THE DETERMINANTS OF CAPITAL STRUCTURE: EVIDENCE FROM INDONESIA

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ARTICLE INFO	ABSTRACT
	Purpose: This paper aims to examine the determinants of capital structure. **Theoretical framework:** There is an essential gap in modern finance theory on the issue of corporate debt policy, where contemporary theory cannot explain the company's choice of capital structure composition (Myers, 1977). Myers (1984) claimed that we have a limited understanding of capital structure. We have no idea how corporations determine whether debt, equity, or hybrid securities to issue. Furthermore, Thies & Klock (1992) claimed that capital structure is one of the most divisive topics in finance. **Design/methodology/approach:** A hundred and three companies were observed 618 times, applying multiple regression to find out the determinants of capital structure in manufacturing companies in Indonesia from 2011 to 2017. **Findings:** This study disclosed that five capital structure determinants (firm size, profitability, debt tax shield, growth, and liquidity) significantly affected capital structure. Firm size, debt tax shield, and growth positively correlated with capital structure, while profitability and liquidity negatively correlated with capital structure. Firm size was inequivalent with expectations, indicating that managers take advantage of firm size to increase their debt. Likewise, growth was not analogous with expectations, indicating that the company was taking advantage of its growth opportunities to increase debt. On the other hand, profitability, debt tax shield, and liquidity had the desired direction of the relationship. Furthermore, the other two variables, firm age and business risk, had no significant effect on capital structure, alluding that they were improper variables to explain variations in the sample companies' capital structure. **Research, Practical & Social implications:** The study focused on manufacturing companies listed on the Indonesia Stock Exchange, consisting of various industrial sectors and sub-sectors or heterogeneous. Thus, recruiting homogenous samples is recommended to generalize Indonesians' sub-sector companies. In addition, the findings suggested that the management needed to pay attention to firm size, profitability, debt tax shield, growth, and liquidity to determine the composition of its capital structure. **Originality/value:** Manufacturing companies listed on the Indonesia Stock Exchange were recruited as the sample of the study. However, the controversies and inconsistencies of the results are still debatable. Doi: https://doi.org/10.26668/businessreview/2023.v8i5.878

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OS DETERMINANTES DA ESTRUTURA DE CAPITAL: EVIDÊNCIAS DA INDONÉSIA

RESUMO
Objetivo: Este artigo tem como objetivo examinar os determinantes da estrutura de capital.
Estrutura teórica: Há uma lacuna essencial na teoria de finanças moderna sobre a questão da política de dívida corporativa, onde a teoria contemporânea não pode explicar a escolha da composição da estrutura de capital da empresa (Myers, 1977). Myers (1984) afirmou que temos uma compreensão limitada da estrutura de capital. Não temos ideia de como as corporações determinam se devem emitir títulos de dívida, ações ou títulos híbridos. Além disso, Thies & Klock (1992) afirmaram que a estrutura de capital é um dos tópicos mais divisivos em finanças.
Design/metodologia/abordagem: Cento e três empresas foram observadas 618 vezes, aplicando regressão múltipla para descobrir os determinantes da estrutura de capital em empresas manufatureiras na Indonésia de 2011 a 2017.
Achados: Este estudo revelou que cinco determinantes da estrutura de capital (tamanho da empresa, lucratividade, benefício fiscal da dívida, crescimento e liquidez) afetaram significativamente a estrutura de capital. O tamanho da empresa, o benefício fiscal da dívida e o crescimento se correlacionaram positivamente com a estrutura de capital, enquanto a lucratividade e a liquidez se correlacionaram negativamente com a estrutura de capital. O tamanho da empresa foi incompatível com as expectativas, indicando que os gestores aproveitam o tamanho da empresa para aumentar seu endividamento. Da mesma forma, o crescimento não foi análogo às expectativas, indicando que a empresa estava aproveitando suas oportunidades de crescimento para aumentar o endividamento. Por outro lado, rentabilidade, benefício fiscal da dívida e liquidez tiveram a direção desejada do relacionamento. Além disso, as outras duas variáveis, idade da empresa e risco do negócio, não tiveram efeito significativo na estrutura de capital, aludindo que eram variáveis impróprias para explicar variações na estrutura de capital das empresas da amostra.
Pesquisa, Implicações Práticas & Sociais: O estudo concentrou-se em empresas manufatureiras listadas na Bolsa de Valores da Indonésia, compostas por vários setores e subsetores industriais ou heterogêneos. Assim, o recrutamento de amostras homogêneas é recomendado para generalizar as empresas do subsetor indonésio. Além disso, os resultados sugeriram que a administração precisava prestar atenção ao tamanho da empresa, lucratividade, benefício fiscal da dívida, crescimento e liquidez para determinar a composição de sua estrutura de capital.

Palavras-chave: Tamanho da Empresa, Idade da Empresa, Lucratividade, Escudo Fiscal da Dívida, Risco do Negócio, Crescimento, Liquidez, Estrutura Capital.

LOS DETERMINANTES DE LA ESTRUCTURA DE CAPITAL: EVIDENCIA DE INDONESIA

RESUMEN
Propósito: El objetivo de este estudio fue identificar los factores internos y externos de la sostenibilidad del negocio camaronero vannamei y la relación de influencia y dependencia entre los factores.
Marco teórico: Hay una brecha esencial en la teoría financiera moderna sobre el tema de la política de deuda corporativa, donde la teoría contemporánea no puede explicar la elección de la composición de la estructura de capital de la empresa (Myers, 1977). Myers (1984) afirmó que tenemos una comprensión limitada de la estructura de capital. No tenemos idea de cómo las corporaciones determinan si emitir valores de deuda, capital o híbridos. Además, Thies y Klock (1992) afirmaron que la estructura de capital es uno de los temas más divisivos en las finanzas.
Diseño/metodología/enfoque: Se observaron ciento tres empresas 618 veces, aplicando regresión múltiple para averiguar los determinantes de la estructura de capital en empresas manufactureras en Indonesia desde 2011 hasta 2017.
Hallazgos: Este estudio reveló que cinco determinantes de la estructura de capital (tamaño de la empresa, rentabilidad, escudo fiscal de la deuda, crecimiento y liquidez) afectaron significativamente la estructura de capital. El tamaño de la empresa, el escudo fiscal de la deuda y el crecimiento se correlacionaron positivamente con la estructura de capital, mientras que la rentabilidad y la liquidez se correlacionaron negativamente con la estructura de capital. El tamaño de la empresa no fue equivalente a las expectativas, lo que indica que los gerentes aprovechan el tamaño de la empresa para aumentar su deuda. Asimismo, el crecimiento no fue análogo a las expectativas, lo que indica que la empresa estaba aprovechando sus oportunidades de crecimiento para aumentar la deuda. Por otro lado, la rentabilidad, el escudo fiscal de la deuda y la liquidez tenían la dirección deseada de la relación. Además, las otras dos variables, edad de la empresa y riesgo empresarial, no tuvieron un efecto significativo en la estructura de capital, aludiendo que eran variables impropias para explicar las variaciones en la estructura de capital de las empresas de la muestra.
Investigación, implicaciones prácticas y sociales: El estudio se centró en las empresas manufactureras que cotizan en la Bolsa de Valores de Indonesia, que consisten en varios sectores y subsectores industriales o

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heterogéneos. Por lo tanto, se recomienda reclutar muestras homogéneas para generalizar las empresas del subsector de Indonesia. Además, los hallazgos sugirieron que la gerencia necesitaba prestar atención al tamaño de la empresa, la rentabilidad, el escudo fiscal de la deuda, el crecimiento y la liquidez para determinar la composición de su estructura de capital.

Originalidad/valor: Las empresas manufactureras que cotizan en la Bolsa de Valores de Indonesia fueron reclutadas como muestra del estudio. Sin embargo, las controversias e inconsistencias de los resultados aún son discutibles.

Palabras clave: Tamaño de la Empresa, Edad de la Empresa, Rentabilidad, Escudo Fiscal de la Deuda, Riesgo del Negocio, Crecimiento, Liquidez, Estructura Capital.

