

## Determinants of Debt Maturity Structure: Evidence from Indonesian Companies

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### Abstract

*This study examines the effect of earnings management, firm size, asset maturity, and leverage on the debt maturity structure. The debt maturity structure refers to the proportion of long-term debt to total debt. The choice between long-term and short-term debt has its own consequences. Long-term debt bears higher debt costs but the payback period is long enough to make it easier for companies to pay debt installments. Samples were taken from public companies listed on the Indonesia Stock Exchange (IDX) in 2016-2020 that met the sample criteria. The final observations that meet the sample criteria during the research period are 2,229 company years. Hypotheses were tested using multiple linear regression and the results showed that earnings management had a negative effect on the debt maturity structure. These results indicate that the company prefers short-term debt rather than long-term debt. In addition, firm size and asset maturity have a positive effect on the structure of debt maturity and leverage has no effect on the structure of debt maturity.*

**Keywords:** *Earnings management, firm size, aset maturity, leverage, debt maturity structure.*

### Abstrak

Penelitian ini menguji pengaruh manajemen laba, ukuran perusahaan, maturitas aset, dan leverage terhadap struktur maturitas utang. Struktur jatuh tempo utang mengacu pada proporsi utang jangka panjang terhadap total utang. Pilihan antara utang jangka panjang dan jangka pendek memiliki konsekuensi tersendiri. Utang jangka panjang menanggung biaya utang yang lebih tinggi namun payback periodnya cukup lama sehingga memudahkan perusahaan dalam membayar cicilan utang. Sampel diambil dari perusahaan publik yang terdaftar di Bursa Efek Indonesia (BEI) tahun 2016-2020 yang memenuhi kriteria sampel. Observasi akhir yang memenuhi kriteria sampel selama periode penelitian adalah 2.229 tahun perusahaan. Pengujian hipotesis menggunakan regresi linier berganda dan hasilnya menunjukkan bahwa manajemen laba berpengaruh negatif terhadap struktur jatuh tempo utang. Hasil ini menunjukkan bahwa perusahaan lebih menyukai utang jangka pendek daripada utang jangka panjang. Selain itu, ukuran perusahaan dan jatuh tempo aset berpengaruh positif terhadap struktur jatuh tempo utang dan leverage tidak berpengaruh terhadap struktur jatuh tempo utang.

**Kata Kunci:** *Manajemen laba, ukuran perusahaan, maturitas aset, tingkat utang, struktur maturitas utang.*

## 1. INTRODUCTION

Optimal financing decision making is very important to ensure efficient allocation of resources. Firm value can be expected to increase consistently when accurate decisions are made. Optimal financing decisions related to debt and equity composition (Abadi et al., 2013). Companies must decide carefully the source of funds to reduce the cost of capital. Two alternative sources are available to the company, one comes from internal sources and the other from external sources. When the company experiences a cash shortage, external funding sources are the last resort to finance the company's activities. The main alternative source of external financing is through debt. Despite having a higher risk, debt financing has played an important role in helping companies to thrive. However, the company's ability to pay debts is highly dependent on the company's cash flow (De Meyer, et al., 2018).

When considering an investment project to be funded through debt, managers must decide whether to use short-term or long-term debt. The proportion of long-term debt to the company's total debt is known as the debt maturity structure. Long-term debt carries a higher cost of debt thereby increasing the risk of default. Although the cost of debt is higher, debt with longer maturities has the advantage of making it easier for companies to pay off debt (Rey et al., 2020). Barclay and Smith (1995) argued that firms use the maturity structure of their debt to signal information to the market and Stohs and Mauer (1996) provide evidence that high quality firms choose short-term debt to signal their qualities.

The literature on debt maturity structure has recognized that financial structure involves significant agency costs (Ozkan, 2002). Myers (1977) argues that using risky debt to finance investment projects will result in suboptimal investment. Managers are more likely to miss projects with positive NPVs if lenders capture more profits than shareholders. In this situation companies will experience underinvestment. One way to solve this problem is to issue short-term debt. He concluded that firms with more growth options must issue debt with shorter maturities.

