



Stock Liquidity, Corporate Governance, and Leverage in Indonesia

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<https://doi.org/10.35212/277622>

ARTIKEL INFO

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Submitted:
02 JANUARI 2019
Revised :
10 FEBRUARI 2019
Accepted:
03 MARET 2019



Abstract

This paper studies the relationship between stock liquidity, corporate governance, and leverage in Indonesia. A sample of 165 Indonesian listed firms in the year 2006-2016 is used. The study results confirm that an increase in stock liquidity and corporate governance decreases the use of leverage. This show that corporate governance and stock liquidity able to decrease the agency cost and the usage of debt. The interaction between stock liquidity and corporate governance shows that corporate governance significantly affects leverage only when the firm is liquid. However, there are different results among different proxies of corporate governance quality.

Abstrak

Penelitian ini melakukan studi hubungan antara likuiditas saham, tata kelola dan tingkat hutang di Indonesia. Penelitian ini menggunakan sampel 165 perusahaan Indonesia yang sudah terdaftar di bursa. Hasil penelitian ini mengkonfirmasi peningkatan likuiditas saham dan tata kelola perusahaan mengurangi penggunaan hutang. Hal ini menunjukkan tata kelola perusahaan dan likuiditas saham dapat mengurangi biaya keagenan dan penggunaan hutang. Interaksi antara likuiditas saham dan tata kelola perusahaan menunjukkan tata kelola perusahaan secara signifikan mempengaruhi tingkat hutang hanya pada perusahaan yang likuid. Akan tetapi, terdapat perbedaan hasil dari proksi-proksi dari kualitas tata kelola perusahaan yang digunakan.

Keywords: stock liquidity, corporate governance, leverage

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1. Introduction

1.1 Background

The capital structure decision is a popular issue in the corporate finance world. Managers must decide on the amount of debt and equity level used for financing their projects, aiming to maximize firm value by minimizing the cost of capital. According to (Clayman, Fridson, & Troughton, 2012), the decision on a firm's leverage level for an optimal capital structure depends on the firm's stock liquidity and corporate governance. There are studies that have related between stock liquidity and leverage (Lipson & Mortal, 2009) and between corporate governance and leverage (Jiraporn, Kim, Kim, & Kitsabunnarat, 2012). Therefore, this paper will study the joint impact of stock liquidity and corporate governance simultaneously on firms' leverage within the Indonesian market.

The literatures on capital structure have been discussed in decades starting from the famous work by (Modigliani & Miller, 1958) which showed that capital structure is irrelevant. Theories such as the pecking-order theory (Myers & Majluf, 1984), static-trade off theory (Modigliani & Miller, 1958) and agency theory (Jensen & Meckling, 1976) have tried to explain how firms decide on their optimal capital structure. This shows how challenging and important this decision is, and this paper will contribute to this literature by showing how this decision can be affected by the firm's stock liquidity and corporate governance quality.

Stock liquidity has been shown to have significant impact on a firm such as increasing firm value (Fang, Noe, & Tice, 2009) and increasing shareholder activism (Norli, Ostergaard, & Schindele, 2014). This paper relates the impact of stock liquidity on leverage which can be explained by several capital structure theories. The static trade-off theory (Modigliani & Miller, 1958) suggests that a liquid stock has lower flotation costs which causes equity to be more attractive than debt. The pecking-order theory (Myers & Majluf, 1984) suggests that firms issue debt over equity when there is asymmetrical information. Empirical evidence in the US by (Lipson & Mortal, 2009) has also shown that there is a negative relationship between stock liquidity and leverage.