INTRODUCTION

There is an essential gap in modern finance theory on the issue of corporate debt policy, where existing theory cannot explain the company's choice of capital structure composition (Myers, 1977). Myers (1984) claimed that we have a limited understanding of capital structure. We have no idea how corporations determine whether debt, equity, or hybrid securities to issue. Thies & Klock (1992) claimed that capital structure is one of the most divisive topics in finance. Furthermore, capital structure is determined by a multitude of factors, including the macroeconomic climate of each country, the industry in which the business operates, and the particular characteristics of each organization (Hoang, 2023).

Since Modigliani and Miller (1958) published their work, capital structure has been a source of research interest for academics worldwide. Numerous studies have been conducted over the last half-century to explain the relationship between capital structure and firm value, how businesses determine their capital structure, and how much to borrow in light of the benefits and costs of borrowing.

Furthermore, Modigliani & Miller (1963) proposed that debt influences corporate value in a positive manner, indicating that a more significant debt load indicates higher corporate value, meaning that corporations are prodded to expand their debt holdings. This concept has been criticized for neglecting to consider the hazards that the organization may face due to growing its debt load. The trade-off theory of tax savings versus financial expenses was coined to describe this method later. According to trade-off theory, the ideal capital structure ratios are established by evaluating the benefits of debt against the costs of corporate bankruptcy (Brealey et al., 2007).

The Pecking Order Hypothesis is the following capital structure theory to be discussed. Gordon Donaldson proposed this hypothesis in 1963 in his research on 500 companies listed on the Fortune 500 published by the Harvard School of Business's Research Division. According to the findings of this study, the corporation has a financing cycle that begins with

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retained earnings, then debts to third parties, either through loan or bond sales, and ultimately fresh share issuance. The costs determine the financing sequence the business must incur, and the highest cost is the cost of equity (Donaldson, 1963). The pecking order theory explains why low-profitability firms tend to incur more debt. They require more outside funding not because they have higher target debt ratios. Firms that are less profitable issue debt because they lack internal sources of capital investment and because debt financing is first in the external financing pecking order. Companies that are highly profitable but have limited investment opportunities will strive for low debt ratios (Minh Tien, 2023).

Moreover, firms prefer internally financed with debt and equity in securities offering events (Myers, 1984). The theory of pecking order is founded on asymmetric information problems. Businesses may opt to finance investments internally. Thus, employing external financing means prioritizing debt over equity. Furthermore, Myers & Majluf (1984) also argued that the issue of safe securities generally is better than that of risky. Firms should seek external capital through bond markets but, if possible, raise equity through retention. That is, external debt funding is preferable to equity financing.

Firm size is one of the factors of capital structure. According to Schoubben & Van Hulle (2004), corporate size appears to be one of the most widely hypothesized predictors of financial leverage. In effect, practically all mainstream capital structure models account for the relationship between size and financial leverage. Schwartz & Van Tassel (1950) established the first positive correlation between size and leverage. Many factors support the positive linearity thesis, including that large firms have a more remarkable ability to satisfy interest payments, are more diversified than smaller organizations, have larger collateral values, and are less likely to go bankrupt than small companies. Pandey (2004) uses the Log of Assets as a proxy for firm size in his research. Riportella & Papis (2001) use the volume of sales, the volume of assets, and the number of employees as proxies for firm size, both state that firm size is positively correlated with firm leverage, with the argument that large firms have a higher capacity to meet interest payments, are more diversified than smaller firms, and large firms are more profitable.

On the other hand, Rajan & Zingales (1995) demonstrate that firm size is adversely connected with the company's debt level because large companies choose equity financing over debt financing. Therefore, smaller and younger firms pay fewer dividends because they prioritize debt and investment more than larger firms (Cooley & Quadrini, 2001). The negative association between firm size and debt exists because large firms have greater access to an

equity investment than small firms (Bevan & Danbolt, 2002; Faulkender & Petersen, 2006; Marsh, 1982; Titman & Wessels, 1988).

Firm Age is also a determining factor for company leverage. According to Kieschnick & Moussawi (2018), *firm* Age, without considering its interaction with other corporate governance elements, is adversely connected with a firm's use of debt conditional on its use. The negative relationship between firm Age and debt is also consistent with the findings of several other researchers (Filatotchev et al., 2006; Johnson et al., 2017). In general, the researcher interprets the research results to show that as they age, entrenched managers can let their risk preferences play a more extensive influence in capital structure decisions at their organization (Kieschnick & Moussawi, 2018; Lewellen, 2006; Morellec, 2004)

Profitability is another aspect that impacts capital structure. According to Kumar et al. (2017), profitability is a primary explanatory variable in the research on capital structure. Overall profitability is inversely related to leverage. When the relationship is examined independently in different regions of the world, it is discovered to be inversely proportional to leverage, explaining why corporations typically invest their internal funds, such as retained earnings and owner's equity. Numerous prior researchers have established a negative correlation between profitability and debt (Baker & Wurgler, 2002; Fama & French, 2002; Frank & Goyal, 2009; Rajan & Zingales, 1995; Titman & Wessels, 1988).

On the other hand, several researchers found a positive relationship between profitability and debt (Al-Ajmi et al., 2009; Nunkoo & Boateng, 2010; Zhang, 2010). Taxes and costs of financial distress are the main factors considered in determining the optimal capital ratio (Berger et al., 1995). Trade-off theory predicts a positive relationship between debt and effective tax rates. Thus, a high tax rate increases the interest tax benefits of debt. Trade-off theory predicts that to take advantage of the benefits of higher interest taxes, firms will use more debt when the tax rate is higher (Frank & Goyal, 2009). Furthermore, Rasiah & Kim (2011) stated that the most significant reason that encourages companies to increase debt is the tax shield resulting from tax savings by paying interest on the debt.

From the point of view of the pecking order theory, corporate debt is negatively related to the effective tax rate because a higher effective tax rate will reduce the company's internal funds from profits and increase its cost of capital (Rasiah & Kim, 2011).

Business risk is also the primary determinant of a company's capital structure in the academic literature (Castanias, 1983; Jayant et al., 1991). However, the relationship between business risk and capital structure is debatable based on evidence. Numerous research indicates

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that the two have an inverse relationship. (Baxter, 1967; Bradley et al., 1984; Carleton & Silberman, 1977; Ferri & Jones, 1979; Flath & Knoeber, 1980; Friend & Lang, 1988). Several other researchers have discovered an uncertain association between the two (Scott Jr, 1976; Toy et al., 1974; Wald, 1999). Titman & Wessels (1988) determined that there was no significant association between the two in their investigation. On the other hand, according to the idea that a reduction in business risk increases capital structure costs, various researchers have demonstrated a positive association between business risk and capital structure (Kim & Sorensen, 1986; Myers, 1977).

According to Myers (2001), organizations with significant growth potential also tend to have low debt levels. This finding is corroborated by numerous other researchers who discovered a negative correlation between growth and business leverage (Barclay & Smith Jr, 1999; Barclay et al., 1995; Long & Malitz, 1985; Smith & Watts, 1992).

Liquidity has also been identified as a factor influencing capital structure in several earlier studies (Kumar et al., 2017). Jensen (1986) argues that cash-rich corporations should take on new debt to prevent managers from squandering free cash flows, implying a positive correlation for liquidity. Several researchers corroborate this finding (Bradley et al., 1984; Kaur & Rao, 2009). The majority of empirical evidence, however, supports the notion that liquidity is inversely connected with debt ratios (Alom, 2013; Bevan & Danbolt, 2002; Friend & Lang, 1988; Pathak, 2010; Rajan & Zingales, 1995; Sheikh & Wang, 2011; Titman & Wessels, 1988).

This paper aims to examine the determinants of capital structure. Based on previous research that has been described previously, the determinants of capital structure are still inclusive, the results of which vary in each sample taken all over the world. This research is intriguing as it is connected with the condition of the sample companies in Indonesia. Manufacturing companies in Indonesia, based on World Bank data, Indonesia has a gross domestic product (GDP) of US$ 1.19 quadrillion in 2021. This value is the largest compared to 9 other ASEAN countries. Indonesia's GDP value in 2021 will also reach around one-third of ASEAN's GDP with a total value of US$3.34 quadrillion

LITERATURE REVIEW

Theories and Hypotheses Development-Based Capital Structure

Since Modigliani and Miller's 1958 article "The Cost of Capital, Corporation Finance, and the Theory of Investment," with various limiting assumptions, it has been asserted that the effect of financing on the firm's value is immaterial. Capital structure is a subject that has

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piqued the curiosity of world scholars. Numerous studies have been undertaken over the last half-century to explain the relationship between capital structure and firm value, how businesses determine their capital structure, and how much to borrow in light of the benefits and costs of borrowing. Three significant hypotheses attempt to explain the origins and evolution of corporate leverage.