Barclay and Smith (1995) state that decisions about debt maturity must take into account the assets and debts of the company. At the end of the economic life of the asset, the company will face reinvestment problems and must make the right decision in this regard. Issuing debt that matures at the end of the asset's useful life can help companies reorganize investment incentives that are most favorable from the available investment options. Although short-term debt and long-term debt can both lead to bankruptcy, Barclay and Smith (1995) conclude that funding new investment projects using short-term debt is more profitable than long-term debt. Thus, the choice between short-term debt or long-term debt depends on the characteristics and business environment of the company (Rey et al., 2020; Myers (1977).

Previous studies on debt maturity structure have focused on the determinants of debt maturity structure. Rey et al. (2020) examines the debt maturity structure of Italian companies in 2011-2017 and finds that firm size has a positive effect on the debt maturity structure. In addition, leverage was negatively associated with debt maturity structure. Abadi et al. (2013) examined the debt maturity structure of Indonesian public companies in 2008-2012 and also found that firm size and debt maturity structure were positively correlated. Leverage had a negative effect on the debt

maturity structure. Lemma et al. (2020) examines the debt maturity structure of companies listed on the Johannesburg Stock Exchange in 2011-2015 and finds that firm size is positively related to the debt maturity structure.

Salehi and Sehat (2019) examined the debt maturity structure of 858 Tehran Stock Exchange companies in 2011-2016 and found that firm size had a positive effect on the structure of debt maturity and leverage had a negative effect on the structure of debt maturity. Seo et al. (2017) examined the debt maturity structure of US companies in 1992-2015 and found that firm size and asset maturity had a positive effect on the debt maturity structure. Leverage has a negative effect on the structure of debt maturity. Brockman et al. (2010) examined the debt maturity structure of 6,825 US companies in 1992-2005 and found that firm size had a positive effect on the debt maturity structure; leverage has a negative effect on the debt maturity structure.

This study re-examines the determinants of the debt maturity structure using Indonesian companies. In addition, this study also investigates the effect of earnings management on debt maturity structure. The choices made about the debt maturity structure are very important for the company because a poorly chosen mix leads to the liquidation of projects that have a positive NPV. (Antoniou, et al. 2002). However, managers can influence the debt maturity structure by engaging in earnings management. This research contributes to debt maturity structure literature by providing empirical evidence from emerging capital markets. The findings of this study can be used to test the validity of the conceptual argument developed by Myers (1977) which has been widely used as the underlying argument for choosing between short-term debt and long-term debt. The practical implication of this research is as input for managers in the Indonesian capital market in choosing between long-term and short-term debt.

## **2. LITERATURE REVIEW AND HYPOTHESIS**

### **Debt Maturity Structure**

Jensen (1986) suggests that debt is required to reduce agency costs between shareholders (principals) and managers (agents). Agency conflict may arise from free cash flow and debt can reduce the conflict. A debt contract is a mechanism that binds managers to pay principal and interest over a certain period. The obligation to pay off debt requires managers to set aside cash so as to prevent excess cash from flowing to shareholders. Reducing the amount of free cash flow prevents shareholders from getting more cash from the company in the form of dividends.

In general, there are two sources of corporate financing; internal and external financing. External financing can be obtained through short-term or long-term debt or in the form of equity by issuing shares. Diamond and He (2014) argue that companies with poor performance tend to use long-term debt and vice versa. Companies with poor performance will find it difficult to obtain short-term debt because of the high costs of paying off short-term debt. Moreover, short-term debt requires faster repayment than long-term debt. Companies must have cash reserves to repay short-term debts that mature quickly. As a result, underperforming companies are willing to pay high interest costs through long-term debt.