The effects of liquidity may be different in Indonesia compared to other countries due to difference in trading mechanism and regulations. The US has a quote-trading market where the bid and ask price are quoted by market makers (Ali, Liu, & Su, 2015). Indonesia has an order-driven market where the bid and ask price established by public-limit orders (Chai, Faff, & Gharghori, 2010). According to (Brown & Zhang, 1997), an order-driven market has a higher liquidity than the quote-driven market. A study on the effects of liquidity in the order-driven market of Australia by (Sivathaasan, Ali, S., Liu, & Huang, 2016) has shown that stock liquidity negatively influences leverage. Therefore, it is interesting to compare the results in Indonesia with the US due to the different trading mechanism, and with other order-driven markets such as Australia due to the difference in size and regulations.

While stock liquidity by itself is known to affect leverage significantly, this paper takes the study further by incorporating corporate governance into the relationship. Corporate governance provides a monitoring mechanism on managers, and thus companies with better corporate governance are more transparent (Sivathaasan et al., 2016). Since good corporate governance aligns managers and shareholder's interest, it causes a lower agency costs and higher shareholder value (Clayman et al., 2012).

The effect of corporate governance on a firm are numerous, however this paper's focus is its effect of a firm's leverage decisions. A study by (Jiraporn et al., 2012) explains how corporate governance quality affects capital structure using the agency theory. The agency theory explains that debt is an alternative monitoring mechanism to corporate governance for solving the agency problem. When there is less corporate governance, debt will be used more as an alternative solution. Increase in debt pressures the managers to make better decisions as they are responsible for meeting the debt obligations. Therefore, higher CGQ (corporate governance quality) reduces leverage which is also backed up by empirical results (Jiraporn et al., 2012).

A study by (Zhuang, Edwards, & Capulong, 2001) on the corporate governance of Indonesia show that most corporations are controlled by families. Families control 67.1% of publicly listed companies in the Jakarta Stock Exchange. This insider system differs from the US outsider system with dispersed shareholders determined by the market forces (Dignam & Galanis, 2004). Indonesia's shareholders prefer to use debt financing for expansion to preserve their ownership in the family business. Indonesian listed companies with higher ownership concentration are shown to have higher level of leverage (Zhuang et al., 2001). Therefore, the results of this study on Indonesia can have significant difference in the impact of corporate governance.

2. Literature Review and Hypothesis Development

2.1 Stock Liquidity and Leverage

The static trade-off theory (Modigliani & Miller, 1958) states that company chooses between equity and debt by balancing their costs and benefits at the optimal level. In an imperfect market as assumed by Modigliani and Miller's second proposition, debt benefits from taxes. However, this benefit must be balanced with the risk of bankruptcy from the debt obligations. While increasing debt increases company's value due to tax benefits, at some point the benefit is counteracted by the cost of financial distress. Therefore, the optimal capital structure exists at the point where the marginal increase in tax benefits is equal to the expected financial distress costs.

An implication of this theory is that when the cost of equity is lower than cost of debt, then more debt will be used. A liquid stock has lower flotation costs, which is the costs incurred when issuing the equity from expenses such as underwriting fees and legal fees. Therefore, the conclusion is that a more liquid stock with lower flotation costs makes equity more preferred than debt. Empirical result by (Andres, Cumming, Karabiber, & Schweizer, 2014) show that stock liquidity affects equity returns and cost of capital. (Amihud & Mendelson, 2000) also show that firms with higher stock liquidity has lower cost of equity, thus having lower level of debt.

The pecking-order theory (Myers & Majluf, 1984) states that firms followed the order of internal financing, debt, then equity when financing. Firms will prioritize using internal financing as much as possible, followed by debt, then equity if needed. Debt and equity is avoided due to the level of asymmetrical information that they have. This implies a firm's capital structure is determined by their need of external financing and that firms with better cash flow will naturally use less debt and equity.

2.2 Corporate Governance and Leverage

The agency theory (Jensen & Meckling, 1976) is about resolving the agency costs that arise from the conflict of interest between the shareholders (principal) and managers (agent). The conflict arises because managers may have different goals than maximizing shareholder's value, and the shareholders may not be fully aware of the manager's actions. (Jensen & Meckling, 1976) argue that agency costs can be alleviated through capital structure decisions. While corporate governance is the main solution to the agency problem, debt can substitute it by motivating managers to make better decisions as they are responsible for the debt obligations.