The classic (or static) trade-off theory is the initial theory. This theory explains how a business determines the optimal level of debt and attempts to change its current debt level toward the optimal point by comparing the tax benefits of debt, the costs of bankruptcy, and the costs of debt and equity agency. (Bradley et al., 1984; Modigliani & Miller, 1963; Myers, 1977).

The second theory is pecking order (Donaldson, 1961; Myers, 1984; Myers & Majluf, 1984). Due to information asymmetries between insiders and outsiders, the corporation prefers to finance itself through internal resources, debt, and stockholders' equity (Viviani, 2008).

The dynamic trade-off theory (DTOT) evolved as a way to reconcile the traditional (or static) trade-off theory and pecking order theory (Kraus & Litzenberger, 1973; Leland, 1994). This theory places a premium on time, which the static model does not. The derivation of two concepts, expectations (targets) and adjustment cost, is critical in determining whether appropriate leverage exists and how it should be employed in the business's capital structure. The company's conduct can be observed through the adjustment. Specific individuals increase their leverage while others decrease it. Although the dynamic model appears to be more sophisticated than the static model, the dynamic model's findings illustrate the shift between actual and desired leverage.

The market timing hypothesis is the third capital structure theory. This hypothesis explains why corporations issue new shares when managers believe their stock is overpriced and buy back shares when managers believe their stock is cheap. The objective of market timing is to capitalize on transient variations in a company's equity and then maximize it to generate a profit for the company (Baker & Wurgler, 2002).

Capital Structure's Empirical Determinants
Firm Size

Numerous empirical studies have been conducted to determine the relationship between firm size and capital structure. According to Schoubben & Van Hulle (2004), corporate size appears to be one of the most widely hypothesized predictors of financial leverage. In effect,

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practically all mainstream capital structure models account for the relationship between size and financial leverage.

Schwartz & Van Tassel (1950) established the first positive correlation between business size and leverage. Coleman & Cohn (1999) also enhance the positive association between firm size and leverage by emphasizing the exorbitant costs of debt and equity securities, which forces small businesses to rely heavily on short-term financing. Pandey (2004) and Hedau (2021) employed the Log of Assets as a proxy for firm size. Withal, Riportella & Papis (2001) plotted the volume of sales, the volume of assets, and the number of employees as a proxy for firm size. Riportella & Papis (2001) further stated that firm size was positively correlated with corporate leverage because larger firms had a greater capacity to meet interest payments and were more diversified than smaller firms.

On the other hand, some researchers discovered a negative relationship between firm size and leverage. Rajan & Zingales (1995) demonstrated that firm size was negatively correlated with firm leverage using Log Sales as a proxy for firm size, arguing that large firms prefer equity financing over debt financing. This finding was corroborated by Cooley & Quadrini (2001), demonstrating that firm size was inequivalent with leverage in their research using equity as a proxy for firm size, arguing that smaller and younger firms pay fewer dividends by prioritizing debt and investment more than larger firms.

In addition, many other researchers also prove that firm size was negatively correlated with firm leverage with the argument that large firms have more access to equity funding than small firms, including Bevan & Danbolt (2002), Faulkender & Petersen (2006) and Titman & Wessels (1988) used Log Sales as a proxy for firm size, and Marsh (1982) used Log Total Assets as a proxy for firm size.

Based on the previous studies, it appears that the relationship between firm size and the company's capital structure is still equivocal, with some claiming a negative association and others claiming a positive correlation. However, based on the findings of Sibindi (2016), company size is positively associated with capital structure, both in terms of pecking order theory and trade-off theory. Thus the first hypothesis is formulated as follows:

H1: There is a negative relation between firm size and the capital structure.

Firm Age

Firm Age is also a determining factor for company leverage. Sibindi (2016) states that age is one of the most influential characteristics that define a company's capital structure. In

contrast, older organizations are assumed to be lucrative and have more significant internal resources. Consequently, the mandate would first adhere to the financial hierarchy and finance from retained earnings. On the contrary, older companies are likely to establish a favorable reputation in the debt market. Therefore, the prediction is that firm leverage is proportional to age. Several scholars in the corporate age claim that entrenched managers are better equipped to let their risk preferences influence their firm's capital structure decisions (Lewellen, 2006; Morellec, 2004).

On the other hand, some researchers have demonstrated that firm Age is negatively correlated with firm leverage, such as Kieschnick & Moussawi (2018). They state that age is negatively correlated with a firm's use of debt, even when other corporate governance features are considered. The findings of Filatotchev et al. (2006) and Johnson et al. (2017) analogously demonstrate that company age is adversely connected with firm leverage in their research, which lead the researcher to form the second hypothesis as follows:

H2: There is a negative relation between firm Age and the capital structure.

Profitability

Kumar et al. (2017) noted in their research that profitability is one of the primary explanatory variables examined in the capital structure literature. Overall, profitability is inversely correlated to leverage. When the relationship is independently examined in different regions of the world, it is discovered to be inversely correlated to leverage, explaining why corporations frequently invest their internal funds, such as retained earnings and owner's equity.

Many earlier studies have found a negative link between profitability and capital structure (Antoniou et al., 2008; Baker & Wurgler, 2002; Cassar & Holmes, 2003; Chakraborty, 2010; Fama & French, 2002; Frank & Goyal, 2009; Oino & Ukaegbu, 2015; Rajan & Zingales, 1995; Van Caneghem & Van Campenhout, 2012; Yang et al., 2010).

Nunkoo & Boateng (2010), on the other hand, contend in their research that static trade-off theories show a positive relationship between capital structure and debt, arguing that enterprises with high profits require more tax shelter and have a more significant debt-taking capability.

These findings are consistent with the findings of Taub (1975), Roden & Lewellen (1995), Hedau (2021), and Zhang (2010), which support Modigliani & Miller (1963), revealing that if a tax on retained earnings is imposed, the more profitable the firms, the more likely they

seek financing through debt to benefit from the tax shield on debt. Furthermore, a profitable corporation will send favorable information to outside investors, who will be less hesitant to lend or invest money in that firm. Therefore, the third research hypothesis is formulated as follows:

H3: There is a negative relationship between profitability and capital structure.

Debt Tax Shield

According to the trade-off theory, business leverage and effective tax rates have a positive relationship. As a result, a high tax rate boosts the interest tax benefits of debt. Furthermore, when the tax rate is more significant, corporations will use more debt to reap the benefits of higher interest tax (Frank & Goyal, 2009). The most crucial reason that pushes corporations to accumulate debt is the tax shelter that results from tax savings from debt interest payments (Rasiah & Kim, 2011).

According to the pecking order theory, firm leverage is negatively correlated to the effective tax rate since a higher effective tax rate reduces the company's internal finances from profits to increase its cost of capital (Rasiah & Kim, 2011). Based on the empirical evidence, the fourth hypothesis is formulated as follows:

H4: There is a positive relation between debt tax shield and the capital structure.

Business Risk

According to Castanias (1983) and Jayant et al. (1991), business risk is the primary determinant of a company's capital structure. However, empirical evidence suggests that the nature of the relationship between business risk and capital structure is debatable. Friend & Lang (1988), in their study "An Empirical Test of the Impact of Managerial Self-Interest on Corporate Capital Structure," a risky organization borrows less. These findings are congruent with those of earlier researchers (Baxter, 1967; Bradley et al., 1984; Carleton & Silberman, 1977; Ferri & Jones, 1979; Flath & Knoeber, 1980).

