will be more eager to lend to lucrative businesses.

According to Nunkoo and Boateng (2009), enterprises with large profits demand more tax shelter and debt-taking capacity due to their capital structure and debt. As a result, the theory predicts a positive link between leverage and likelihood, as evidenced by research.

H1a: A significant positive relationship between profitability and book leverage

H1b: A significant positive relationship between profitability and market leverage

1.3.4 Firm Size

Firm size of a company is commonly used as a criterion for capital structure selection (Rajan and Zingales, 1995; Titman and Wessels, 1988). The natural logarithm of total sales is used to determine the size of a firm. A positive link between size and leverage is assumed in the trade-off theory. A large bank, according to the trade-off approach, has less risk since its assets are more diversified and its cash flows are more steady. Large businesses will also face reduced financial difficulties and the threat of bankruptcy. Furthermore, huge corporations will have a positive reputation in the debt market since they will have a higher credit rating due to the decreased danger of default. This indicates that business size and leverage have a favorable connection.

H2a: A significant negative relationship between size and book leverage

H2b: A significant negative relationship between size and market leverage

1.3.5 Collateral

Collateral is a factor in capital structure selection (Rampini and Viswanathan, 2013). When a firm seeks external sources of finance, the quantity of collateral held by the company is necessary. The greater a company's Collateral, the simpler it will be for it to obtain finance from outside sources. According to Gropp and Heider (2010), companies with greater collateral have more leverage. When more assets are available as collateral, less is lost in times of difficulty, lowering debt bankruptcy expenses. Furthermore, Collateral lowers the agency cost of debt by making asset monitoring more accessible. This indicates that collateral and leverage have a favorable connection.

H3a: A significant positive relationship between collateral and book leverage

H3b: A significant positive relationship between collateral and market leverage

1.3.6 Tobin's Q

Growth prospects are a potential predictor of capital structure, but their impact on firm leverage and appropriate measurement is unknown. The trade-off theory posits that growth potential and leverage have a negative connection. The cost of financial hardship rises with predicted growth, according to the trade-off principle, driving management to minimize debt in their capital structure. When knowledge asymmetry exists, corporations issue stock rather than debt when overvaluation results in higher predicted growth (Antoniou et al., 2010). As a starting point, enterprises with expansion prospects should have a stronger need for capital. If retained earnings are insufficient to cover development potential, companies must seek external funding.

High-growth enterprises, on the other hand, may have more actual possibilities for future investment, according to Myers (1977). Assume that high-growth companies will require more equity financing to exercise these options in the future. In that instance, a company with existing debt may opt-out of this investment since it essentially transfers value from stockholders to debtholders. As a result, companies with high-growth prospects may avoid taking on debt in the first place, and leverage is expected to be adversely correlated with growth prospects. This supports the pecking order idea by indicating a positive association between growth possibilities and company leverage. Higher information asymmetries are implicated, according to the pecking order hypothesis, since shareholders are reluctant to provide much information about their investment chances. These investment prospects necessitate capital expenditures, causing the firms' finance shortfall to grow, forcing them to seek external funding, ideally short-term debt financing (Bhabra et al., 2008; Chang et al., 2014; Gaud et al., 2005; HUANG & SONG, 2006; Li & Islam, 2019; Yildirim et al., 2018)

H4a: A significant positive relationship between Tobin's Q and book leverage

H4b: A significant negative relationship between Tobin's Q and market leverage

1.3.7 Non-debt Tax Shield

The non-debt tax shield decreases the number of profits, which reduces the predicted level of interest tax savings and reduces the advantage of employing high debt financing. The trade-off theory suggests that net debt tax shield and leverage have a negative relationship. According to trade-off theory, more debt should be used to take advantage of interest tax breaks. As a result, a negative relationship between tax and debt appears, but it implies that if a corporation has a non-debt tax shield, it should be exploited, resulting in reduced interest tax benefiting high-debt firms. If interest payments on debt are tax-deductible, corporations with positive taxable revenue have an incentive to issue more debt, according to Modigliani and Miller (1958). That is, the primary motivation for borrowing is to benefit from interest tax breaks. According to DeAngelo and Masulis (1980), the marginal corporate savings from an extra unit of debt drop as non-debt tax shields increase. This is because the risk of bankruptcy rises as leverage rises.