The agency theory can be used to explain the relationship between corporate governance and leverage. (Sivathaasan et al., 2016) explain that corporate governance and leverage can be substituted for each other as a mechanism for controlling agency problems. Corporate governance is an internal mechanism that monitors and set regulations for the firm. Debt is an external mechanism which motivates better managerial decisions. According to (Jiraporn et al., 2012) higher leverage substitutes weaker corporate governance as a means of resolving agency problems. Therefore, firms with better corporate governance have less need of using debt.

2.3 Stock Liquidity, Corporate Governance, and Leverage

According to (Ali et al., 2015), corporate governance affects stock liquidity by affecting the level of transparency and information asymmetries between insiders and outsiders. The decrease in information asymmetries increases stock liquidity lowers cost of equity, and therefore less use of debt (Lipson & Mortal, 2009). Empirical result by (Ali et al., 2015) suggest that better governed firms have greatly increased stock liquidity in Australia. (Chung, Elder, & Kim, 2010) also show a positive relation between corporate governance quality and stock liquidity in the US. Then, according to (Lipson & Mortal, 2009) increase in stock liquidity decreases the use of debt as it causes cost of equity to decrease and thus equity is more attractive. Therefore, the conclusion is that an increase in corporate governance quality increases stock liquidity which then decreases leverage.

2.4 Hypothesis Development

The static trade-off theory states that firms choose between equity and leverage to minimize cost of capital. The pecking-order theory (Myers & Majluf, 1984) states that firms prefer using debt when there is more asymmetrical information on equity. Therefore, a more liquid stock with lower flotation costs and asymmetrical information will cause firms to use more equity. Since equity became more preferred over debt, the level of leverage will decrease. Empirical results also show a negative relationship between stock liquidity and leverage (e.g. (Amihud & Mendelson, 2000).

H1: Firms with higher stock liquidity experience a lower level of leverage

Based on the agency theory, firms solve their agency problems by using the mechanisms of corporate governance and leverage (Jiraporn et al., 2012). Corporate governance monitors managers, whereas leverage encourages managers to make better decisions. A firm with good corporate governance quality has less need of using debt as an external mechanism for resolving agency problems, and therefore higher corporate governance quality reduces leverage.

H2: Firms with higher corporate governance quality (CGQ) has a lower level of leverage

According to (Sivathaasan et al., 2016), the significant negative relationship between corporate governance quality (CGQ) and leverage only exists for firms with high stock liquidity in Australia. The interaction is different due to the different level of transaction costs from liquidity. Small firms with less liquidity have a higher level of transaction costs and therefore a higher expected rate of return (Stoll & Whaley, 1983). Therefore this paper predicts that the inverse relationship effect between CGQ and leverage is stronger for firms with higher liquidity than those with lower liquidity in Indonesia.

H3: Firms with higher liquidity has a stronger inverse relationship between CGQ and leverage than lower liquidity.

3. Methodology

3.1 Data

The data is taken from a population of all 532 public listed firms in the Indonesian Stock Exchange from year 2006 - 2016 (11 years). Among the population, a sample is selected that meets the following criteria:

- The firm is not a financial company. Financial companies were excluded as they are different in characteristics and regulations (Chang, Wong, & Park, 2014).
- The firm must have been publicly listed in 2006-2016. Therefore only firms that were publicly listed before January 2, 2006 are selected.
- Stock data must be complete from 2006–2016. Several firms had to be excluded due to the amount of missing data in Yahoo! Finance.
- Corporate data must be complete from 2006–2016. Incomplete data results from both incomplete annual reports and human error.