On the other hand, several other academics have concluded that the relationship between business risk and capital structure is uncertain (Scott Jr, 1976; Toy et al., 1974; Wald, 1999). Furthermore, Titman & Wessels (1988) concluded in their study that there was no significant association between the two. Several scholars have demonstrated a positive association between business risk and capital structure based on the assumption that high business risk can minimize

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loan agency costs (Kim & Sorensen, 1986; Myers, 1977). Based on the empirical evidence, the fifth hypothesis is formulated as follows:

H5: There is a negative relationship between business risk and the capital structure

Growth

According to Gupta (1969), rising businesses have a high total debt-to-total asset ratio due to their increased desire for financial structure flexibility, as well as the fact that debt may be acquired and liquidated more quickly, increasing the return on equity investment and bringing distinct income tax advantages when compared to equity funds. On the other hand, growing businesses have enormous bank debts concerning their overall assets and make greater use of available trade credit, suggesting a positive relationship between growth and capital structure.

On the other hand, according to Myers (2001), firms with strong growth potential have modest debt levels. This phrase implies a negative correlation between growth and capital structure. This finding is corroborated by several other researchers who discovered a negative correlation between growth and capital structure (Barclay & Smith Jr, 1999; Barclay et al., 1995; Long & Malitz, 1985; Smith & Watts, 1992). Based on the empirical evidence, the sixth hypothesis is formulated as follows:

H6: There is a negative relationship between growth and the capital structure.

Liquidity

Liquidity has also been identified as a factor influencing capital structure in several earlier studies (Kumar et al., 2017). Jensen (1986) argues that cash-rich enterprises should take on additional debt to prevent managers from squandering free cash flows, implying a positive link for liquidity. Several researchers corroborate this finding (Bradley et al., 1984; Kaur & Rao, 2009).

The majority of empirical evidence, however, supports the notion that liquidity is inversely connected with debt ratios (Alom, 2013; Bevan & Danbolt, 2002; Friend & Lang, 1988; Pathak, 2010; Rajan & Zingales, 1995; Sheikh & Wang, 2011; Titman & Wessels, 1988). Based on the empirical evidence, the seventh hypothesis is formulated as follows:

H7: There is a negative relationship between liquidity and capital structure.

MATERIAL AND METHODOLOGY

A hundred and seventy-nine manufacturing companies were observed under complete populational sampling between 2012-2017. Meanwhile, in 2011, the observation data were plotted as the data comparison. Likewise, when a researcher employed complete population sampling, they chose to look at every member of the population having one or more of the same traits (Crossman, 2020). The total population was 179 companies. However, sixty-seven samples were delisted during the study period, and nine samples were excluded because they had negative equity balances during the study period. All in all, the samples were 103 companies. They were observed from 2012-2017 with 618 observations.

Measurements

1.   Firm Size

The firm's size was determined by the sum of the company's assets at the end of the fiscal year. Ln Total Assets was used to determine the firm size in this study (Alipour et al., 2015; Antoniou et al., 2008; Eldomiaty, 2008; Kaur & Rao, 2009; Lourenço & Oliveira, 2017; Mazur, 2007; Taub, 1975).

2.   Firm Age

The firm's age was the period since it became a public business. Thus, firm Age was defined in this study as the period when the company was listed on the stock exchange (Filatotchev et al., 2006; Johnson et al., 2017).

3.   Profitability

Profitability refered to a company's ability to generate profits. Profitability was measured in this study by Return on Assets (Oino & Ukaegbu, 2015; Onofrei et al., 2015; Sofat & Singh, 2017; Viriya & Suryaningsih, 2017) using a formula:

$$ROA = \frac{\text{Earning After Tax}}{\text{Total Assets}} \times 100\%$$

4.   Debt Tax Shield

Debt Tax Shield was the profit on taxes the company receives from paying interest on the debt. Debt Tax Shield was measured by calculating the difference between corporate tax costs without debt and corporate tax costs with debt or multiplying interest costs by taxes.

Debt Tax Shield = Interest Expense * Tax Rate

(Malenya et al., 2017; Wrightsman, 1978)

5.   Business Risk

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A company's earnings variability (uncertainty) is a business risk. The standard deviation of EBIT was used to assess business risk. (Lourenço & Oliveira, 2017; Sofat & Singh, 2017).

6.   Growth

The ability of a corporation to expand in size is referred to as growth. Sales growth was used to measure growth in this study. (Eldomiaty, 2008; Kaur & Rao, 2009; Titman & Wessels, 1988) using a formula:

$$\text{Sales Growth} = \frac{\text{Sales}_{(t)} - \text{Sales}_{(t-1)}}{\text{Sales}_{(t-1)}}$$

7.   Liquidity

The ability of a corporation to fulfill short-term financial obligations on time is called liquidity. The current ratio is used to measure liquidity in this study (Alipour et al., 2015; Kaur & Rao, 2009; Mazur, 2007; Mohsin, 2016; Onofrei et al., 2015; Sheikh & Wang, 2011; Viriya & Suryaningsih, 2017), using a formula:

$$\text{CR} = \frac{Current\ Assets}{Current\ Liabilities} x100\%$$

8.   Capital Structure

The capital structure is a policy adopted by management to obtain a source of financing for the firm, which will be utilized to fund the company's operating activities. The debt ratio confirmed the capital structure (Abor, 2007, 2008; P. G. Berger et al., 1997; Hameedi et al., 2022; Ooi, 2000). The formula used:

$$\text{DR} = \frac{Total\ Debt}{Total\ Debt + Equity} x100\%$$

This study employed two types of statistical analysis: descriptive statistical analysis and inferential statistical analysis. Descriptive analysis was performed to characterize each variable in more detail. Furthermore, inferential statistical analysis was plotted to determine the independent effect on dependent variables.

In this investigation, the regression equation model is as follows:

$$CS = a + \beta_1\ SIZE + \beta_2\ AGE + \beta_3\ PRF + \beta_4\ DTS + \beta_5\ BR + \beta_6\ GRO + \beta_7\ LIQ + e$$

Where:

SIZE: *firm size*

AGE: *firm Age*

PRF: *Profitability*

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DTS: *Debt Tax Shield*

BR: *Business Risk*

GRO: *Growth*

LIQ: *Liquidity*

CS: *Capital Structure*

RESULTS AND DISCUSSION

Descriptive Statistics

We used descriptive statistics to summarize the research data and provide a summary of data dissolution and distribution size. The following Table 1 summarizes the results of descriptive statistics:

Table 1 Descriptive Statistics

Independent Variable	N	Minimum	Maximum	Mean	Std. Deviation
FS	618	25.6	33.3	28.465	1.6074
FA	618	1	40	20.27	8.136
PROF	618	-29.9090	65.7201	5.356751	9.3897482
DTS	618	-767.6871	455.2025	19.832971	70.8204647
BR	618	17.7689	30.5646	24.354606	1.9513850
GRO	618	-80.1039	594.7309	7.056647	34.3234118
LIQ	618	33.7204	46498.4417	339.416742	2114.3251973
CS	618	0.0397	98.8488	44.785620	20.9418543

Source: Prepared by the authors (2023)

Based on Table 1, in terms of Firm Size, the standard deviation value smaller than the average indicates that the overall sample companies have relatively even company sizes. In addition, the average value was inclined to the minimum, indicating that most sample companies had Firm Sizes below the average (58.6%). The standard deviation value of the firm's age was smaller than the average, meaning that the company's age was evenly distributed at all points between 1 year to 40 years. However, further examination showed that 40.3% of sample companies were below the average age, and the remaining 59.7% were above the average age.

The sample companies' profitability level in the study period varies between companies. In addition, the average value that is more inclined to the minimum value indicates that most of the sample companies in the study period have a profitability ratio below the average. 80.7% have a positive profitability ratio, and the remaining 19.3% have a lower profitability ratio. The Debt Tax Shield of the sample companies in the study period varies significantly between

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companies. The average Debt Tax Shield, which is more inclined to the maximum value, indicates that most sample companies have Debt Tax Shield above the average (70.9%).

The high and low Business Risk faced by the sample companies in the study period is relatively the same. The average Business Risk was higher than the minimum value, indicating that most sample companies have Business Risk below the average (50.8%). The growth rate of the sample company dramatically varies depending on the company's sales achievement level. The average growth was higher than the minimum value, indicating that most sample companies had growth below the average (52.4%). However, most sample companies had growth values, indicating that some companies have increased their sales compared to the previous period (66%).