Furthermore, some investments can result in NDTS advantages regardless of how the corporation funds the project. Although the expenses of linked debt are not included in this investment, they serve as an alternative for tax shelters. As a result, the number of non-debt tax shelters and leverage is expected to have an inverse (negative) relationship.

H5a: A significant negative relationship between Non-Debt Tax Shield and book leverage

H5b: A significant negative relationship between Non-Debt Tax Shield and book leverage

1.3.8 Tier 1 Capital

Tier 1 Capital is one of the determining factors that influence the determination of the capital structure that the bank must maintain. The capital requirements of a bank determine the level of its capital "Bank managers frequently desire to keep less bank capital than regulatory authorities need due to the high cost of holding capital. In this situation, the capital needs of the bank determine the amount of determinant of Capital Structure " (Mishkin, 2000). The bank's capital requirements are determined the Financial Services Authority Regulation and agreed by Basel III namely, the bank's capital has a minimum of 8%.

Bank regulators use capital regulations to ensure that markets are recognized and regulated to regulate bank risk. The higher the level of Tier 1 Capital. The higher the risk-adjusted assets resulting in a higher capital structure and lower debt simultaneously reducing debt financing is not only an option but a must for banks when they are at a high-risk level to comply with banking regulations.

H6a: A significant negative relationship between Tier 1 Capital and book leverage

H6b: A significant negative relationship between Tier 1 Capital and market leverage

1.3.9 Research Framework

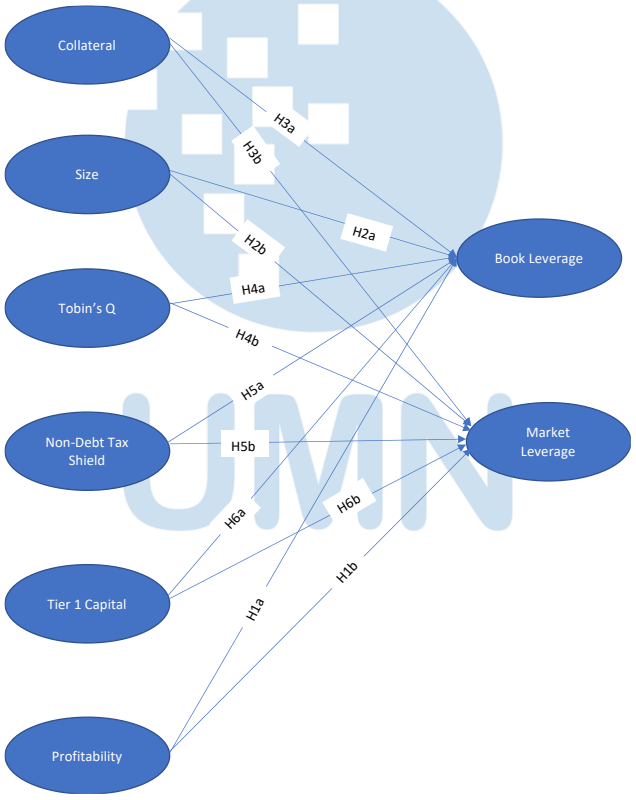

Figure 1. Research Framework

2. METHODOLOGY AND ANALYSIS DATA

2.1 Overview of Research Object

This study uses a sample of Indonesian banking listed on the Indonesia Stock Exchange (IDX) as a research sample. We used 44 banks as samples research. The period of analysis for this study is from 2010 to 2019. The data sources in this study are commercial bank annual report data and reports from the Financial Services Authority (OJK) and the Indonesia Stock Exchange (IDX).