As a result, a sample of 165 firms with complete data were selected. The final sample amounts to 1815 firm-year observations. The details are as follow:

Table 1. Sample Selection

Total of publicly listed firms in Indonesian Stock Exchange	532
Firms that are not publicly listed since 2006	222
Firms in financial industry	56
Firms with incomplete stock data	58
Firms with outliers or incomplete final data	31
Final amount of firms sample	165

3.2 Empirical Model

Model (1) shows the the effect of both stock liquidity and corporate governance to leverage. The model (2) examines the difference in the effect of CGQ to leverage when stock liquidity is high or low.

$$Lev_{i,t} = a_0 + a_1Liq_{i,t} + a_2IsBig4_{i,t} + a_3BOD_{i,t} + a_4AUDT_{i,t} + \gamma_1Size_{i,t} + \gamma_2Tang_{i,t} + \gamma_3MTB_{i,t} + \gamma_4Age_{i,t} + \gamma_5ROA_{i,t} \quad (1)$$

$$\begin{aligned}
 Leverage_{i,t} = & \beta_0 + \beta_1 CG_{i,t} + \beta_2 CG_{i,t} * AmihudDummy_{i,t} + \beta_3 CG_{i,t} * LMDummy_{i,t} + \\
 & \gamma_1 Size_{i,t} + \gamma_2 Tang_{i,t} + \gamma_3 MTB_{i,t} + \gamma_4 Age_{i,t} + \gamma_5 ROA_{i,t} + \gamma_6 Risk_{i,t} + \gamma_7 NDTs_{i,t} + \\
 & \gamma_8 AssetLiq_{i,t} + \gamma_9 Top_{i,t} + u_{i,t} \quad (2)
 \end{aligned}$$

Using leverage as dependent variable ($Lev_{i,t}$), model (1) examines the effect of stock liquidity ($Liq_{i,t}$) and corporate governance quality ($IsBig4_{i,t}$, $BOD_{i,t}$, $AUDT_{i,t}$) as the independent variable. Stock Liquidity is measured using Amihud illiquidity estimate (Amihud, 2002) and turnover-adjusted zero daily volumes (LM). We use three corporate governance quality which are the usage of Big 4 independent auditor ($IsBig4_{i,t}$), proportion of independent director ($BOD_{i,t}$) and proportion of independent audit committee ($AUDT_{i,t}$). The control Variables includes 9 variables which are Firm Size ($Size_{i,t}$), Tangibility ($Tang_{i,t}$), Growth Opportunities ($MTB_{i,t}$), Firm Age ($Age_{i,t}$), Profitability ($ROA_{i,t}$), Firm Risk ($Risk_{i,t}$), Non-debt Tax Shields ($NDTS_{i,t}$), Asset Liquidity ($AssetLiq_{i,t}$), and Ownership Concentration ($Top_{i,t}$).

Model (2) uses a corporate governance variable ($CG_{i,t}$) will be switch out among the three proxies (IsBig4, BOD, Amihud) and includes its interaction effect with Amihud and LM as the other independent variables. Stock liquidity variables here is turned into a dummy variable, where those above the median (illiquid) is 0 and those below the median is 1 (liquid).

3.3 Research Variables

3.3.1 Dependent variables

Leverage variable is measured using market leverage:

$$ML_{i,t} = \frac{STD_{i,t} + LTD_{i,t}}{STD_{i,t} + LTD_{i,t} + MVE_{i,t}}$$

Where Short-Term Debt (STD) is synonymous with current liabilities, and Long-Term Liabilities (LTD) includes all non-current liabilities that bears interests. Total Asset (TA) is the total book value of assets and Market Value of Equity (MVE) is equal to the number of shares outstanding multiplied by yearly share price.