The sample company's ability to guarantee short-term liability with its current assets was different in terms of liquidity. The average liquidity was higher than the minimum value, indicating that most sample companies had a Liquidity below the average (81.7%). However, most sample companies were below the rule of thumb for liquidity (2x or 200%). In other words, most of the sample companies did not have sufficient ability to guarantee their short-term debt.

The proportion of debt in the sample companies' capital structure showed analogous statistics. Most sample companies had a capital structure above the average (50.5%), and the rest were below the average (49.5%), but when compared to the rule of thumb, the debt ratio was 50 %. It revealed that 42.6% of companies had a higher level of risk (>50%), and the remaining 57.4% had a lower level of risk (<50%).

Regression Analysis

The results of the regression analysis can be seen in Table 2 as follows:

Table 2 Empirical Finding

Descriptions	Expected significance	Coefficients β	t	p-value	Collinearity Statistics	
					Tolerance	VIF
(Constant)		2,972	0,214	0,830		
Firm Size	-	1,652**	2,335	0,020	0,477	2,098
Firm Age	-	0,136	1,336	0,182	0,902	1,109
Profitability	-	-0,701***	-7,813	0,000	0,869	1,150
Debt tax shield	+	0,144**	1,985	0,048	0,936	1,068

Business Risk	-	-0,244	0,419	-0,585	0,675	0,473	2,114
Growth	-	0,047**	0,041	2,042	0,042	0,977	1,023
Liquidity	-	-0,002***	4,343	-0,000	0,000	0,988	1,012

Observation: 618
R^2: 0,143
Adjusted R^2: 0,133
F-value: 14,534 (p-value 0,000)
Dependent variable: *Capital Structure*
Independent variable: *Firm Size*, *Firm Age*, *Profibatility*, *Debt Tax Shield*, *Business Risk*, *Growth*, *Current Ratio*.
***Significant at the 0.01 level; **significant at the 0.05 level.

Source: Prepared by the authors (2023)

Based on the empirical finding as presented in Table 2, it can be explained as follows:

a.   The effect of firm size on capital structure

The results obtained β coefficients of 1.652 with a t-test of 2.338 (p-value 0.020) on the effect of firm size on capital structure, showing that firm size has a significant positive effect on capital structure, so hypothesis 1 is accepted. The findings were consistent with the trade-off theory, stating that there was a positive relation between firm size and capital structure because larger corporations had a greater capacity to satisfy interest payments. They are more diverse than smaller companies and have a higher collateral value to reduce the percentage of bankruptcy (Schwartz & Van Tassel, 1950; Coleman & Cohn, 1999; Riportella & Papis, 200; Pandey, 2004). Ultimately, the company might leverage its size to expand its debt.

This study, on the other hand, did not appear to confirm the findings of Rajan & Zingales (1995), Cooley & Quadrini (2001), Bevan & Danbolt (2002), Faulkender & Petersen (2006), Titman & Wessels (1988) dan Marsh (1982). Their research demonstrated that firm size had a detrimental impact on capital structure. Several causes caused the discrepancies. First, there were discrepancies in the proxies used to quantify firm size. Firm size was measured in this study using Ln total assets, whereas Rajan & Zingales (1995), Bevan & Danbolt (2002), Faulkender & Petersen (2006), and Titman & Wessels (1988) used log sales as a proxy firm size, and Cooley & Quadrini (2001) used total equity as a proxy firm size. Second, there were differences in the country of origin of the companies sampled; in the research of Rajan & Zingales (1995), Bevan & Danbolt (2002), Faulkender & Petersen (2006), Titman & Wessels (1988) and Cooley & Quadrini (2001), the companies used developed countries' companies as their samples, where this study was also observed the developing countries' companies.

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b.   The effect of firm Age on capital structure

The results obtained β coefficients of 0.136 with a t-test of 1.336 (p-value 0.182) on the effect of firm Age on capital structure, showing that firm Age had no significant effect on capital structure, so hypothesis 2 was rejected. Although not significant, the direction of the coefficient followed the trade-off theory, assuming a positive relationship between age and debt ratio.

This study's results support Sibindi's (2016) research, which can also prove that firm Age positively affects Capital Structure. Sibindi (2016) and Adair & Adaskou (2015) stated that older companies were expected to be more profitable because they had more internal resources than younger ones. In addition, older firms were expected to earn a reputation in the debt market because they could be well-evaluated. Thus, firm Age was positively related to capital structure.

c.   The effect of Profitability on Capital Structure

The results obtained β coefficients of -0,701 with a t-test of -7,813 (p-value 0,000) on the effect of profitability on capital structure, showing that profitability significantly affected the capital structure. Thus, hypothesis 3 was accepted. The results of this study support previous research (Antoniou et al., 2008; Chakraborty, 2010; Oino & Ukaegbu, 2015; Rajan & Zingales, 1995; Van Caneghem & Van Campenhout, 2012; Xu, 2012), which can prove the pecking order theory that implies a negative relationship between profitability and capital structure. These results indicate that the sample companies that earn profits will prioritize internal funds to fund their investments

On the other hand, several researchers, such as Taub (1975), Roden & Lewellen (1995), Nunkoo & Boateng (2010), and Zhang (2010), proved that profitability had a positive effect on capital structure. The statement was consistent with the trade-off theory, implying a positive relationship between capital structure and debt where high-profit firms might require greater tax protection and more capacity to repay debt.

Variant proxies applied might cause results variation as a measure of profitability and capital structure as well as the country of origin of the sample companies. Taub (1975), in his research, uses the sum of earnings available for ordinary stock dividends as a proxy for profitability. Roden & Lewellen (1995) used the same proxy, namely ROA, but the companies used as samples were financial firms. Likewise, Nunkoo & Boateng (2010), in their research, use the ratio of the book value of long-term debt to the book value of long-term debt and market value of equity as a proxy for capital structure and

use companies in developed countries (Toronto Stock Exchange -Canada) as a sample. Meanwhile, Zhang (2010) uses total debt/total assets as a proxy for capital structure and the British manufacturing industry as a sample in his research.

d.   The effect of Debt Tax Shield on Capital Structure

On the effect of Debt Tax Shield on capital structure, the results obtained β coefficients of 0,144 with a t-test of 1,985 (*p-value* 0,048), showing that Debt Tax Shield has a significant effect on capital structure, so hypothesis 4 is accepted. This study's results align with the trade-off theory, which states that companies that use more debt will also benefit from higher interest taxes. Empirically this study supports Frank & Goyal (2009) and Rasiah & Kim (2011). They argue that companies will use more debt when the tax rate is higher to take advantage of the benefits of higher interest taxes.

Nevertheless, this study also did not support the research of Frank & Goyal (2009), which can prove that the debt tax shield negatively affected capital structure when using total debt to market assets and total debt to book assets as a proxy for the company's capital structure. Based on the pecking order theory, the company's leverage negatively affects the effective tax rate.

e.   The effect of Business Risk on Capital Structure

The results obtained β coefficients of -0.244 with a t-test of -0.419 (p-value 0.675) on the effect of Business Risk on capital structure, showing that Business Risk had no significant effect on capital structure, so hypothesis 5 was rejected. The results of this study supported the research of Titman & Wessels (1988), which concluded that there was no significant relationship between the two. The results of this study indicated that companies with high business risk did not necessarily prefer internal funding compared to external funding in the form of debt.

In addition, based on the relationship between business risk variables and capital structure, the findings corresponded with the trade-off theory stated by Wahome et al. (2015) that more volatile cash flows could increase the probability of default.

f.   The effect of growth on capital structure

The results obtained β coefficients of 0.047 with a t-test of 2.041 (p-value 0.042) on the effect of growth on capital structure, showing that growth significantly affected capital structure, so hypothesis 6 is accepted.

The results of this study were more in line with the trade-off theory because "…a profitable firm was likely to have more debt as it would want to shield its income from

taxes" (Wahome et al., 2015). Empirically, this study supported the findings of Gupta (1969) that growing companies tended to have high total debt to total assets ratios.