2.2 Research Method

2.2.1 Dependent Variable

Both book and market leverage (BLEV and MLEV) measures will be employed as the dependent variable, following the work of Fama and French (2002), Antoniou et al. (2008), Gropp and Heider (2010), Hoque and Pour (2018), and Yildirim et al. (2018). Because the amount of preferred stocks and deferred taxes are small and inconsequential, book debt is extremely near to total liabilities (Welch, 2011). Because book leverage is procyclical (Adrian et al. 2016), falling debt can cause total assets to fall, and vice versa.

The value of market leverage is smaller than the value of book leverage influenced by two factors, namely book equity and market equity caused by "fluctuations in stock prices" (Welch, 2004). Market leverage is countercyclical (Adrian et al. 2016) , meaning that declining debt holders or customers can affect book equity, market equity, and total assets decline and vice versa. As argue in Gropp and Heider (2010), since the capital structure includes everything except equity, it can easily be linked to the regulatory view of the bank's capital structure. However, as a deposit receiving institution, there are differences in the capital structure of banks and non-bank capital structures.

2.2.2 Independent Variable

1. **Profitability**
   Following Hoque and Pour, we used EBITDA over book value asset as a proxy for profitability (PROF) (2018).
2. **Firm size**
   The firm size variable is based on Logaritma of book value asset (SIZE), following Gropp and Heider (2010) and Hoque and Pour (2018).
3. **Asset Structure**
   We use collateral as a proxy for asset structure (CLLTR), following Hoque and Pour (2018).
4. **Growth Opportunity**
   We use Tobin's Q as a proxy for growth opportunity (TOBIN'S Q), following Bhabra et al (2008) Chang et al. (2014).
5. **Net-Debt Tax Shield**
   Our study defined depreciation over total asset, following Gropp and Heider (2010)., following Hoque and Pour (2018).
6. **Tier One**
   Our study defined Tier 1 Capital over risk-adjusted asset

2.4 Data Collection

The data sources in this study are commercial bank annual report data and reports from the Financial Services Authority (OJK) and the Indonesia Stock Exchange (IDX).

2.5 Sample Collection

The sample used in this study is all commercial banks, but not including unlisted on Indonesia Stock Exchange (IDX) and rural credit banks (BPR). We used 44 banks as samples research. The period of analysis for this study is from 2010 to 2019. The data sources in this study are commercial bank annual report data and reports from the Financial Services Authority (OJK) and the Indonesia Stock Exchange (IDX).

2.6 Data Analysis

Having described the dataset and the dependent and independent variables, we now move on to a formal depiction of the utilized regression models. The general form of the models is:

$$y_{it}= \alpha+\beta x_{it}+\mu_i+ \mu_i+ \varepsilon_{it}$$

where is leverage ratio for bank i in year t; xit is the vector of bank-specific and tax-related; α is the constant term; μi the individual error; μt a time-specific component of the error term; and εit is the error term. , which is assumed to be mean equal to zero, uncorrelated with itself, uncorrelated with x, uncorrelated with μi and homoskedastic, i.e. εit ≈ i.i.d.N(0,σ2)

Tabel 1. Definitions of dependent and independent variables.

Variabel	Definition	Measure
Dependent		
BLEV	Book Leverage	Book Debt/Total Assets (whereby, Book Debt = Total Assets - Book Equity)
MLEV	Market Leverage	Book Debt / (Total Assets - Book Equity + Market Equity) (whereby, Book Equity = Total Assets - Total Liabilities - Preferred Stocks + Deferred Taxes)
Independent		
PROF	Profitability	EBITDA/Book value asset
SIZE	Firm Size	Log of book value asset
CLLTR	Collateral	[Total Securities + Government Securities + Cash and Due From Banks + Fixed assets] / Book asset value
TOBIN'S Q	Growth Opportunity	(Market Value + Book Value)/ Total Aset
NDTX	Net - Debt Tax Shield	Depreciation/Total asset
TIERONE	Tier 1 capital	Tier 1 capital/ risk-adjusted asset

This study uses a panel data regression model. The general functional form of the panel data regression model is as follows:

$BLEVit = \beta0 + \beta1PROF1it + \beta2SIZE2it + \beta3CLLTR3it + \beta4TOBINS'Q4it + \beta5NTDS5it + \beta6TIERONE6it + \varepsilon it$…….(eq. 1)

MLEVit = β0 + β1PROF1it + β2SIZE2it + β3CLLTR3it + β4TOBINS'Q4it + β5NTDS5it + β6TIERONE6it +εit……..(eq. 2)

Where BLEV and MLEV are the book and market leverage for firm i in year t, respectively, with firm-specific determinants such as profitability (PROF), firm size (SIZE) growth opportunities (TOBIN'S Q), Collateral (CLLTR), Net-Debt Tax Shield (NTDS) and Tier one Capital (TIERONE). The μi denotes the time-invariant unobservable bank-specific fixed effects (e.g., management performance), which are common to all firms and can change over time. The disturbance term is denoted as εit and is assumed to be mean equal to zero, uncorrelated with itself, uncorrelated with x, uncorrelated with μi and homoskedastic, i.e. εit ≈ i.i.d.N(0,σ2).

3. RESULTS AND DISCUSSION

It can be seen from the table 2 that, bank leverage and bank profitability fluctuate year by year. This implies that differences group of bank. Banks tend to have lower profits and more leverage (Gropp and Heider, 2008). In addition, size increases significantly, This implies that the presence of expansion for the good bank's business development and existence year by year. Moreover, growth opportunities increases significantly, has high investment level and an excellent general perception of the Indonesian Banking prospects. Futhermore, collateral increases significantly, this implies that bank has good tangible asset

In summary, the results suggest that the capital structure does indeed affect Indonesian banking on both leverage measures. Indonesian banking has the highest debt in another sector industry in Indonesia, hence Indonesian banking has a good capital structure. A good capital structure affects bank profitability, Indonesian banking has a moderately profitable firm and increases high bank size. Indonesian banking has high collateral and growth opportunities, hence The indicates that the market has an excellent general perception of the Indonesian Banking prospects and trust in investors, lender, and depositors. Indonesian banking has good tier 1 capital because regulated strictly

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
BLEV	440	.787	.192	.028	.963
MLEV	440	.77	.198	.05	1
PROF	440	.455	.619	-.52	7.139
SIZE	440	7.227	1.156	3.109	10.232
CLLTR	440	5.109	3.081	.028	16.536
TobinsQ	440	1.006	.33	.028	2.573
NTDS	440	.011	.008	0	.092
TIERONE	440	.267	.325	.024	4.889

All dependent and independent variables considered in this analysis, including book leverage, market leverage, tier one capital, profitability, size, tangibility, non-debt tax shield, collateral, and growth prospects, are displayed in pairwise correlation in Table 3 All correlation coefficients are less than 80% for all variables. A correlation value of more over 80% suggests a concern with multicollinearity (Brooks, 2014).

Table 3. Pairwise Correlation

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) BLEV	1.000							
(2) MLEV	0.631	1.000						
(3) PROF	0.330	0.232	1.000					
(4) SIZE	0.164	0.015	0.102	1.000				
(5) CLLTR	0.660	0.444	0.366	0.118	1.000			
(6) TobinsQ	0.666	0.003	0.149	-0.042	0.339	1.000		
(7) NTDS	-0.166	-0.071	-0.043	-0.271	-0.132	0.011	1.000	
(8) TIERONE	-0.366	-0.116	-0.134	-0.397	-0.299	-0.060	0.238	1.000

Profitability and Capital Structure

Table 4 show that the Profitability is highly significant at 1% level on both leverage measures. Positive relationship is consistent with the predictions of the Trade-Off theory which an increase in Profitability is high, then the capital structure will increase and vice versa. The Trade-Off Theory that Profitability in this study has a low value and can increase the risk of bankruptcy (Kayo and Kimura, 2011). According to the trade-off theory, the higher the Profitability, the more likely it is to issue debt because it reduces tax liability. The higher Profitability will allow the company to maintain more income which is the preferred resource. Therefore, the amount of debt required by the company should be reduced. Even though the positive relationship is often stated as a contradiction of the pecking order theory (Yildirim, 2018). The results of this study are by the research of Nanko and Boetang (2009)