On the other hand, larger companies will find it relatively easier to obtain long-term debt. This is partly because larger companies tend to be more transparent than small companies. As a result, capital market investors are more actively following the shares of large companies. More transparent and reliable information also tends to increase lenders confidence, making it easier for large companies to issue long-term debt financing at lower interest rates. Banks are also more likely to provide long-term credit to large companies because banks can access more information about the actual condition of the company. In contrast, information about small companies is very limited, causing lenders to charge higher interest rates to anticipate the risk of default. Consequently, small companies tend to get short-term debt financing (Stephan et al., 2011).

### **Earnings Management and Debt Maturity Structure**

The ability to pay debts depends on the company's ability to generate future cash flows (De Meyere et al., 2018). However, higher information asymmetry hinders the lenders to reliably assess the credit worthiness and thus increases default risk. In response to this higher default risk, lenders will tend to provide shorter term loans. However, using risky debt to finance investment opportunities results in non-optimal investment (Myers, 1977). Companies with high growth options are expected to use short-term debt to finance investment projects. Similarly, Rey et al. (2020) argues that long-term debt provides flexibility for firms to repay loans and thus, poses a lower default risk.

The choice between short-term debt or long-term debt depends on the characteristics and business environment of the company (Rey et al., 2020; Myers (1977)). However, managers can influence the debt maturity structure through earnings management activities. According to Healy and Wahlen (1999), earnings management occurs when managers use discretion in reporting transactions and other economic events to influence financial statements. Unreliable financial statements have the potential to mislead users of financial statements. In relation to the debt maturity structure, managers can choose accounting policies that hide the company's true ability to pay off debt. In an effort to obtain long-term debt, managers are motivated to influence financial reporting in order to increase creditworthiness. On the other hand, creditors can anticipate possible financial statement misstatements by providing shorter debt periods with higher interest rates. Thus, the relationship between earnings management and debt maturity cannot be determined with sufficient confidence.

Based on the preceding arguments, the relationship between earnings management and debt maturity structure is expressed in the following hypothesis:

**H1: Earnings management is associated with debt maturity structure**

### **Firm Size and Debt Maturity Structure**

Information about large companies is relatively more accessible and many investors intensively follow the financial performance of large companies. In such an environment, large

companies are forced to be more transparent and disclose more information than small companies. Lenders and other suppliers of capital are better able to assess a company's capacity to generate future cash flows. Given a lower default risk, lenders are more likely to offer long-term debt to large companies and short-term debt to small companies. Thus, the larger companies are more likely to obtain long-term debt (Brockman et al., 2010).

Rey et al. (2020) examined the debt maturity structure of Italian companies and found that the larger companies tend to have long-term debts. Abadi et al. (2013) examined the debt maturity structure of manufacturing companies on the Indonesia Stock Exchange and found that firm size had a positive effect on the debt maturity structure. Lemma et al. (2020) examined companies on the Johannesburg Stock Exchange, Salehi and Sehat (2019) examined the Tehran Stock Exchange companies and both found that firm size is associated with debt maturity structure. Seo et al. (2017) who examined companies in the United States capital market also found consistent results.

Based on preceding arguments and previous findings, the relationship between firm size and debt maturity structure can be stated in the following hypothesis:

**H2: Firm size is positively associated with debt maturity structure.**

### **Asset Maturity and Debt Maturity Structure**

Taleb and Shubiri (2011) argued that asset maturity reflects the level of flexibility of fixed assets in generating cash. Companies with short asset maturities are expected to be able to generate more cash from their assets. Fixed assets generally have a longer maturity than current assets. Determining the compatibility between asset maturity and debt maturity is considered the most important factor in choosing short-term or long-term debt. Taleb and Shubiri (2011) examined the relationship between asset maturity and debt maturity and found that the longer the asset maturity, the higher the use of long-term debt. Conversely, the shorter the maturity of the asset, the higher the use of short-term debt. They concluded that flexibility and financial strength of the company enable company to reap the benefits of using short-term debt.

When making funding decisions, companies must consider the maturity of assets and maturity of debt because the company can face the risk of cash shortages if the maturity of assets is longer than the maturity of debt. If the company has debt with a shorter maturity than the assets, then the company is at risk of running out of cash to pay off the debt. Conversely, if the maturity of the debt is longer than the maturity of the asset, the cash flow obtained from the asset can be used to pay off the debt (Abadi et al. 2013).

