Jurnal Economia, Vol. 21, No.2, June 2025, 220-237 P-ISSN: 1858-2648
Website: https://journal.uny.ac.id/index.php/economia E-ISSN: 2460-1152

Analysis of Capital Structure Theory on Companies Funding Decisions

Kadek Saptaria Wagisuwari[1*], Palti Marulitua Sitorus[2]
[12]Master of Management, Telkom University, Indonesia
[1]kadeksaptaria@student.telkomuniversity.ac.id, [2]paltisitorus@telkomuniversity.ac.id
*Corresponding Author

Abstract
This study aims to identify variables that should be considered and also figuring the most relevant capital structure theory on funding decisions of property and real estate companies listed on the Indonesia Stock Exchange. This study is descriptive quantitative using a purposive sampling method, and 65 observation data were gathered through panel data regression analysis. This study carries out six perspectives divided into three popular theories. Each perspective was chosen because of its ability to explain the characteristics of each theory. Compared to other resemblant studies, this study provides a novel look at a company's characteristics in choosing its capital structure. The results of the trade-off theory show that all variables have a positive impact. In the pecking order theory, the financial deficit has a positive effect as a proportion of independent commissioners on agency theory, while the growth opportunity variable is considered to have a negative effect.

Keywords: Agency Theory, Capital Structure, Pecking Order Theory, Trade-Off Theory

Analisis Teori Struktur Modal Terhadap Keputusan Pendanaan Perusahaan

Abstrak
Penelitian ini bertujuan untuk mengidentifikasi variabel-variabel yang perlu dipertimbangkan dan juga mencari tahu teori struktur modal yang paling relevan terhadap keputusan pendanaan perusahaan properti dan real estate yang terdaftar di Bursa Efek Indonesia. Penelitian ini bersifat deskriptif kuantitatif dengan menggunakan metode purposive sampling, dan 65 data observasi dikumpulkan melalui analisis regresi data panel. Penelitian ini melakukan enam perspektif yang dibagi menjadi tiga teori populer. Setiap perspektif dipilih karena kemampuannya untuk menjelaskan karakteristik masing-masing teori. Dibandingkan dengan penelitian serupa lainnya, penelitian ini memberikan pandangan baru tentang karakteristik perusahaan dalam memilih struktur modalnya. Hasil teori trade-off menunjukkan bahwa semua variabel memiliki dampak positif. Dalam teori pecking order, defisit keuangan memiliki efek positif sebagai proporsi komisaris independen pada teori keagenan, sedangkan variabel peluang pertumbuhan dianggap memiliki efek negatif.

Kata Kunci: Teori Agensi, Struktur Modal, Teori Urutan Kekuasaan, Teori Trade-Off

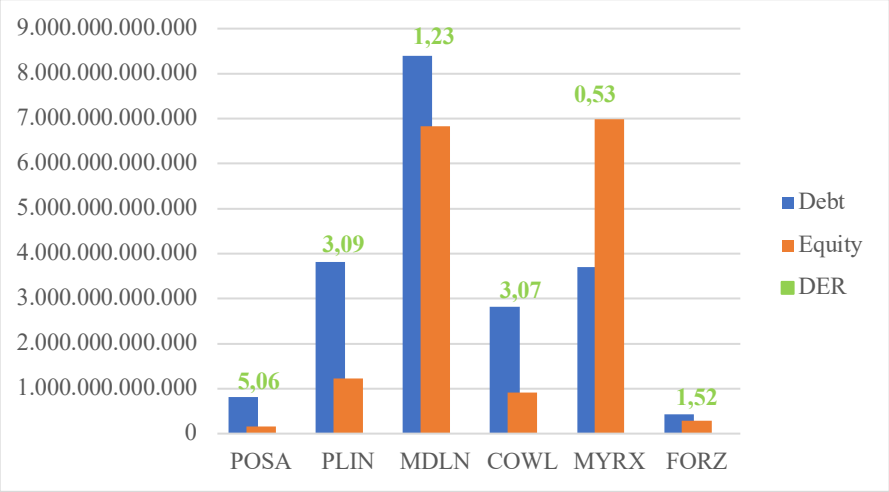
History: Received: 29 October 2023 Revised: 27 May 2024 Accepted: 13 March 2025
Citation (APA 6th): Wagisuwari, K.S & Sitorus, P.M. (2025). Analysis of Capital Structure Theory on a Company's Funding Decisions. *Jurnal Economia,* 21 (2), 220-237. https://doi.org/10.21831/economia.v21i2.67029

INTRODUCTION

Indonesia stock exchange functioning as an Indonesian official capital market is used by companies registered in it to obtain capital from the public who act as investors. Based on publicly available data from the Indonesia Stock Exchange (IDX) as of February 2023, the property and real estate sector included 85 listed entities, subject to the inherent limitations of stock exchange data. Based on the real estate sector's GDP value and growth, the GDP

value of this sector has increased since 2010-2021 but is still experiencing fluctuations in the growth of its GDP contribution when compared to the national GDP. Now the property industry continues to grow and has become one of the pillar sectors for the national economy. This sector contributes to the multiplier effect both in terms of forward-linkage and backward-linkage for other supporting industrial sub-sectors such as the financial sector, as well as absorbing labor significantly (Santia, 2022).

Liquidity and the tendency of property prices to increase every year are the main attractions for the community. Various incentives were also provided by the government to support the enthusiasm of the community in owning private property units. Under these conditions, at first glance, the property industry may appear to be fine, but in fact, the opposite happens in property companies listed on the stock exchange. Several property companies have experienced suspension and delisting from the stock exchange. Stock exchanges have the authority to suspend and delist issuers under certain conditions. In connection with the purpose of the company registering the company on the stock exchange to obtain capital (Cahyani & Suhadak, 2017), but in the end, the company failed and was unable to fulfill its obligations under the provisions of the stock exchange. This anomaly also shows the company's failure to maintain sustainability. These are several analyses of companies that have experienced suspension and delisting on the IDX.