3.3.2 Independent Variables

Stock liquidity is first measured using the Amihud illiquidity estimate (Amihud 2002) as a proxy for price impact of trade:

$$Amihud_{iy} = \frac{1}{D_{it}} \sum_{t=1}^{D_{iy}} \frac{|r_{it}|}{Dvol_{it}}$$

Where D_{iy} is the number of days with available ratios for firm i in year t , $|r_{it}|$ is the absolute yearly return of firm i in year t , and $Dvol_{it}$ is the total daily trading volume of firm i in the end of year t . A higher Amihud means a lower stock liquidity.

The second variable is the turnover-adjusted zero daily volumes (LM) by (Bilinski, Liu, & Strong, 2012) for measuring trading continuity:

$$LM_{iy} = \left[NoZV_{i,t} + \frac{1/(turnover_{i,t})}{Deflator} \right] \times \frac{246}{NoTDt}$$

Where $NoZV_{i,t}$ is the number of days with zero trading volume in firm i in the end of year t , $turnover_{i,t}$ of firm i in year t is the ratio of the sum of volume per year to the number of shares outstanding per year, and $Deflator$ is a constant number set to 20,000 so that $1/(turnover_{i,t})$ is < 1 . The last multiplier is used to standardize the amount of trading days per year to 246 days in Indonesia, where $NoTDt$ is the number of trading days over the year. The higher the LM, the lower the stock liquidity.

Corporate governance quality is measured using three proxies from (Subramanyam, 1996)

- IsBig4 is a dummy variable representing the external auditor quality of the firm. It is 1 if the firm is audited by one of the big 4 auditors namely : Ernst & Young, Pricewaterhouse Coopers, Deloitte, and KPMG. It is 0 with other auditors.
- BOD is the proportion of independent board commissioners in the firm, calculated as number of independent members divided by total number of commissioners.
- AUDT is the proportion of independent audit committee members in the firm, calculated as number of independent members divided by total number of committee members.

3.3 Operationalization of Variables

This section is a summary of the definition of the variables explained.

Table 2. Definition of Variables

Leverage	The proportion of debt that the firm uses measured by the total amount of debt divided by the sum of its total debt and market value of equity.
Amihudit	A stock liquidity proxy capturing the price impact of trade. A higher Amihud shows lower liquidity.
LMit	A stock liquidity proxy for measuring trading continuity. A higher LM shows lower liquidity.
AmihudDummyit	0 for firms with Amihud above median, 1 for firms with Amihud below median
LMDummyit	0 for firms with LM above median, 1 for firms with LM below median
IsBig4it	A corporate governance proxy dummy variable measuring the external auditor quality of the firm. It returns 1 if the auditor is among the Big 4 Auditing firms:
BODit	A corporate governance proxy variable measuring board independence. It is measured by the proportion of independent commissioners.

AUDTit	A corporate governance proxy variable measuring the proportion of independent auditing committee members.
Size	Natural log of total assets
Tang	Net property, plant, and equipment divided to total assets
MTB	Market value to book value ratio
Age	Natural log of years since the company is publicly listed
ROA	EBIT to total assets ratio
Risk	Standard deviation of stock returns
NDTS	Annual depreciation divided by total assets
AssetLiq	Current asset divided by current liabilities
Top	Percentage of shares owned by top shareholder

4. Empirical Results

4.1 Descriptive Statistics

Table 3. Descriptive Statistics of Variables

Variables	Mean	Std. Dev.	Min.	Max.
Leverage				
ML	0.5302	0.2813	0.0163	0.996
Stock Liquidity				
Amihud	-11.7169	4.6394	-22.3486	-4.9743
LM	33.5267	55.1423	0.00002	222.035
Corporate Governance				
IsBig4	0.3983	0.4897	0	1
BOD	0.2859	0.2411	0	0.8571
AUDT	0.1489	0.2367	0	1
Control Variables				
Size	21.2171	1.6644	17.9098	25.2431
Tang	0.4973	0.2235	0.0248	0.9604
MTB	1.6148	2.3999	-0.4616	16.3483
Age	2.7046	0.4834	0	4.1897
ROA	0.0654	0.1106	-0.246	0.5216
Risk	0.0628	0.1328	0.0059	1.1389
NDTS	0.0375	0.0505	0.0001	0.3886
AssetLiq	2.6401	3.9318	0.1222	29.7417
Top	0.4897	0.2149	0.093	0.9531