Based on the preceding discussion, the relationship between asset maturity and debt maturity structure can be stated in the following hypothesis:

**H3: Asset maturity is positively associated with debt maturity structure.**

### **Leverage and Debt Maturity Structure**

Brigham and Ehrhardt (2010) stated that leverage reflects the company's ability to meet its obligations. Companies with high leverage ratios have the potential to go bankrupt if the company is unable to pay off its debts and will also have difficulty obtaining additional debt in the future.

High debt levels increase the risk of default, forcing companies to provide large cash to pay high interest and principal costs. As a result, lenders are reluctant to provide long-term loans. The higher the debt the company has, the less likely it is that the company will be able to access long-term financing (Salehi and Sehat, 2019).

Rey et al. (2020) examines the debt maturity structure of Italian companies and finds that leverage has a negative effect on the debt maturity structure. Abadi et al. (2013) examined the debt maturity structure of manufacturing companies on the Indonesia Stock Exchange and found that leverage had a negative effect on the debt maturity structure. Salehi and Sehat (2019) examine the debt maturity structure of companies on the Tehran Stock Exchange and find that leverage has a negative effect on the debt maturity structure. Seo et al. (2017) examined the debt maturity structure of US companies and found that leverage had a negative effect on the debt maturity structure.

Based on the arguments and findings of previous research, the relationship between leverage and debt maturity structure can be stated in the following hypothesis:

**H4: Leverage is negatively associated with debt maturity structure.**

### 3. RESEARCH METHOD

#### Population and Sample

The population of this research are all companies listed on the Indonesia Stock Exchange (IDX) and sample was selected using the purposive sampling method for the period of 2016-2020. Table 1 presents the sample selection procedure. Companies engaged in insurance and finance were excluded from the sample because they have different accrual characteristics. During the study period, a total of 2229 observations met the criteria. However, 169 observations that fell within three standard deviations of the mean had to be omitted. Thus, the final observations available for hypothesis testing is 2060 firm-years.

**Table 2. Sample Selection**

No	Kriteria	2016	2017	2018	2019	2020	Total
1	All public companies in IDX 2016-2020	516	553	608	663	670	3010
2	Insurance and financial companies	-90	-93	-97	-100	-103	-483
2	Financial reports cannot be accessed	-3	-1	-3	-19	-220	-194
3	The required variable data is not available	-7	-9	-12	-10	-14	-52
		416	450	496	534	333	2.229
	Outliers						-169
	Sample						2.060

Source: Processed Secondary Data (2021)

### Variable Measurement

Debt maturity structure is the ratio of long-term debt to the company's total debt. Earnings management is measured by discretionary accruals using the Modified Jones model. Firm size is proxied by the natural logarithm of total assets. Following Taleb and Shubiri (2011), asset maturity is measured by the ratio of fixed assets to total assets. Leverage is the ratio of total debt to total assets.

### Regression Model

Test of hypothesis is conducted by using regression model. The following is a regression model for the test of hypothesis.

$$MATUR_{it} = \beta_0 + \beta_1 DA_{it} + \beta_2 SIZE_{it} + \beta_3 ASMAT_{it} + \beta_4 DAR_{it} + e$$

Where: MATUR= Debt maturity structure for firm i and year t; DA= Earnings Management of firm i and year t; SIZE= Company size of company i and year t; ASMAT= Asset Maturity of firm i and year t; DAR= Leverage of firm i and year t.