Figures 1. Debt to Equity Ratio for the Year 2018

Figure 1. shows a comparison of the debt and equity ratio of property and real estate companies. The comparison of this portion is measured by DER which can show the obligations that can be fulfilled by the company's capital (Sari et al., 2020). Figure 1. shows that they have a high DER value, especially POSA and PLIN. Kuntari & Machmuddah (2021) mentioned that a good company has a low DER value. This statement is then supported by Kusmawati & Ovalianti (2022) which states that a good DER is below 1 so that DER score above 2 will be indicated to be very high (Bhama et al., 2019). This is because a higher DER means that a company uses more debt to fulfill its obligation or funding rather than other sources of funding. So, when the company is facing financial difficulty in the future, it will be more difficult for the company to make the payment of due debt and this poses a detrimental impact on the firm's long-term sustainability.

The industry of property and real estate business requires a strong image and consumer trust. One of the cases that is still being discussed is the Meikarta project made by PT Lippo Cikarang Tbk. (LPCK) where the project has stalled due to licensing problems, bankrupt defendants, and corruption. The Meikarta case also has a deterrent effect and creates a trust issue in society. The community then expects the property company to have good sustainability to avoid stalled project cases. To maintain sustainability, the company's decision in determining the source of funding is very strategic and needs to be considered carefully, especially in the long-term funding of the company. As a company strategic decision, capital structure is a mixed ratio of funds originating from internal (equity) and external (debt) funds. The consequence that must be accepted by the company if using debt is that the company must comply with the debt agreement. If the company uses a source of funds in the form of issuing shares, compensation that must be provided for shareholders is dividends.

This study then aims to identify what variables need to be considered by companies in determining the structure of funding sources through three popular theoretical models. By identifying these three theories, it is expected to discover the most relevant theories to be applied by companies in the property and real estate sectors in Indonesia as well as the determining factors for funding decisions. Through an appropriate funding decision, the company would be able to maintain the company's sustainability and reputation better. To find the answer to the phenomenon, here is the research question that is proposed in this study:

RQ: Is there any influence given by the capital structure theory in determining the capital structure of property and real estate companies listed on the IDX for the 2017-2021 period?

A few studies have been conducted in analyzing the capital structure theory approaches in determining the mix of funding sources as has been done by (Agyei et al., 2020) and (Sumani et al., 2020). Research by Agyei et al. (2020) and Sumani et al. (2020) was carried out in the 2008-2018 period, so that with the research period within the 2017-2021 period in this study will provide a recent view. When compared to the trade-off theory model by Sumani et al. (2020), this study adds a new perspective of firm age to identify the existence of privileges owned by old companies in optimizing the capital structure according to the proposition of the trade-off theory. The pecking order theory model in this study also adds a financial deficit perspective that was not investigated by Agyei et al. (2020) and Sumani et al. (2020). That perspective is added in this study as the conservative nature of the pecking order theory on using external funding. In addition, this research reviewed growth opportunities from an agency theory perspective to find the effect of growth opportunity on other capital structure theories after Agyei et al. (2020) tested it on trade-off theory and pecking order theory.

The trade-off theory explains that debt is beneficial because debt interest can be charged in calculating taxes and decreasing tax payments. Ariyanto (2018) in his research mentions that the debt tax shield can be an encouragement for the company to take more loans, because the tax burden will be reduced when debt interest is charged to profit and loss. When the tax burden is smaller, a bigger amount of resources can be allocated to the

capital structure. If a company makes good use of the debt tax shield and has a high value of it, the company's capital structure will increase. As Susilawaty (2021) mentions debt financing will give a company more opportunity to expand the business. Expansion can be done faster even when a company doesn't have sufficient capital by taking external funding sources. A company will take more debt compared to other funding methods hence the tax protection provided by this debt tax shield facility. The results of research by Yunira (2022) and Eze & Uzochukwu (2020) found that the higher the company's debt, the higher the level of tax shield benefit will be utilized by the company, so in this study the author suspects that there is a positive influence given by debt tax shield to capital structure.

H_1: Debt tax shield has a positive effect on capital structure.

The age of the company is calculated from the time the company was first established and if a company can be grouped based on age into old and young companies, then using the trade-off theory approach, the determination of capital structure by these companies will be different. Agyei et al. (2020) mention that a company that can survive for a long time (old) will have more experience thus giving it a better image. They also know better what information is needed and important for the business (Fransisca & Dermawan, 2022). A company's good image can give creditors more conviction that the company as a debtor can survive and fulfill its debt obligations (Anwar et al., 2022). The longer a company operates, the stronger the company's reputation can be considered by the creditors. Loans provided by creditors can be used by companies to fund investments and other operational activities so that they will increase the company's debt ratio. Research results by Almanaseer (2019) and Khémiri & Noubbigh (2018) found that older firms use more debt rather than younger, so based on the elaboration in this study the author suspects that there is a positive influence given by firms' age to capital structure.

H_2: Firm age has a positive effect on capital structure.

The pecking order theory model explains that of the three main determinants, only one factor influences the issuance of long-term debt, namely the internal financial deficit (Febriana & Yulianto, 2017). Financial deficit refers to the cash position resulting from operational activities that are no longer sufficient to fund the company's activities in the future (Africa & Sunani, 2017). Radjamin & Sudana (2014) mention that based on this theory firms tend to choose a source of funds with less risk and lower cost. When the company's cash is insufficient to finance future activities, the company must use external funding sources. If all internal funding sources are used, but the company is still lacking funds, then the company must issue debt. The greater the deficits experienced by the company, the greater the additional debt will be made by the company. On Rathnasingha & Heiyanthuduwa (2019) research mentions that in Sri Lanka, profitable companies tend to have lower debt ratios since they are maximizing their retained earnings. These findings strengthen the author's hypotheses on the positive effect of a financial deficit on capital structure, similar to the results from Ahmad & Pongoliu (2021) and Serrasqueiro et al. (2016).

H_3: Financial deficit has a positive effect on capital structure.