Table 3 shows the descriptive statistics from the dependent variable market leverage (ML), the independent variables for stock liquidity (Amihud and LM) and corporate governance (IsBig4, BOD, AUDT) and the 9 control variables. All data except corporate governance variables are winsored at 0.01% to account for outliers. Market Leverage is higher compared to other studies such as (Lipson & Mortal, 2009) in the US and

(Sivathaasan et al., 2016) in Australia. This may show that firms in Indonesia tend to have higher leverage than other developed countries.

Amihud and LM is an inverse indicator of stock liquidity. Which means a higher Amihud or LM shows a low stock liquidity, and a lower Amihud or LM shows a high stock liquidity. Among these two, LM shows a significant variance with an standard deviation of 55.14 and large gap between the lowest and highest value. This is caused by a large amount of firms with zero-volume trading days in Indonesia. Top ownership of a firm's shares, or percentage of shares by largest blockholder, averages at 48.97%. This reflects the large amount of family ownerships in Indonesia as studied by (Zhuang et al., 2001).

Regression Result

The regression result is done after treating for heteroscedascity, autocorrelation, and cross-sectional dependency in the models using the (Driscoll & Kraay, 1998) standard errors method.

Table 4. Regression Results

	Hypothesis 1 & 2			Hypothesis 3	
	Model1	Model2	Model3	Model4	Model5
Amihud	0.0037** (2.17)				
LM		0.0001*** (3.46)			
IsBig4	-0.0098 (-0.62)	-0.0111 (-0.68)	0.0364 (1.66)		
BOD	-0.0339** (-2.34)	-0.0319** (-2.16)		0.0174 (0.57)	
AUDT	-0.0583*** (-2.67)	-0.0593** (-2.50)			-0.0397 (-1.76)
IsBig4*Amihud			-0.0198** (-2.00)		
IsBig4*LM			-0.0673*** (-4.43)		
BOD*Amihud				-0.0378** (-2.10)	
BOD*LM				-0.0788*** (-2.92)	
AUDT*Amihud					-0.0237 (-1.35)
AUDT*LM					-0.0293 (-1.16)
Size	0.0168 (1.81)	0.0151 (1.46)	0.0150 (1.35)	0.0147 (1.37)	0.0127 (1.15)
Tang	-0.239*** (-6.63)	-0.2364*** (-7.63)	-0.2369*** (-7.17)	-0.2349*** (-7.75)	-0.2389*** (-6.81)
MTB	-0.0374*** (-10.11)	-0.0372*** (-9.91)	-0.0368*** (-10.34)	-0.3762*** (-10.74)	-0.0374*** (-10.23)
Age	-0.0420 (-0.97)	-0.0487 (-1.12)	-0.0749 (-1.95)	-0.0648 (-1.47)	-0.0595 (-1.49)
ROA	-0.4814*** (-11.62)	-0.4702*** (-11.44)	-0.4899*** (-12.43)	-0.4776*** (-11.76)	-0.4913*** (-11.87)

Risk	-0.0661 (-1.17)	-0.0669 (-1.18)	-0.0667 (-1.24)	-0.6488 (-1.13)	-0.0702 (-1.23)
NDTS	-0.0452 (-0.91)	-0.0711 (-1.64)	-0.0494 (-1.08)	-0.0389 (-0.82)	-0.0709 (-1.65)
AssetLiq	-0.014*** (-5.44)	-0.014*** (-5.37)	-0.0139*** (-5.33)	-0.1397*** (-5.53)	-0.0141*** (-5.59)
Top	-0.0248 (-0.70)	-0.0267 (-0.73)	-0.0354 (-0.90)	-0.0329 (-0.91)	-0.0313 (-0.79)
_cons	0.6175*** (4.02)	0.6219*** (3.28)	0.6873*** (3.66)	0.6722*** (3.91)	0.6998*** (3.80)
N	1815	1815	1815	1815	1815
Adj. R2	0.3329	0.3270	0.3294	0.3283	0.3243