## 4. RESULTS and DISCUSSION

### Descriptive statistics

Table 2 displays descriptive statistics for all variables in this study. The mean for earnings management variable (DA) is 0.081, suggesting that firms were engaged in earnings managements amounting to 8.1% of total assets and the standard deviation is 0.1488067. The mean for firm size (SIZE) is 28.657 and the standard deviation is 1.7013692. The mean for asset maturity (ASMAT) is 0.328, suggesting that level of flexibility in generating cash flow is 32.79% of total assets and the standard deviation is 0.2439131. The mean for leverage (DAR) is 0.458, indicating that one rupiah of assets guarantees 0.458 debt and the standard deviation is 0.2126312. The mean for debt maturity structure (MATUR) is 0.371, suggesting that composition of long-term debt to the company's total debt is 37.07% and the standard deviation is 0.2468197. This means that the average

**Table 2. Descriptive Statistics**

Variables	N	Minimum	Maximum	Mean	Std. Deviation
DA	2.060	0,000	3,668	0,081	0,149
SIZE	2.060	13,062	35,140	28,657	1,701
ASMAT	2.060	0,000	0,964	0,328	0,244
DAR	2.060	0,001	0,999	0,458	0,213
MATUR	2.060	0,000	0,970	0,371	0,247

## Results

Hypothesis testing is carried out using multiple linear regression analysis which is focused on assessing the effect of earnings management, firm size, asset maturity and leverage on the debt maturity structure. Table 3 presents the estimation results with two-tailed test.

**Table 3. Regression Results**

Variables	Coefficients	T	Sig.	Sig. / 2	Ha
DA	-0.152	-4.388	0.000	0.000	Supported
SIZE	0.038	12.321	0.000	0.000	Supported
ASMAT	0.243	11.601	0.000	0.000	Supported
DAR	0.029	1.171	0.242	0.121	Not supported

From table 3, it can be concluded that hypothesis one which predicts earnings management is associated with debt maturity structure is supported statistically with a significance level of less than 1% (p-value = 0.000). Hypothesis two which predicts firm size (SIZE) is positively associated with debt maturity structure is supported statistically with a significance level of less than 1% (p-value = 0.000). Hypothesis 3 which predicts asset maturity (ASMAT) is positively associated with debt maturity structure is supported statistically with a significance level of less than 1% (p-value = 0.000). Hypothesis 4 which predicts that leverage is negatively associated with debt maturity structure is not supported statistically (p-value=0.121). Thus, of the four proposed hypotheses, three are statistically supported.

## Discussion

### Hypothesis One

Earnings management is predicted to have association with debt maturity structure and the hypothesis is statistically supported. Note that the coefficient regression is negative. The finding suggests that the more intensely the company is involved in earnings management, the less long-term debt the company will acquire. According to Healy and Wahlen (1999) earnings management occurs when managers influence the financial reporting process, making it less reliable and potentially misleading users of financial statements. Unreliable financial reports negatively affect the ability of lenders to estimate future cash flow. It has been stated earlier, the company's ability to pay debts depends on the company's ability to generate future cash flows (De Meyere et al., 2018). However, high information asymmetry causes lenders have difficulty predicting future cash flows and it is becoming difficult when the horizon for calculating cash flows is getting longer. To protect themselves from the risk of default, lenders provide loans with shorter maturities. The results are consistent with previous studies. Rey et al. (2020) examines the debt maturity structure of Italian companies and finds that earnings management has a negative effect on the debt maturity structure. De Meyere et al. (2018) examines the debt maturity structure of Belgian companies and finds that earnings management has a negative influence on the debt maturity structure.



### **Hypothesis Two**

Hypothesis two which predicts the firm size is positively associated with debt maturity structure is statistically supported. The finding suggests that the larger the size of the company, the more long-term financing the company will acquire. Note that firm size was measured by total assets. Larger firms have fewer problems accessing long-term debt financing (Seo et al., 2017). Because large companies have a lower risk of bankruptcy, lenders will offer long-term debt. On the other hand, small companies have a greater risk of bankruptcy and lenders will tend to provide short debt maturities to minimize default risks. The larger the size of the company, the more likely it is that the company will be offered long-term debt (Brockman et al., 2010).