Table 4. Panel Fixed Effect Regression

	Book Leverage	**Market leverage**
Determinants	**(1)**	**(2)**
Profitability	0.17***	.024***
	(.002)	(.004)
Firm Size	-.027***	-.028*
	(.008)	(.07)
Collateral	.015***	.012 ***
	(.000)	(.000)
Tobin's Q	.109***	-.34 ***
	(.000)	(.000)
Non-Debt Tax Shield	-1.425***	-.367
	(.004)	(.627)
Tier 1 Capital	-.07***	.124
	(.000)	(.029)
Constant	.824	1.235
	(.000)	(.000)
R_2	0.360	0.349
Firms	44	44
Observation	440	440
Time Effects	Yes	Yes
Estimator	FE	FE

Firm Size and Capital Structure

Firm size is one of those determinants that provide consistent results in its relationship to leverage. The results show that the size is significant at 1% level on book leverage, however the size is significant at 10% level on book leverage. The negative relationship is consistent with the predictions of the Pecking Order Theory that increasing banks will prioritize their capital sources to finance bank assets compared to other sources of funds. of the debt of companies with high returns using relatively small debt, because of the problem of "minimal information asymmetry in large companies compared to small companies. Thus, large companies prefer to issue equity rather than debt" (Rajan & Zingales, 1995:1431). "Banking companies use debt only when retained earnings are insufficient and increase external equity capital only as a last resort" (Antoniou et al., 2008:70). The results of this study are by previous studies, Hassan et al. (2020), Hoque and Pour (2018).

Collateral And Capital Structure

Collateral, like business size, is one of those drivers that consistently shows consistent outcomes in its link to leverage. The outcome of both measurements reveals a substantial and favorable link on capital structure at the 1% level. The positive association is consistent with the Trade-Off theory's predictions that if collateral increases significantly, the capital structure will also rise, and vice versa. Companies employ tangibles as collateral to give security to lenders in the case of financial troubles, according to the Trade-Off hypothesis. If the company's tangible assets account for a bigger percentage of overall assets, these assets can be utilized as collateral to secure further loan financing. Banks in Indonesia may be trusted by investors.

This consequence debt can also lower the risk of lenders to clients. As a result, businesses with more physical assets may take on more debt. The findings of this study are based on Gropp and Heider's earlier research (2010).

Growth Opportunities and Capital Structure

Higher growth potential are expected to have a negative influence on enterprises' leverage decisions. On both leverage measures, the coefficients of the growth variable indicate varied findings. As anticipated by the Pecking Order Theory, the Tobin'S Q ratio is notably positive in respect to the BLEV at the 1% level. According to pecking order theory, more information asymmetry drives shareholders to withhold information about their investments. Firms raise external financing, preferably current liabilities, as their financial shortfall grows (Gaud et al., 2005). The findings of this study were based on prior research by Li and Islam (2019) and Chang et al (2014)

However, contrary to BLEV, Growth opportunity is negative and significant at 1% level for MLEV. The significant negative result supports the notion of the Pecking Order Theory. First, the cost of financial distress rises with predicted growth, driving managers to minimize debt in their capital structure, according to the trade-off principle. Second, corporations issue stock rather than debt in the situation of information asymmetry when overvaluation leads to higher predicted growth. Higher growth opportunities arise from higher free cash flow in the future" (Huang and Song, 2006:29). The inverse effect supports the view that the financial distress of companies has relatively high growth, thus leading to an increase in agency costs. The high cost of debt, demand for capital providers for higher interest rates, and, consequently, managers increasing capital using internal funding sources, namely debt, lead to lower leverage ratios.