Business risk is the risk of uncertainty faced by a company from its business activities (Jalil, 2018). Business risk affects the sustainability of the company, such as the ability to pay its debts and obtain funds for its operational activities. According to Lianto et al. (2020) high-risk companies must have lesser debt rather than low-risk companies. Companies with a high level of risk are more fragile and riskier in maintaining the sustainability of the company. Adding debt on funding for companies that already have high business risks will only exacerbate conditions such as demand for agency costs and financial distress (Meilani & Wahyudin, 2021). As the business risk that is faced by the company is increasing, the debt value on capital structure should decrease. This condition is related to the conservative nature of the pecking order theory, hence why companies that have high business risks are certainly not advised to use debt as a source of funding. Triherawati & Nusraningrum (2021) and Lianto et al. (2020) found that industrial sector managers are still considering business while deciding the capital structure. When a company faces uncertainty, managers will reduce the level of debt from the capital structure so the author suspects there is a negative effect given by business risk to capital structure.

H_4: Business risk has a negative effect on capital structure.

Agency theory is a theory that explains the reciprocal relationship between agents and principals. Concerning agency theory as a determiner theory of capital structure, growth opportunity reflects the opportunity for future growth of company assets and how principals and agents respond to this. In this study growth will be seen from assets growth year on year. A high company growth rate can provide positive feedback for stakeholders. A business that grows positively will give managers optimistic feelings about expanding the business (Salam & Sunarto, 2022). Other than that, Sunaryo (2019) mentions that it will be easier for a company that has positive growth to get external funding because of the conviction given by the creditor. External funding carried out by the company will result in responsibilities that must be filled by the company in the future, such as interest and dividend expenses. According to Onofrei et al. (2015) debt owned by the company can be a "guard" against opportunistic managerial actions that trigger conflicts of interest. When a company has low net cash flow, it will reduce the opportunistic action of managers. As the agency theory is correlated with asymmetry information, Rathnasingha & Heiyanthuduwa (2019) mention that equity financing is less preferred because when the equity is raised by a manager who has better knowledge, investors tend to believe that the company is overvalued and managers are trying to get advantage of it. So the author suspects that according to agency theory, growth opportunities will have a positive effect on capital structure similar to the findings from Michalkova et al. (2021).

H_5: Growth opportunity has a positive effect on capital structure.

Good corporate governance (GCG) is a controlling mechanism used to ensure the sustainability of the company. To ensure the mechanism is implemented well, company managers need to have an independent board of commissioners who are competent and expected to be able to manage resources better through a broader and independent perspective (Suri et al., 2020). Gustyana & Hanari (2022) also mention that the presence of independent commissioners can make the decision-making system more open and clearer.

When referring to agency theory, an independent board of commissioners can minimize agency conflicts and provide an independent view on making funding decisions. Setiawan & Kusumawati (Setiawan & Kusumawati, 2020) mention that independent commissioners can limit the implementation of managerial policies that exploit the wealth of minority shareholders. Independent commissioners also balance the board of commissioners so insiders wouldn't be able to take any advantage of their position. Based on the elaboration before, the author suspects that there is an ability of independent commissioners to minimize agency problems through funding decisions similar to what was found by (Ajijah et al., 2019).

H_6: Independent board of commissioners has a positive effect on capital structure.

METHOD

Based on its purpose and method, this is descriptive quantitative research to identify the capital structure phenomenon in a company group of property and real estate in Indonesia. Data and phenomena are collected and combined with a literature review to make the research hypotheses. The visualization of the research plan can be seen in Figure 2.

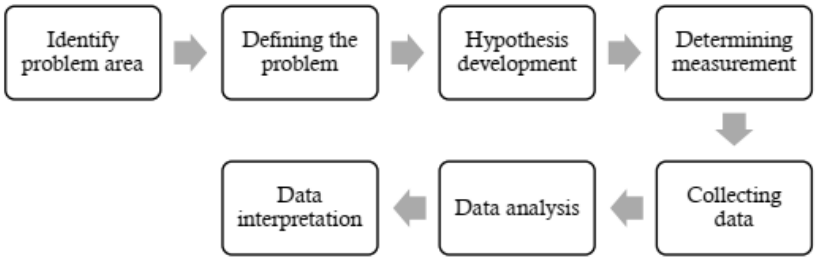
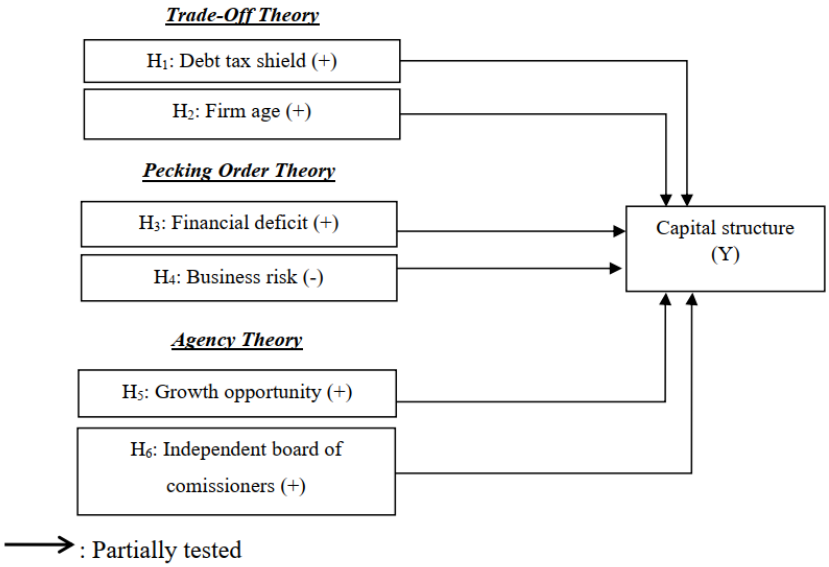


Figure 2. Research Plan

Based on the research plans, the following is a visualization of the research framework for this research model:



Figures 3. Research Design

The data population is a group of companies listed in the property and real estate sector on the IDX in the 2017-2021 period. There are 85 listed companies where the sample was selected using a non-probability sampling method with purposive sampling. Companies that pass the sampling will be tested into three models for three capital structure theories. Research data were arranged in such a way that it can point out how companies are operated as what they expected when listed on IDX, so loss companies will be excluded because it indicates that the company wasn't operating normally as expected in the beginning. There are several sample selection criteria used in this study based on research by Purnasari et al. (2020), Simatupang et al. (2019), Zamri et al. (2016).