On the other hand, Myers (2001), in his research, states, "...firms with valuable growth opportunities also tend to have low debt ratios" this statement implies that growth was negatively correlated with capital structure. Several other researchers supported this result and found that growth was negatively correlated with capital structure (Barclay & Smith Jr, 1999; Barclay et al., 1995; Long & Malitz, 1985; Smith & Watts, 1992). This difference in results occurs because of the different proxies used to measure growth using investment opportunities and incentives compensation (Smith & Watts, 1992; Barclay et al., 1995; Barclay & Smith Jr., 1999; Long & Malitz, 1985). In addition, the sample companies used are from developed countries, including Canada, France, Japan, Germany, Italy, England, and the US.

g.   The effect of Liquidity on Capital Structure

On the effect of liquidity on capital structure, the results obtained β coefficients of -0.002 with a t-test of -4.343 (p-value 0.000), showing that liquidity has a significant effect on capital structure, so hypothesis seven is accepted.

This result follows the pecking order theory, which holds that companies prefer to use internal funding as a source; if external funding is needed, the company will issue securities first (Myers, 1984). Similarly, the opinion of Kaur & Rao (2009) states, "Firms that are maintaining their liquid resources are not essentially in need of debt or borrowings from outside." Companies with high liquidity have high current assets to finance company activities, so companies with high levels of liquidity tend to use relatively low debt because the company's current assets are able to cover the funds needed by the company.

The results of this study supported the research of most previous researchers, including Alom (2013), Bevan & Danbolt (2002), Friend & Lang (1988), Mazur (2007), Pathak (2010), Rajan & Zingales (1995), Sheikh & Wang (2011), and Titman & Wessels (1988), claiming that liquidity adversely affected capital structure.

The results of this study did not support the findings of Jensen (1986), arguing that "cash-rich firms should acquire new debt to prevent managers from wasting free cash flows, implying a positive relationship for liquidity." In addition, the positive relationship between liquidity and capital structure was supported by several others (Bradley et al., 1984; Kaur & Rao, 2009). The difference between the results of this study and the findings of Jensen (1986), Bradley et al. (1984), and Kaur & Rao (2009) was that the sample companies used in the three

studies were homogeneous. Jensen (1986) used oil companies, Kaur & Rao (2009) used textile companies, while Bradley et al. (1984) differed in that they used financial firms in their sample.

Research Implication

a.   In this study, firm size was proxied on Ln total assets; it can be proven that firm size positively affected the capital structure. The results of this study were relevant to the trade-off theory (Kraus & Litzenberger, 1973), arguing that large companies had a higher capacity to meet interest payments, were more diversified than smaller companies, had higher collateral values, and had a lower risk of bankruptcy. Thereby, the company could take advantage of the size of the company to increase its debt. These results also showed that firm size proxied to Ln total assets was an appropriate explanatory variable to explain changes in the capital structure, especially in the sample companies.

b.   Based on the analysis described previously, firm age appeared to have no significant effect on capital structure. These results indicated that the firm age proxied to the company's age since its listing on the Indonesia Stock Exchange was not an accurate predictor of changes in its capital structure. It is necessary to do further research to find out a suitable proxy for firm Age. For example, using a dummy variable Ahmad & Aris (2015). The dummy variable measured the firm's age. If the company's age is < 8 years = 0, and if the age of the company is eight years = 1, or "firm age as the time between the initial creation of a firm and the present time (in years)" (Kieschnick & Moussawi, 2018).

c.   Profitability negatively affected the capital structure. This result was congruent with the view of the pecking order theory (Myers, 1984; Myers & Majluf, 1984), suggesting a negative relationship between Profitability and Capital Structure and showing that the sample companies in this study prioritized internal funds to fund their investments, which also showed that managers in the sample companies tended to prefer funding with lower risk.

d.   The effect of the debt tax shield on the capital structure positively affected the capital structure. The direction of the relationship between the debt tax shield variable and the capital structure was congruent with the trade-off theory, stating that the company used more debt to obtain higher tax benefits.

e.　　　On the effect of business risk on capital structure, business risk had no significant effect on capital structure. The direction of the variable relationship is in line with the pecking order theory (Myers, 1984; Myers & Majluf, 1984). Companies with high business risk tended to avoid financing using debt compared to companies with lower business risk. Generally, high-risk companies prioritized the use of internal funds rather than the use of debt or the issuance of shares. However, based on the significance level, these results also showed that business risk was not an appropriate predictor of capital structure. In other words, the sample companies did not consider business risk when deciding the capital structure.

f.　　　Growth positively affected the capital structure. This result was equivalent to the Trade-off theory. Companies with high growth tended to have higher total debt. These results also showed that the sample companies used sales growth as one of the primary considerations in determining capital structure choice.

g.　　　Liquidity negatively affected the capital structure. These results aligned with the pecking order theory (Myers & Majluf, 1984; Myers, 1984). Companies with high liquidity had high current assets to finance company activities, so companies with high liquidity levels tended to use relatively low debt. Therefore, the greater the level of liquidity, the smaller the company's capital structure because the company might first use internal funds to cover its financing needs. These results indicated that the sample companies in this study used liquidity as one of the primary considerations in determining capital structure choice.

CONCLUSIONS

The five determinants of capital structure used in this study were firm size, Profitability, debt tax shield, Growth, and Liquidity, which significantly affected capital structure. In contrast, the other two variables: firm Age and business risk, had no significant effect on capital structure.

Limitations of this study include this study observed manufacturing companies listed on the Indonesia Stock Exchange, consisting of various industrial sectors and sub-sectors or heterogeneous. The generalizability might only be applied to the companies. The result of R Square was relatively low, indicating that many other variables outside the model affected the capital structure.

Moreover, it is expected for those willing to delve into the same endeavor to use a sample of more homogeneous companies, for example, companies from the same sub-sector. Thus, the inquiry may invoke higher generalization analysis in these sub-sectors. Furthermore, exploiting theoretical and empirical variables has previously been proven to affect the capital structure, such as tangibility, macroeconomic conditions, etc.

REFERENCES

Abor, J. (2007). Corporate governance and financing decisions of Ghanaian listed firms. *Corporate Governance: The International Journal of Business in Society*, *7*(1), 83–92. https://doi.org/doi:10.1108/14720700710727131

Abor, J. (2008). Agency theoretic determinants of debt levels: evidence from Ghana. *Review of Accounting and Finance*, *7*(2), 183–192. https://doi.org/doi:10.1108/14757700810874146

Adair, P., & Adaskou, M. (2015). Trade-off-theory vs. pecking order theory and the determinants of corporate leverage: Evidence from a panel data analysis upon French SMEs (2002–2010). *Cogent Economics & Finance*, *3*(1), 1006477. https://doi.org/10.1080/23322039.2015.1006477

Ahmad, N., & Aris, Y. (2015). Does Age of the Firm Determine Capital Structure Decision?Evidence from Malaysian Trading and Service Sector. *International Business Management*, *9*, 200–207. https://doi.org/10.3923/ibm.2015.200.207

Al-Ajmi, J. … Al-Saleh, N. (2009). Decisions on capital structure in a Zakat environment with prohibition of riba: The case of Saudi Arabia. *The Journal of Risk Finance*, *10*(5), 460–476.

Alipour, M. … Derakhshan, H. (2015). Determinants of capital structure: an empirical study of firms in Iran. *International Journal of Law and Management*, *57*(1), 53–83. https://doi.org/doi:10.1108/IJLMA-01-2013-0004

Alom, K. (2013). *Capital Structure Choice of Bangladeshi Firms: An Empirical Investigation* (Vol. 5). https://doi.org/10.5296/ajfa.v5i1.3495

Antoniou, A. … Paudyal, K. (2008). The determinants of capital structure: capital market-oriented versus bank-oriented institutions. *Journal of Financial and Quantitative Analysis*, *43*(1), 59–92.

Baker, M., & Wurgler, J. (2002). Market Timing and Capital Structure. *The Journal of Finance*, *57*(1), 1–32. https://doi.org/doi:10.1111/1540-6261.00414

Barclay, M. J., & Smith Jr, C. W. (1999). The capital structure puzzle: another look at the evidence. *Journal of Applied Corporate Finance*, *12*(1), 8–20.

Barclay, M. J. … Watts, R. L. (1995). The determinants of corporate leverage and dividend policies. *Journal of Applied Corporate Finance*, *7*(4), 4–19.