The high Tobin's Q ratio on growth opportunity affects market leverage which can lead to low debt. The state still controls the major shareholder. Companies in the banking sub-sector have good relations with government agencies. Companies that do not have good relationships with developing governments face problems with financing. Companies for future growth opportunities (higher Tobin's Q) tend to have lower leverage. Companies with better growth opportunities, prefer to maintain low leverage to not give up on profitable investments due to the transfer of wealth from shareholders to creditors."Another reason is that growth opportunities are intangible assets, which may be in financial distress" (Bhabra et al., 2008). This study agrees with Li and Islam (2019) and Chang et al. (2014).

Non-Debt Tax Shield And Capital Structure

Non-Debt Tax Shield is one of those determinants that provide consistent results in its relationship to leverage. The result shows that Non-Debt Tax Shield is found to significant at 1% level and negative relationship, while the results for MLEV show positive and insignificant. The negative relationship is consistent with the prediction of trade-off theory that more debt will protect the form of debt interest expense, reducing tax profit. Tax savings are obtained from the value of depreciation and investment tax credits that take advantage of tax benefits or protection through tax services provided by the government. In addition, depreciation is an incentive for companies to reduce the debt because depreciation is a cash flow source of capital from within the company to reduce debt sources. Futhermor, DeAngelo and Masulis (1980) argue that tax deductions for depreciation and investment tax credits can be considered as a substitute for tax benefits from debt financing. Firms can influence the market equilibrium, where each firm has optimal debt. Firms with higher non-taxable debt will have a lower debt level. Therefore the firm's motivation to borrow decreases with an increase in non-debt taxes. The results of this study are by previous studies, namely Antoniou et al. (2008).

Tier 1 Capital And Capital Structure

The results of this study indicate that banks have regulatory capital to reduce the speed of adjustment. It is important to consider regulatory capital when estimating the bank's capital structure speed. The results of this study are by Hassan et al. 2020, Hoque and Pour (2018), and Gropp and Heider (2010)

4. CONCLUSION AND SUGGESTION

4.1 Conclusion

The objective of this study was to look at the most dependable factors of Indonesian banking capital structure. We used the FE estimator on a static regression model with book and market leverage ratios as dependent variables and six drivers of capital structure (profitability, business size, collateral, Tobin's Q, Non-Debt Tax Shield, and Tier 1 Capital).

We discovered that numerous independent factors on the capital structure rely on the leverage measurement (book or market). The regression models' findings reveal that profitability is positively connected to leverage across all company types and leverage metrics. Rajan and Zingales (1995), Fama and French (2002), Frank and Goyal (2003), Hoque and Pour (2018), and Yildirim et al. all support this conclusion (2018). Furthermore, for market and book leverage, a consistent link between collateral, business size, Tobin's Q, and non-det tax shield is seen, as predicted. The lack of a significant relationship between tier 1 and market leverage does not match our expectations; however, Gaud et al. (2005), Ariff et al. (2008), Cekrezi (2013), and Sorokina (2014) found similar results and found no significant

relationship between non-debt tax shield and market leverage. Overall, our panel regression results imply that the factors under investigation are capable of explaining the capital structure of Indonesian banks. Furthermore, based on the data above, the Pecking Order Theory for BLEV and the Trade-Off Theory for MLEV are both better described by the Pecking Order Theory in terms of coefficient sign and significance, respectively.

4.2 Limitation

This paper limits the analysis and effect of debt factors in ten years span. It would be interesting to use longitudinal study to capture the dynamic of capital structure in banking.

4.3 Suggestion

In future research, it is suggested to further additional macro-level determinants and industry-specific determinants. Macroeconomic effects may be more important for banks than for firms because banks' exposure to business cycle fluctuations may be larger than for firms (Gropp & Heider, 2010)

4.4 Research Implication

This study implies the strategic decisions made by the regulator and manager of the firms. For instance, managers understood the effect of different debt determinant when deciding the capital structure. This might help managers when deciding their financing to add value to the companies. Banking is a high regulated industries by Financial Services Authority. A bank's capital structure reflects the institutional environment and how executive manager chooses their financing source. It also helps regulators to design a financial system consistently and impact to the economy in Indonesia. Therefore, to support external sources, Indonesia Stock Exchange should provide instruments and solutions to encourage participation in this market.

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