Table 1. *Sampling Criteria*

No	Sample Selection Criteria	Amount
1	Property and real estate sector companies listed on the Indonesia Stock Exchange	85
2	Inconsistent/non-listed property and real estate sector companies on the Indonesia Stock Exchange for the 2017-2021 period	(36)
3	Property and real estate sector companies that do not publish audited annual financial reports consistently during the 2017-2021 period	(3)
4	Property and real estate sector companies that experienced losses during the 2017-2021 period	(32)
5	Property and real estate sector companies that do not disclose data for research during the 2017-2021 period	(1)
	Number of research samples	13
	Research Year	5
	Total Research Sample	65

The strategy used in collecting data is an archive strategy that utilizes primary data and secondary data as a source of research data. The type of data used in this study is secondary data. All financial data used in data analysis were obtained from audited financial reports during the study period which were uploaded on the company's official website. In addition, information and supporting theories in this study were obtained from books, research journals, and articles related to capital structure and financial management.

In this study capital structure is defined as a dependent variable while the independent variables for the trade-off theory model are the debt tax shield and firm age, while for the pecking order theory are financial deficits and business risk, and for the agency theory are growth opportunity and independence board of commissioners. The following is an operational variable that explains the definitions and indicators of each variable.

Table 2. *Operational Definition of Variables*

Variable	Definition	Indicator	Scale
Capital structure (Y)	The ratio of funding sources based on short-term debt, long-term debt and owned capital used to fulfill the company's spending needs (Megawati et al., 2021).	$DER = \frac{Total\ Debt}{Total\ Equity}\ x\ 100\%$	Ratio
Trade-off theory (TOT):			
Debt tax shield (X_1)	A debt tax shield can be interpreted as tax protection through debt (Yunira, 2022).	$Debt\ Tax\ Shield = \frac{Interest\ Expense}{EBIT}$	Ratio
Firm age (X_2)	The age of the company has been calculated since the company was first established (Agyei et al., 2020).	$Firm\ age = Ln\ (Observation\ year - Founded\ year)$	Ratio
Pecking order theory (POT):			
Financial defisit (X_1)	A condition in which the company experiences a deficit so that the company's cash is unable to fund the company's activities in the future (Africa & Sunani, 2017).	$Financial\ deficit = \frac{(Div + Inv + WC - OCF)}{Total\ asset}$	Ratio
Business risk (X_2)	Risk is in the form of uncertainty about future business conditions (Jalil, 2018).	$BEPR = \frac{EBIT}{Total\ asset}$	Ratio
Agency theory (AT):			
Growth opportunity (X_1)	The opportunity the company must develop and invest in the future (Lestari, 2015).	$Growth = \frac{Asset_{\ t} - asset_{\ t-1}}{asset_{\ t-1}}$	Ratio
Independent board of commissioner (X_2)	A board of commissioners has no relationship with company stakeholders, both internally and externally (Wati et al., 2019).	$IBC = \frac{Independence\ board\ of\ con}{Total\ of\ board\ of\ comis.}$	Ratio

The analysis model used in this study adopts the model used in research by Sumani et al. (2020) wherein each structural theory model is tested, and panel data regression analysis is carried out separately. Out of 85 companies only 13 companies passed the sampling and then tested for the outlier. An outlier is an observation that lies an abnormal distance from

other values in a random sample from a population. The test begins with a descriptive statistical test to determine the characteristics of the observed data and continues with a regression feasibility test with the classical assumption test. The model that has been selected and is feasible is then followed by hypothesis testing.

$$Y_n = \alpha + \beta_1 X_1 it + \beta_2 X_2 it + e$$

Description:

Y_n : Capital structure for equation model-n
α : Constant
β_n : Regression Coefficient of variable X_n
e : Error term
t : Time
i : Company

Model 1: (TOT)	Model 2: (POT)	Model 3: (AT)
X_1 : Debt tax shield	X_1 : Financial deficit	X_1 : Growth opportunity
X_2 : Firm age	X_2 : Business risk	X_2 : Independence board of commissioners

FINDING AND DISCUSSION

The initial stage of testing the data is to perform an outlier test. Model 1 (TOT) and model 3 (AT) were found to have no outliers while there were five outliers for model 2 (POT) therefore the sample for model 2 (POT) decreased to 60 data. After that, the data is tested using a descriptive statistical test.

Table 3. *Statistics Descriptive Results*

Model	Variable	N	Means	Std. Dev	Maximum	Minimum
Model 1 (TOT)	Y_DER	65	0.7621	0.6665	3.6878	0.0857
	X_1_DTS	65	0.3541	0.4945	3.3865	0.0001
	X_2_AGE	65	3.4241	0.5151	3.8268	1.3863
Model 2 (POT)	Y_DER	60	0.6893	0.4848	2.1975	0.0857
	X_1_DEF	60	0.0435	0.1263	0.4833	-0.1762
	X_2_RISK	60	0.0543	0.0363	0.1440	0.0002
Model 3 (AT)	Y_DER	65	0.7621	0.6665	3.6878	0.0857
	X_1_GROW	65	0.0778	0.0817	0.4230	-0.0794
	X_2_IBC	65	0.3788	0.1414	0.6667	0.0183

Based on Table 3, the average value of the DER for Model 1 is 0.7621, model 2 is 0.6893, and Model 3 is 0.7621 respectively which indicates that during the study period, most of the sample data had a debt portion of more than 50% on their capital structure. The greater the score of the DER means the greater the debt owned by the company. During the study period, the average value of the debt tax shield was 0.3541 with a value range of 0.0001 to 3.3865. Another perspective in model 1 is that the age of the company has an average of 3.4241 with a value range of 1.3863 to 3.8268. Testing the pecking order theory in model 2 consists of a financial deficit and business risk perspective. The financial deficit for five years of research has an average value of 0.0435 with a value range of -0.1762 to 0.4833 and business risk has an average value of 0.0543. For model 3, agency theory is viewed by growth opportunity and independence board of commissioners. The growth opportunity for five years of research has an average value of 0.0778 with a value range between -0.0794 to 0.4230.