Previous results support the finding of this study. Rey et al. (2020) examined the debt maturity structure of Italian companies and found that firm size has a positive effect on the debt maturity structure. Abadi et al. (2013) examined the structure of debt maturity in manufacturing companies on the Indonesia Stock Exchange and found that company size had a positive effect on the structure of debt maturity. Lemma et al. (2020) examined the debt maturity structure of Johannesburg Stock Exchange companies and found that company size had a positive effect on the debt maturity structure. Salehi and Sehat (2019) examined the debt maturity structure of the Tehran Stock Exchange and found that firm size had a positive effect on the debt maturity structure. Seo et al. (2017) examined the debt maturity structure of US companies and found that firm size had a positive effect on the debt maturity structure. Brockman et al. (2010) examined the debt maturity structure of US firms and found that firm size had a positive effect on the debt maturity structure.

### **Hypothesis Three**

Hypothesis three which predicts that the assets maturity is positively associated with debt maturity structure is statistically supported. The findings suggest that the longer the asset maturity, the more long-term financing the company will acquire. According to Taleb and Shubiri (2011), asset maturity indicates the level of flexibility of fixed assets in generating cash. Fixed assets generally have a longer maturity than current assets. Companies with short-maturity assets are better able to generate cash from their assets. Effective decision-making regarding the proportion of maturities of assets and maturities of debt is expected to influence the choice between short-term and long-term debt.

In making financing decisions, companies must consider the right proportion between asset maturity and debt maturity because the company can face the risk of not having sufficient cash when the asset maturity period is longer than the debt maturity. If the maturity of assets is longer than the maturity of debt, the company will not have enough cash available to pay off long-term debt as it matures. Conversely, if the maturity of the debt is longer than the maturity of the asset, the cash flow obtained from the asset can be used to pay and pay off the debt, so that the maturity of the debt will be faster (Abadi et al. 2013).

Previous studies are consistent with the finding. Taleb and Shubiri (2011) examined the relationship between asset maturity and debt maturity and found that the longer the asset maturity,

the higher the company's use of long-term debt and vice versa. They argue that only companies that have the flexibility and financial strength can enjoy the benefits of using short-term debt because these companies are not exposed to refinancing risk and interest risk. Seo et al. (2017) examined the debt maturity structure of US companies and found that asset maturity had a positive effect on the debt maturity structure. Brockman et al. (2010) examined the debt maturity structure of US companies and found that asset maturity has a positive effect on the debt maturity structure.

#### **Hypothesis Four**

Hypothesis three which predicts that leverage is negatively associated with debt maturity structure is not statistically supported. Conceptually, firm with higher leverage pose the threat of default risk. As Brigham and Ehrhardt (2010) argued higher leverage ratios suggest bankruptcy if a company is unable to pay off its debts, making it hard to obtain additional debt in the future. However, the finding of this failed to support the argument. It seems that the company does not care about how much debt the company has in deciding whether to offer long or short-term debt.

Previous empirical results contradict the findings of this study. Rey et al. (2020) reported that leverage is significantly associated with debt maturity structure of Italian companies. Using Indonesian manufacturing companies, Abadi et al. (2013) found that leverage is negatively associated with debt maturity structure. Similarly, Seo et al. (2017) and Salehi and Sehat (2019) find that the leverage of American and Iranian companies is negatively related to the debt maturity structure.

## **5. CONCLUSIONS**

The debt maturity structure reflects the choices the company has made with respect to external sources of financing. More specifically, it is the proportion of long-term debt to total debt. Long-term debt bears higher cost of debt, forcing companies to provide more cash to pay off debt. However, long-term debt provide flexibility for companies due to longer maturities. This study examines the association between earnings management, firm size, asset maturity, and leverage on debt maturity structure.

The results show that while earnings management, firm size and asset maturity have a significant correlation with the debt maturity structure, leverage is not significantly related to the debt maturity structure. More specifically, earnings management is negatively related to the debt maturity structure. Firm size and asset maturity are positively related to debt maturity structure.

Adjusted R<sup>2</sup> is 0.136 which indicates that the explanatory power of all variables to the dependent variable is rather low. Future research can add other independent variables that may affect debt maturity structure such as market-to-book ratio and growth.