t statistics in parentheses, **p<0.05, ***p<0.01

Table 4 shows model 1 and 2 captures these two effects by regressing both stock liquidity and corporate governance variables to leverage. Two models are used while switching out between Amihud and LM to account for the different dimensions of liquidity that Amihud and LM captures. Amihud and LM is an inverse measurement, therefore a positive coefficient would actually mean a negative effect on leverage.

Both Amihud and LM has a positive coefficient similar to studies by (Amihud & Mendelson, 2000) and (Lipson & Mortal, 2009). Despite having a lower coefficient, LM shows to be more statistically significant in affecting leverage than Amihud. BOD and AUDT as corporate governance proxies also shows to significantly decrease leverage similar to other studies (e.g. (Jiraporn et al., 2012). However, IsBig4 fails to show a significant effect on leverage. According to (Siregar & Utama, 2008) research on corporate governance and earnings management in Indonesia, audit quality may not be a good proxy for corporate governance in Indonesia. For example, several studies has successfully shown that audit quality affects earning management (e.g. (Krishnan, 2003), however a study in Indonesia by Sandra and (Sandra & Kusuma, 2004) failed to show this effect.

For model 3, 4, and 5 we will focus on the interaction variables, which Amihud and LM is represented with a dummy variable. The inverse effect of Amihud and LM must be reconciled with the corporate governance variables, and therefore the dummy variables returns “0” (illiquid) for firms above the median and “1” (liquid) for firms below the median. The interaction variables’ coefficient can then be interpreted as the effect of corporate governance on leverage in liquid firms, and the CGQ coefficient represents the effect in illiquid firms.

All three corporate governance variables (IsBig4, BOD, AUDT) in low liquidity fails to show a significant effect on leverage. This is as expected in the hypothesis It states that increased corporate governance quality significantly decreases leverage in highly liquid firms, however corporate governance has no significant effect on leverage in illiquid firm. This is because lower liquidity firms has higher transaction costs (Stoll & Whaley, 1983) from flotation costs such as legal and underwriting fees. Costs are higher because the firm has more assymetrical information and risk from illiquidity, and therefore using more equity in place of leverage is undesirable.

The interaction variables of IsBig4*Amihud, IsBig4*LM, BOD*Amihud, and BOD*LM is also consistent with the hypothesis. They show that IsBig4 and BOD only significantly decreases leverage when the firm is liquid. Furthermore, the effect of BOD in

Model 4 has a higher coefficient than in Model 1 and 2, thus showing a stronger effect in high liquidity. The effect is present and stronger in high liquidity because the firm's liquidity allows debt to be replaced by equity due to lower costs and information asymmetry. Although IsBig4 was shown to be insignificant in decreasing leverage in general in Models 1 & 2, Model 3 shows that it is significant when the firm is liquid. Unfortunately, Model 5 show results contrary to the hypotheses where AUDT*Amihud and AUDT*BOD is insignificant. This may be caused by lack of observations of AUDT in high liquidity.

5. Conclusion

This paper tests these hypotheses with empirical results in Indonesia using a sample of 165 firms for 11 years (2006-2016). Our results show that stock liquidity negatively affects leverage in Indonesia. Therefore it confirms the hypothesis that firms with higher liquidity prefer to use less debt in their capital structure. Moreover, corporate governance quality also negatively affect leverage. Lastly, corporate governance effect on leverage is only significant for firms with higher stock liquidity and insignificant for illiquid firms in Indonesia. This study suggest the importance of firms' corporate governance and their stock liquidity so they can limit their debt usage and default risk.

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