After three-step tests of the Chow test, Hausman test, and Lagrange multiplier test it was found that the regression model that is suitable for models 1 (TOT) and 3 (AT) is the fixed effect model (FEM) whereas the random effect model for model (REM) 2 (POT). In the CEM and FEM models, the approach used is OLS so that only multicollinearity and heteroscedasticity tests are needed (Iqbal, 2015). Gujarati (2004) in Setyawan et al. (2019) explain that the GLS approach in the REM model has estimated heterogeneity in an independent variable so that this model is able to produce estimators that meet the BLUE criteria. This study has met the feasibility of regression through two stages of the classical assumption test. The multicollinearity test was carried out by pairwise correlation while the white test was used as a heteroscedasticity test.

Table 4. *Classic Assumption Test Result*

Model	**Multicollinearity Test**	**Heteroskedasticity Test**
	Coefficient < 0.85	**Probs > 5%**
Model 1 (TOT)	Yes	0.7633
Model 2 (POT)	Yes	0.1125
Model 3 (AT)	Yes	0.2143

In contrast to the usual quantitative study using regression analysis, the effect of the independent variables in this study was only tested partially, without simultaneously testing (Test F). This is to avoid the possibility of data autocorrelation symptoms.

Through the regression model that has been selected, the findings are shown in Table 5. Starting from model 1, the probability value for the debt tax shield is 0.0000 which is less than the 5% significance level with a positive coefficient. These results indicate that the debt tax shield is considered to have a significant positive effect on capital structure. The age of the company has a probability value of 0.0000 and less than the 5% significance level with

a positive coefficient. A lower probability value means that the age of the company is considered to have a positive and significant effect on capital structure.

Table 5. *Coefficient t-Test Result*

Model	Variable	coefficient	std. Error	t-Statistics	Prob.
Model 1 (TOT)	C	-4.505092	0.950547	-4.739471	0.0000
	X_1_DTS	0.276511	0.058407	4.734234	0.0000
	X_2_AGE	1.509690	0.281022	5.372134	0.0000
Model 2 (POT)	C	0.639597	0.149889	4.267143	0.0001
	X_1_DEF	1.946621	0.606121	3.211606	0.0022
	X_2_RISK	-0.333677	1.584783	-0.210551	0.8340
Model 3 (AT)	C	0.249485	0.212508	1.174004	0.2460
	X_1_GROW	-1.440543	0.442700	-3.253997	0.0020
	X_2_IBC	1.534657	0.497382	3.085468	0.0033

In model 2, the probability value for financial deficits is 0.0022 which is less than the 5% significance level with a positive coefficient. These results indicate that the financial deficit is considered to have a positive and significant effect on capital structure. The probability value of the business risk variable is 0.8340 which is higher than 5% with a positive coefficient. A higher value of probability means that there is no significant effect given by business risk on capital structure.

In model 3, growth opportunity has a probability value of 0.0020 and it is less than the 5% significance level with a negative coefficient. These results indicate that the company's capital structure is affected negatively by growth opportunities. The Independence Board of Commissioners has a probability value of 0.0033 which is less than 5% significance level with a positive coefficient. These results indicate that the independent board of commissioners of the company is viewed to have a positive and significant effect on the company's capital structure.

Debt Tax Shield And Capital Structure

This study found that the debt tax shield variable has a positive effect on capital structure, which means that the incentives provided by the debt tax shield are used by companies to increase debt. A debt tax shield is a tax benefit obtained from additional debt and measured by comparing interest costs to the company's operating profit. Higher interest costs indicate that the company has higher debt obligations to fulfill. Based upon the trade-off theory concept, companies are given the freedom to choose debt as an external funding source, especially with the benefits provided by the debt tax shield. A large debt tax shield reflects

that companies have wider opportunities to utilize cash (Sumani et al., 2020). This is due to the exception of loan interest costs in calculating taxable income so that the tax burden will be lower. Michalkova et al. (2021) mentioned that companies often value tax incentives as something that is sometimes not important but can also be very important in determining the portion of debt in the funding structure. This condition is related to the bankruptcy risk that must be faced by the company in an unfavorable condition. Based on the research data, most debt tax shield values are high and even higher than average thus it can be concluded that property and real estate companies are taking advantage of tax shields. When talking about tax protection on loan interest, it is inseparable from the fluctuation of the interest rate of the Indonesian central bank (BI7DRR). In the first semester of 2019, BI7DRR was recorded at 6% and immediately fell slowly to touch 3.5% in 2021. It can be said that the benchmark rate has decreased along with the increasing number of Covid-19 cases. Dewi (2022) stated that 15 July 2021, was recorded as one of the highest records for daily Covid-19 cases. With the same loan amount, the interest costs that must be borne by the company can be different, which is based on the fluctuation of BI7DRR. Companies can indirectly take advantage of the debt tax shield scheme before the pandemic. When the pandemic occurred, there was an unexpected decrease in interest rates so the value of the company's debt tax shield also decreased. Likewise, where the benchmark interest rate before the pandemic can provide more profitable tax protection

Firm Age And Capital Structure

This study obtained the results that firm age has a positive effect on capital structure. Firm age shows how long a company has been in operation. The longer the company has been operating, the more experience it has gained. Companies that have been established for a long time have better experience and reputation than new companies and will make it easier for them to obtain debt (Abor & Biekpe, 2009). The good reputation of an old company makes creditors trust the ability to fulfill the responsibility of debt obligations more than young companies. Based on the research data, it was found that the sample of property and real estate companies used in this research belong to an old company because they have been operating for a long time such as MKPI and SMRA who was established in 1975 and the youngest data is PPRO who was established since 2013.