Baxter, N. D. (1967). Leverage, risk of ruin and the cost of capital. *The Journal of Finance*,

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-30 | e0878 | 2023.

22

22(3), 395–403.

Berger, A. N. … Szegö, G. P. (1995). The role of capital in financial institutions. *Journal of Banking & Finance*, *19*(3–4), 393–430.

Berger, P. G. … Yermack, D. L. (1997). Managerial Entrenchment and Capital Structure Decisions. *The Journal of Finance*, *52*(4), 1411–1438. https://doi.org/doi:10.1111/j.1540-6261.1997.tb01115.x

Bevan, A. A., & Danbolt, J. (2002). Capital structure and its determinants in the UK-a decompositional analysis. *Applied Financial Economics*, *12*(3), 159–170.

Bradley, M. … Kim, E. H. (1984). On the existence of an optimal capital structure: Theory and evidence. *The Journal of Finance*, *39*(3), 857–878.

Carleton, W. T., & Silberman, I. H. (1977). Joint determination of rate of return and capital structure: An econometric analysis. *The Journal of Finance*, *32*(3), 811–821.

Cassar, G., & Holmes, S. (2003). Capital structure and financing of SMEs: Australian evidence. *Accounting & Finance*, *43*(2), 123–147.

Castanias, R. (1983). Bankruptcy risk and optimal capital structure. *The Journal of Finance*, *38*(5), 1617–1635.

Chakraborty, I. (2010). Capital structure in an emerging stock market: The case of India. *Research in International Business and Finance*, *24*(3), 295–314. https://doi.org/https://doi.org/10.1016/j.ribaf.2010.02.001

Coleman, S., & Cohn, R. (1999). Small firm use of leverage: A comparison of men and women-owned firms. *Conference Proceedings, United States Association for Small Business and Entrepreneurship, San Diego, January*, 14–17. Citeseer.

Cooley, T. F., & Quadrini, V. (2001). Financial markets and firm dynamics. *American Economic Review*, *91*(5), 1286–1310.

Donaldson, G. (1961). *Corporate debt capacity: A study of corporate debt policy and the determination of corporate debt capacity*. Beard Books.

Donaldson, G. (1963). Financial goals: Management vs. stockholders. *Harvard Business Review*, *41*(3), 116–129.

Eldomiaty, T. I. (2008). Determinants of corporate capital structure: evidence from an emerging economy. *International Journal of Commerce and Management*, *17*(1/2), 25–43. https://doi.org/doi:10.1108/10569210710774730

Fama, E. F., & French, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *The Review of Financial Studies*, *15*(1), 1–33.

Faulkender, M., & Petersen, M. A. (2006). Does the source of capital affect capital structure? *The Review of Financial Studies*, *19*(1), 45–79.

Ferri, M. G., & Jones, W. H. (1979). Determinants of Financial Structure: A New

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-30 | e0878 | 2023.

23

Methodological Approach. *The Journal of Finance*, *34*(3), 631–644. https://doi.org/10.2307/2327431

Filatotchev, I. … Wright, M. (2006). The firm's strategic dynamics and corporate governance life-cycle. *International Journal of Managerial Finance*, *2*(4), 256–279.

Flath, D., & Knoeber, C. R. (1980). Taxes, failure costs, and optimal industry capital structure: An empirical test. *The Journal of Finance*, *35*(1), 99–117.

Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: which factors are reliably important? *Financial Management*, *38*(1), 1–37.

Friend, I., & Lang, L. H. P. (1988). An Empirical Test of the Impact of Managerial Self-Interest on Corporate Capital Structure. *The Journal of Finance*, *43*(2), 271–281. https://doi.org/10.2307/2328459

Gupta, M. C. (1969). The effect of size, growth, and industry on the financial structure of manufacturing companies. *The Journal of Finance*, *24*(3), 517–529.

Hameedi, K. S. … Almagtome, Akeel Hamza. (2022). *IFRS ADOPTION , COST OF EQUITY AND FIRM VALUE : EVIDENCE FROM IRAQ ABSTRACT Article history : Received 30 Dezember 2021 The present accounting internationalization has grown by integrating international accounting standards into the accounting standards o*. 1–14.

Hedau, A. (2021). Determinants of Capital Structure of Listed Construction and Infrastructure Companies in Determinants of Capital Structure of Listed Construction and Infrastructure Companies in India-A Hierarchical Modeling Approach. *Turkish Online Journal of Qualitative Inquiry (TOJQI)*, *12*(7), 680–689.

Hoang, D. H. (2023). EFFECT OF CAPITAL STRUCTURE ON THE PROFITABILITY OF PLASTIC AND Article history : Keywords : Capital Structure ; Profitability ; Operational Efficiency ; The portion of each capital source in the enterprise ' s overall capital source , or the mixture of d. *International Journal of Professional Business Review*, 1–13.

Jayant, R. K. … Gabriel, G. R. (1991). The Effect of Business Risk on Corporate Capital Structure: Theory and Evidence. *The Journal of Finance*, *46*(5), 1693–1715. https://doi.org/10.2307/2328569

Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review*, *76*(2), 323–329. Retrieved from http://www.jstor.org/stable/1818789

Johnson, W. C. … Yi, S. (2017). *The lifecycle effects of firm takeover defenses*.

Kaur, R., & Rao, N. K. (2009). Determinants of Capital Structure: Experience of Indian Cotton Textile Industry. *Vilakshan: The XIMB Journal of Management*, *6*(2).

Kieschnick, R., & Moussawi, R. (2018). Firm age, corporate governance, and capital structure choices. *Journal of Corporate Finance*, *48*, 597–614. https://doi.org/https://doi.org/10.1016/j.jcorpfin.2017.12.011

Kim, W. S., & Sorensen, E. H. (1986). Evidence on the Impact of the Agency Costs of Debt on

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-30 | e0878 | 2023.

24

Corporate Debt Policy. *The Journal of Financial and Quantitative Analysis*, *21*(2), 131–144. https://doi.org/10.2307/2330733

Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The Journal of Finance*, *28*(4), 911–922.

Kumar, S. … Rao, P. (2017). Research on capital structure determinants: a review and future directions. *International Journal of Managerial Finance*, *13*(2), 106–132.

Leland, H. E. (1994). Corporate Debt Value, Bond Covenants, and Optimal Capital Structure. *The Journal of Finance*, *49*(4), 1213–1252. https://doi.org/10.1111/j.1540-6261.1994.tb02452.x

Lewellen, K. (2006). Financing decisions when managers are risk averse. *Journal of Financial Economics*, *82*(3), 551–589. https://doi.org/https://doi.org/10.1016/j.jfineco.2005.06.009

Long, M. S., & Malitz, I. B. (1985). Investment patterns and financial leverage. In *Corporate capital structures in the United States* (pp. 325–352). University of Chicago Press.

Lourenço, A. J. dos S. M., & Oliveira, E. C. (2017). Determinants of debt: Empirical evidence on firms in the district of Santarém in Portugal. *Contaduría y Administración*, *62*(2), 625–643. https://doi.org/https://doi.org/10.1016/j.cya.2016.06.010

Malenya, A. … Mukanzi, D. C. (2017). Influence of Tax Shield on Capital Structure of Private Manufacturing Firms in Kenya. *IOSR Journal of Economics and Finance*, *08*(03), 47–53. https://doi.org/10.9790/5933-0803044753

Marsh, P. (1982). The choice between equity and debt: An empirical study. *The Journal of Finance*, *37*(1), 121–144.

Mazur, K. (2007). The determinants of capital structure choice: evidence from Polish companies. *International Advances in Economic Research*, *13*(4), 495–514.

Minh Tien, C. (2023). THE RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND PERFORMANCE OF SECURITIES BROKERAGE FIRMS – A CASE STUDY IN VIETNAM Article history : Keywords : Capital Structure ; Performance ; Securities Companies ; The Relationship Between Capital Structure and Perform. *International Journal of Professional Business Review*, 1–15.

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, *48*(3), 261–297.

Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction. *The American Economic Review*, 433–443.

Mohsin, A. (2016). *Capital Structure Determinants-Capital structure determinants for large listed Norwegian and foreign public firms*. Oslo and Akershus University College of Applied Sciences.