## REFERENCE

- Abadi, S., W. R. Murhadi, dan B. S. Sutejo. 2013. Faktor-Faktor Yang Mempengaruhi Debt Maturity di Sektor Industri Manufaktur Yang Terdaftar di Bursa Efek Indonesia Periode 2008-2012. *Calyptra: Jurnal Ilmiah Mahasiswa Universitas Surabaya* 2(2):1-10.
- Antoniou, A., Y. Guney, and K. Paudyal. 2002. Article in SSRN Electronic Journal at: <https://www.researchgate.net/publication/228122903>
- Barclay, M. J., dan C. W. Smith. 1995. The Maturity Structure of Corporate Debt. *The Journal of Finance* 50(2):609-631.
- Brigham, F. E., dan M. C. Ehrhardt. 2010. Financial Management Theory and Practice. 13th ed. Mason USA: South-Western.
- Brockman, P., X. Martin, dan E. Unlu. 2010. Executive Compensation and The Maturity Structure of Corporate Debt. *The Journal of Finance* 65(3):1123-1161.
- De Meyere, M., H. V. Bauwhede, dan P. V. Cauwenberge. 2018. The Impact of Financial Reporting Quality on The Debt Maturity: The Case of Private Firms. *Accounting and Business Research* 48(7):759-781.
- Diamond, D. W., dan Z. He. 2014. A Theory of Debt Maturity: The Long and Short of Debt Overhang. *The Journal of Finance* 69(2):719-762.
- Ghozali, I. 2009. Aplikasi Analisis Multivariate Dengan Program SPSS. Semarang: Badan Penerbit Universitas Diponegoro.
- Healy, P. M., dan J. M. Wahlen. 1999. A Review of The Earnings Management Literature and Its Implications for Standard Setting. *Accounting Horizons* 13(4):365-383.
- Jensen, M., dan W. Meckling. 1976. Theory of the Firm: Managerial Behavior, Agency and Ownership Structure. *Journal of Financial Economics* 3: 305-360.
- Jensen, M. 1986. Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review* 76(2):323-329.
- Lemma, T. T., M. A. Shabestari, M. Freedman, A. Lulseged, dan M. Mlilo. 2020. Corporate Carbon Risk, Voluntary Disclosure and Debt Maturity. *International Journal of Accounting & Information Management* 28(4):667-683.
- Myers, S. C. 1977. Determinants of Corporate Borrowing. *Journal of Financial Economics* 5(2):147-175.
- Ozkan, A. 2002. The determinants of corporate debt maturity: evidence from UK firms. *Applied Financial Economics* 12: 19-24
- Rey, A., D. Tuccillo, dan F. Roberto. 2020. Earnings Management and Debt Maturity: Evidence from Italy. *Corporate Ownership & Control* 17(3):179-186.
- Salehi, M., dan M. Sehat. 2019. Debt Maturity Structure, Institutional Ownership and Accounting

Conservatism: Evidence from Iranian Listed Companies. *Asian Journal of Accounting Research* 4(1):35- 51.

Scott, W. R. 2015. *Financial Accounting Theory*. 7th ed. USA: Prentice Hall.

Seo, K., E. E. K. Kim, dan A. Sharma. 2017. Examining the determinants of long-term debt in the US restaurant industry. Does CEO overconfidence affect debt maturity decisions? *International Journal of Contemporary Hospitality Management* 29(5):1501-1520.

Stephan, A., O. Talavera, dan A. Tsapin. 2011. Corporate debt maturity choice in emerging financial markets. *The Quarterly Review of Economics and Finance* 51:141-151.

Stohs, M. H. and D. C. Mauer. 1996. The determinants of corporate debt maturity structure. *Journal of Business* 69: 279-312.

Subramanyam, K. R., dan J. J. Wild. 2014. *Financial statement analysis*. 11th ed. New York: McGraw-Hill.

Taleb, G. A., dan F. N. A. Shubiri. 2011. Capital structure decisions and debt maturity structure: empirical evidence from Jordan. *The Journal of Commerce* 3(4):49-60.