Financial Deficit And Capital Structure

This study obtained the results that the financial deficit has a positive effect on capital structure. A company is considered to have a deficit if the spending costs for working capital, investment, and dividends are greater than the company's operating cash flow. A positive value of financial deficits refers to the company's expenditure costs that are greater than the company's cash, so the company's cash is considered unable to meet the company's needs thus the company experiences a financial deficit. Regarding the funding hierarchy, the results were found to support the assumptions of the pecking order theory (Myers, 1984). Thus, according to the research hypothesis, there is a positive influence that means when

financial deficits increase then the company will increase their capital structure through the debt ratio.

Business Risk And Capital Structure

This study obtained the result that business risk has no effect on capital structure business risk demonstrates a null effect on capital structure. Business risk represents various kinds of risks that a company must face during operations. This variable is measured by looking at a company's assets' capability to generate profits and enable the company to face these risks. Research hypotheses presume that business risk will have a negative effect on capital structure, but the t-test shows that business risk is considered to have no effect even though the coefficient direction is in line with the hypothesis. The average value of business risk in this study is considered low and it means that the company has a low ability to face any potential risk in the future whereas the property and real-estate sector is a risky industry that requires large capital, reputation, and a high tax burden. Moreover, with the COVID-19 pandemic that occurred during the research period. The risks of this industry were then compounded by cash flow that was pressured due to economic activity being shaken by the pandemic (Sidik, 2020). Morri & Artegiani (2015) in their research found similar results where according to the companies that are considered to have a higher risk by the market will consider debt to be a more expensive funding option and therefore tend to have low debt levels.

Growth Opportunity And Capital Structure

This study obtained the result that growth opportunity has a negative effect on capital structure. The company's opportunity to grow is measured by the growth of positive value assets. When asset growth is negative, it can be concluded that the company has more limited opportunities to grow. Even though the growth was positive, in 2020 when the covid broke out, the data showed that analysis of the data indicated limited growth potential among the companies examined. Companies with slow growth tend to have uncertainty over future growth rates, thereby reducing excessive use of debt (Umdiana et al., 2021). Industrial growth has also declined precisely in 2020. The property industry sector was affected by the economic slowdown that occurred in the second-fourth quarter of 2020. One significant impact was the decline in demand for property due to public conservatism in spending during the pandemic (Setyaningsih, 2021). However, this condition can recover where in 2021 all data has a positive growth opportunity value. In relation to agency theory, the company's growth rate is related to the opportunities for agency problems and the required agency costs. A high growth rate will increase the company's need for capital and through high debt so that managerial opportunism can be maintained. Thus, in addition to company development, positive growth is utilized by companies to minimize agency problems and the need for agency costs.

Independence Board Of Commissioners And Capital Structure

This research obtained results that the independent board of commissioners has a positive effect on capital structure. In connection with agency theory, the result proves that the existence of independent commissioners can encourage companies to use debt so that opportunistic managerial actions can be maintained. Sample data shows that the company has more than enough independent commissioners that are determined by the government. Based on statistical descriptive analysis, the average commissioner's independence score is 0.3778, while the DER is 0.7621 which means 76% of capital structure consists of debt. A well-implemented of good corporate governance will create better business management and the profits generated by the company will increase (Wati et al., 2019). By having no relation with other stakeholders, independent commissioners will maximize the profit generated and make a neutral decision for the company. Company debt will push managers to make payments and increase the fund circulation and reduce the opportunity of it being used arbitrarily by management and agency problems can be avoided.

CONCLUSION

This study aims to identify the variables that should be considered in making funding decisions for property and real estate companies for the 2017-2021 period through three popular capital structure theory models. This study proposes six research hypotheses where four hypotheses are accepted and reject two of them. First, the results of the study found that the debt tax shield had a positive effect on capital structure. Second, there is a positive influence given by the age of the company on the capital structure. For the pecking order theory model, the financial deficit was found to have a positive effect on capital structure. And the last for agency theory, the independence board of commissioner is found to have a positive effect on capital structure. Based on the research hypothesis, all perspectives from the trade-off theory are proven to be relevant and affect company funding decisions. Through this research, property and real estate sector companies in Indonesia can be assessed as a moderate risk taker. It is concluded that a property company's capital structure will increase when it benefits from taxes or faces a financial deficit. However, on the other hand, companies still consider external factors and tend to accept risks and balance the trade-off between risks and benefits of funding sources.

This research is limited to a group of property and real estate companies listed on the Indonesia Stock Exchange in 2017-2021 and recommended for future researchers to expand the population and add a more recent research period. In addition, because this research period was conducted during a pandemic, there is the possibility that there will be unique characteristics of the data that occurred because of the pandemic. The research sample is limited to companies experiencing losses with assumptions to assess how the capital structure theory approach can be proven in ideal business conditions. Future researchers can also re-examine growth opportunities or add other perspectives in examining the capital structure theory approaches in determining the company's capital structure. Through this research managers are expected to recognize the characteristics of the company first so that they can know the most appropriate theoretical approach in making company funding

decisions. The author also gives practical advice to the government to be able to prepare policies related to funding for property and real estate sector companies. Accordingly, investors are encouraged to assess a company's capital structure before investment, owing to its direct correlation with returns and long-term sustainability.

REFERENCES

Abor, J. Y., & Biekpe, N. (2009). How Do We Explain The Capital Structure of SMEs in Sub-Saharan Africa?: Evidence From Ghana. *Journal of Economic Studies*, *36*(1), 83–87.

Africa, L. A., & Sunani, A. (2017). *Uji Teori : Pecking Order , Trade-Off Dan Market Timing Pada Struktur Modal Perusahaan Perbankan Go Public Di Indonesia*. *September*.