Morellec, E. (2004). Can managerial discretion explain observed leverage ratios? *The Review of Financial Studies*, *17*(1), 257–294.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-30 | e0878 | 2023.

25

Myers, & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, *13*(2), 187–221.

Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, *5*(2), 147–175.

Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, *39*(3), 574–592. https://doi.org/10.1111/j.1540-6261.1984.tb03646.x

Myers, S. C. (2001). Capital structure. *Journal of Economic Perspectives*, *15*(2), 81–102.

Nunkoo, P. K., & Boateng, A. (2010). The empirical determinants of target capital structure and adjustment to long-run target: evidence from Canadian firms. *Applied Economics Letters*, *17*(10), 983–990.

Oino, I., & Ukaegbu, B. (2015). The impact of profitability on capital structure and speed of adjustment: An empirical examination of selected firms in Nigerian Stock Exchange. *Research in International Business and Finance*, *35*, 111–121. https://doi.org/https://doi.org/10.1016/j.ribaf.2015.03.004

Onofrei, M. … Anton, S. (2015). *Determinant Factors of Firm Leverage: An Empirical Analysis at Iasi County Level* (Vol. 20). https://doi.org/10.1016/S2212-5671(15)00097-0

Ooi, J. T. L. (2000). Managerial opportunism and the capital structure decisions of property companies. *Journal of Property Investment & Finance*, *18*(3), 316–331. https://doi.org/doi:10.1108/14635780010338317

Pandey, I. M. (2004). *Capital Structure and MarketPower*.

Pathak, J. (2010). *What Determines Capital structure of listed firms in India?: Some empirical evidences from the Indian capital market*.

Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The Journal of Finance*, *50*(5), 1421–1460.

Rasiah, D., & Kim, P. K. (2011). A theoretical review on the use of the static trade off theory, the pecking order theory and the agency cost theory of capital structure. *International Research Journal of Finance and Economics*, *63*, 150–159.

Riportella, C. C., & Papis, L. C. (2001). *New approaches to the analysis of the capital structure of SME's: empirical evidence from Spanish firms*.

Roden, D. M., & Lewellen, W. G. (1995). Corporate Capital Structure Decisions: Evidence from Leveraged Buyouts. *Financial Management*, *24*(2), 76–87. https://doi.org/10.2307/3665536

Schoubben, F., & Van Hulle, C. (2004). The Determinants of Leverage: Differences between Quoted and Unquoted Firms. *Tijdschrift Voor Economie En Management*, *49*(4), 589–622.

Schwartz, E., & Van Tassel, R. C. (1950). Some suggested changes in the corporate tax structure. *The Journal of Finance*, *5*(4), 410–420.

Scott Jr, J. H. (1976). A theory of optimal capital structure. *The Bell Journal of Economics*, 33–54.

Sheikh, N. A., & Wang, Z. (2011). Determinants of capital structure: An empirical study of firms in manufacturing industry of Pakistan. *Managerial Finance*, *37*(2), 117–133. https://doi.org/doi:10.1108/03074351111103668

Sibindi, A. (2016). *Determinants of capital structure: A literature review* (Vol. 6). https://doi.org/10.22495/rcgv6i4c1art13

Smith, C. W., & Watts, R. L. (1992). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Financial Economics*, *32*(3), 263–292. https://doi.org/http://dx.doi.org/10.1016/0304-405X(92)90029-W

Sofat, R., & Singh, S. (2017). Determinants of capital structure: an empirical study of manufacturing firms in India. *International Journal of Law and Management*, *59*(6), 1029–1045. https://doi.org/doi:10.1108/IJLMA-05-2016-0051

Sogorb-Mira, F. (2005). How SME uniqueness affects capital structure: Evidence from a 1994–1998 Spanish data panel. *Small Business Economics*, *25*(5), 447–457.

Taub, A. J. (1975). Determinants of the Firm's Capital Structure. *The Review of Economics and Statistics*, *57*(4), 410–416. https://doi.org/10.2307/1935900

Thies, C. F., & Klock, M. S. (1992). *Determinants of Capital Structure*. 40–52. https://doi.org/10.1002/j.1873-5924.1992.tb00548.x

Titman, S., & Wessels, R. (1988). The Determinants of Capital Structure Choice. *The Journal of Finance*, *43*(1), 1–19. https://doi.org/10.2307/2328319

Toy, N. … Beekhuisen, T. (1974). A comparative international study of growth, profitability, and risk as determinants of corporate debt ratios in the manufacturing sector. *Journal of Financial and Quantitative Analysis*, *9*(5), 875–886.

Van Caneghem, T., & Van Campenhout, G. (2012). Quantity and quality of information and SME financial structure. *Small Business Economics*, *39*(2), 341–358.

Viriya, H., & Suryaningsih, R. (2017). *Determinant of Debt Policy: Empirical Evidence from Indonesia*.

Viviani, J. (2008). Capital structure determinants: an empirical study of French companies in the wine industry. *International Journal of Wine Business Research*, *20*(2), 171–194. https://doi.org/doi:10.1108/17511060810883786

Wahome, M. N. … Muturi, D. W. (2015). *The effects of firm size and risk on Capital Structure decisions of Insurance Industry in Kenya*.

Wald, J. K. (1999). How firm characteristics affect capital structure: an international comparison. *Journal of Financial Research*, *22*(2), 161–187.

Wrightsman, D. (1978). American Finance Association Tax Shield Valuation and the Capital Structure Decision Author (s): Dwayne Wrightsman Source : The Journal of Finance , Vol .

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 5 | p. 01-30 | e0878 | 2023.

27

33 , No . 2 (May , 1978), pp . 650-656 Published by : Wiley for the American Finance Association. *The Journal of Finance*, *33*(2), 650–656.

Xu, J. (2012). Profitability and capital structure: Evidence from import penetration. *Journal of Financial Economics*, *106*(2), 427–446. https://doi.org/https://doi.org/10.1016/j.jfineco.2012.05.015

Yang, C.-C. … Lee, Y.-W. (2010). Co-determination of capital structure and stock returns—A LISREL approach: An empirical test of Taiwan stock markets. *The Quarterly Review of Economics and Finance*, *50*(2), 222–233. https://doi.org/https://doi.org/10.1016/j.qref.2009.12.001

Zhang, Y. (2010). The product category effects on capital structure: evidence from the SMEs of British manufacturing industry. *International Journal of Business and Management*, *5*(8), 86.

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APPENDICES

Appendix 1 Descriptive Statistics

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
FS	618	25,6	33,3	28,465	1,6074
FA	618	1	40	20,27	8,136
PROF	618	-29,9090	65,7201	5,356751	9,3897482
DTS	618	-767,6871	455,2025	19,832971	70,8204647
BR	618	17,7689	30,5646	24,354606	1,9513850
SG	618	-80,1039	594,7309	7,056647	34,3234118
LIQ	618	33,7204	46498,4417	339,416742	2114,3251973
CS	618	,0397	98,8488	44,785620	20,9418543
GCG	618	,612	,900	,78087	,056118
FV	618	,0001	299,2324	3,259217	13,8824321
Valid N (listwise)	618				

APPENDIX 2 REGRESSION RESULT

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	LIQ, DTS, SG, BR, FA, PROF, FS[b]	.	Enter

a. Dependent Variable: CS
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,375[a]	,141	,131	19,5238740

a. Predictors: (Constant), LIQ, DTS, SG, BR, FA, PROF, FS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38071,489	7	5438,784	14,268	,000[b]
	Residual	232520,810	610	381,182		
	Total	270592,299	617			

a. Dependent Variable: CS
b. Predictors: (Constant), LIQ, DTS, SG, BR, FA, PROF, FS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,788	14,131		-,056	,956
	FS	1,668	,714	,128	2,338	,020
	FA	,136	,102	,053	1,335	,182

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	PROF	-,746	,089	-,335	-8,429	,000
	DTS	,018	,011	,059	1,575	,116
	BR	-,035	,595	-,003	-,058	,954
	SG	,051	,023	,084	2,227	,026
	LIQ	-,002	,000	-,162	-4,296	,000

a. Dependent Variable: CS