Agyei, J., Sun, S., & Abrokwah, E. (2020). Trade-Off Theory Versus Pecking Order Theory: Ghanaian Evidence. *SAGE Open*, *10*(3). https://doi.org/10.1177/2158244020940987

Ahmad, A. S., & Pongoliu, Y. I. D. (2021). Analisis Struktur Modal Berdasarkan Perspektif Pecking Order Theory. *Jurnal Ilmiah Manajemen Dan Bisnis*, *3*(3), 171–182.

Ajijah, R., Uzliawati, L., & Lestari, T. (2019). The Effect Of Corporate Governance Mechanisms On Financial Performance With Capital Structure As An Intervening Variable. *AFEBI Accounting Review*, *09*(01), 1–18. https://doi.org/10.2991/aicmar-18.2019.12

Almanaseer, S. R. (2019). Determinants of Capital Structure: Evidence from Jordan. *Accounting and Finance Research*, *8*(4), 186. https://doi.org/10.5430/afr.v8n4p186

Anwar, S., Wijayanti, A., & Chomsatu, Y. (2022). Determinan Struktur Modal Pada Perusahaan Makanan Dan Minuman Yang Terdaftar Di Bei 2015 – 2019. *EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis*, *10*(2), 1255–1264. https://doi.org/10.37676/ekombis.v10i2.1895

Ariyanto. (2018). Pengaruh Tax Shield dan Non Tax Shield Terhadap Struktur Modal pada Perusahaan yang Tergabung dalam Sub Sektor Otomotif dan Komponen yang Terdaftar di Bursa Efek Indonesia. *Finance Accounting*, *3*(02), 200–211.

Bhama, V., Jain, P. K., & Yadav, S. S. (2019). Pecking Order Test at Varying Debt Levels: A Comparative Study of Indian and Chinese Firms. *Journal of Emerging Market Finance*, *18*(2), 237–261. https://doi.org/10.1177/0972652719846317

Cahyani, R. T., & Suhadak. (2017). Analisis Kinerja Keuangan Perusahaan Manufaktur Sebelum Dan Sesudah Perusahaan Melakukan IPO (Initial Public Offering) Pada Tahun 2015 Di Bursa Efek Indonesia (BEI). *Jurnal Administrasi Bisnis*, *45*(1), 10–18.

Dewi, H. K. (2022). Kasus Harian Covid-19 Indonesia Cetak Rekor Tertinggi Selama Pandemi, Capai 57.049. *Nasional Kontan [Online]*, 1. https://nasional.kontan.co.id/news/kasus-harian-covid-19-indonesia-cetak-rekor-tertinggi-selama-pandemi-capai-57049

Eze, G. P., & Uzochukwu, A. (2020). The Impact of Debt on Capital Structure: Empirical Evidence from Nigeria. *Asian Journal of Economics, Business and Accounting*, *14*(4), 7–17. https://doi.org/10.9734/ajeba/2020/v14i430199

Febriana, D., & Yulianto, A. (2017). Pengujian Pecking Order Theory Di Indonesia. *Management Analysis Journal*, *6*(2), 153–165. http://maj.unnes.ac.id

Fransisca, & Dermawan, E. S. (2022). Pengaruh Likuiditas, Pertumbuhan Penjualan, Asset Turnover, dan Usia Perusahaan Terhadap Struktur Modal. *Jurnal Multiparadigma Akuntansi*, *IV*(2), 837–846.

Gustyana, T. T., & Hanari, S. P. (2022). Pengaruh Corporate Governance Terhadap Strukturmodal Pada Sektor Barang Konsumen Non-Primer Yang Terdaftar Di BEI. *Jurnal Ilmiah MEA (Manajemen, Ekonomi, Dan Akuntansi)*, *6*(3), 606–616.

Iqbal, M. (2015). *Regresi Data Panel (2) "Tahap Analisis."* Perbanas Institute.

https://dosen.perbanas.id/regresi-data-panel-2-tahap-analisis/

Jalil, M. (2018). Pengaruh Risiko Bisnis dan Struktur Aktiva Terhadap Struktur Modal Pada Perusahaan Yang Terdaftar di BEI. *Jurnal Akuntansi Dan Keuangan*, *9*(2), 1–10. https://ejournal.unisi.ac.id/index.php/jak/article/view/453

Khémiri, W., & Noubbigh, H. (2018). Determinants of capital structure: Evidence from sub-Saharan African firms. *Quarterly Review of Economics and Finance*, *70*, 150–159. https://doi.org/10.1016/j.qref.2018.04.010

Kuntari, S. E., & Machmuddah, Z. (2021). Pengaruh Rasio Likuiditas dan Leverage Terhadap Financial Distress dengan Rasio Profitabilitas Sebagai Pemoderasi. *Dinamika Akuntansi, Keuangan Dan Perbankan*, *4955*(2), 145–155.

Kusmawati, Y., & Ovalianti, N. (2022). Pengaruh Current Ratio dan Debt To Equity Ratio terhadap Return on Equity Pada PT. Permodalan Nasional Madani (PNM) Periode 2012-2021. *Lensa Ilmiah: Jurnal Manajemen Dan Sumberdaya*, *1*(1), 53–61. https://doi.org/10.54371/jms.v1i1.182

Lestari, S. (2015). Determinan Struktur Modal Dalam Perspektif Pecking Order Theory Dan Agency Theory. *Jurnal WRA*, *3*(1), 571–590. https://doi.org/10.15408/akt.v13i2.17337

Lianto, V., Sinaga, A. N., Susanti, E., Yaputra, C., & Veronica, V. (2020). Analisis Profitabilitas, Ukuran Perusahaan, Struktur Aset, Likuiditas, dan Risiko Bisnis terhadap Struktur Modal Perusahaan Manufaktur di Indonesia. *Journal of Economic, Bussines and Accounting (COSTING)*, *3*(2), 282–291. https://doi.org/10.31539/costing.v3i2.1064

Megawati, F. T., Umdiana, N., & Nailufaroh, L. (2021). Faktor-Faktor Struktur Modal Menurut Trade Off Theory. *Jurnal Akuntansi Dan Keuangan*, *26*(1), 55–67. https://doi.org/10.23960/jak.v26i1.255

Meilani, U., & Wahyudin, A. (2021). Pengaruh Struktur Aset, Risiko Bisnis, dan Pertumbuhan Penjualan Terhadap Struktur Modal Dengan Profitabilitas Sebagai Variabel Moderating. *Jurnal Akuntansi Bisnis*, *19*(1), 2541–5204.

Michalkova, L., Stehel, V., Nica, E., & Durana, P. (2021). Corporate Management: Capital Structure and Tax Shields. *Marketing and Management of Innovations*, *3*, 276–295. https://doi.org/10.21272/mmi.2021.3-23.This

Morri, G., & Artegiani, A. (2015). The effects of the global financial crisis on the capital structure of EPRA/NAREIT Europe index companies. *Journal of European Real Estate*, *8*(1), 3–23.

Myers, C. S. (1984). The Capital Structure Puzzle. *The Journal of Finance*, *34*(3), 574–592. https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1540-6261.1984.tb03646.x

Onofrei, M., Tudose, M. B., Durdureanu, C., & Anton, S. G. (2015). Determinant Factors of Firm Leverage: An Empirical Analysis at Iasi County Level. *Procedia Economics and Finance*, *20*(15), 460–466. https://doi.org/10.1016/s2212-5671(15)00097-0

Purnasari, N., Simanjuntak, A., Sultana, A., Manik, L. M., & Halawa, S. R. (2020). Pengaruh Ukuran Perusahaan, GPM, Risiko Bisnis terhadap Struktur Modal pada Perusahaan Manufaktur di BEI. *Owner (Riset Dan Jurnal Akuntansi)*, *4*(2), 640. https://doi.org/10.33395/owner.v4i2.309

Radjamin, I. J. P., & Sudana, I. M. (2014). Penerapan Pecking Order Theory dan Kaitannya dengan Pemilihan Struktur Modal Perusahaan pada Sektor Manufaktur di Negara Indonesia dan Negara Australia. *Jurnal Manajemen Dan Bisnis Indonesia*, *1*(3), 451–468. https://doi.org/10.31843/jmbi.v1i3.35

Rathnasingha, D. L. P. M., & Heiyanthuduwa, C. P. (2019). Revisiting External Pecking Order Hypothesis: Evidence from Sri Lankan Companies Capital Structure. *Journal of Financial Risk Management*, *08*(04), 200–223. https://doi.org/10.4236/jfrm.2019.84014

Salam, J. A., & Sunarto, S. (2022). Pengaruh Likuiditas, Growth Opportunity dan Ukuran Perusahaan terhadap Struktur Modal dengan Profitabilitas sebagai Variabel Moderasi (Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Tahun 2016-2020). *Jurnal Pendidikan Tambusai*, *6*(2), 9165–9178.

Santia, T. (2022). Menko Airlangga Jabarkan Peran Industri Properti, Sumbang 9,14 Persen ke PDB. *Liputan 6*. https://www.liputan6.com/bisnis/read/5064112/menko-airlangga-jabarkan-peran-industri-properti-sumbang-914-persen-ke-pdb

Sari, M., Jufrizen, & Al-Attas, H. M. (2020). Pengaruh Return on Equity dan Debt to Equity Ratio Terhadap Harga Saham Pada Perusahaan Sub Sektor Perdagangan Besar Yang Terdaftar Di Bursa Efek Indoneisa. *Prospek: Jurnal Manajemen Dan Bisnis*, *2*(1), 83. https://doi.org/10.23887/pjmb.v2i1.26203

Serrasqueiro, Z., Nunes, P. M., & da Rocha Armada, M. (2016). Capital Structure Decisions: Old Issues, New Insights from High-Tech Small- and Medium-Sized Enterprises. *European Journal of Finance*, *22*(1), 59–79. https://doi.org/10.1080/1351847X.2014.946068

Setiawan, R., & Kusumawati, N. D. (2020). The role of independent commissioner in the effect of family ownership on capital structure in family companies in Indonesia. *The Indonesian Accounting Review*, *10*(2), 135–145. https://doi.org/10.14414/tiar.v10i2.1972

Setyaningsih, P. (2021). Pasar Properti Residensial Di Tengah Pandemi Covid-19. *Dirjen Kekayaan Negara*. https://www.djkn.kemenkeu.go.id/kpknl-tarakan/baca-artikel/14441/Pasar-Properti-Residensial-Di-Tengah-Pandemi-Covid-19.html

Setyawan, A., Hadijati, M., & Switrayni, N. W. (2019). Analisis Masalah Heteroskedastisitas Menggunakan Generalized Least Square dalam Analisis Regresi. *Eigen Mathematics Journal*, *02*(02), 61–72. https://doi.org/10.29303/emj.v1i2.43

Sidik, S. (2020). Alert! 40% Surat Utang Korporasi Berisiko Tinggi Saat Pandemi. *Cnbcindonesia [Online]*, 1. https://www.cnbcindonesia.com/market/20201020205240-17-195869/alert-40-surat-utang-korporasi-berisiko-tinggi-saat-pandemi

Simatupang, H. J., Purwanti, L., & Mardiati, E. (2019). Determinants of capital structures based on the Pecking Order Theory and Trade-off Theory. *Jurnal Keuangan Dan Perbankan*, *23*(1). https://doi.org/10.26905/jkdp.v23i1.2579

Sumani, Roziq, A., & Manurung, D. T. H. (2020). Relevankah Teori Struktur Modal di Indonesia? *Jurnal Akuntansi Multiparadigma*, *11*(2), 373–385.

Sunaryo, D. (2019). Pengaruh Resiko Bisnis Dan Growth Opportunity Terhadap Struktur Modal Pada Perushaan Manufaktur Sub Sektor Kosmetik Dan Barang Keperluan Rumah Tangga Yang Terdaftar Di Bursa Efek Indonesia Priode 2012-2017. *Jurnal Riset Akuntansi Terpadu*, *12*(1), 22–40. https://doi.org/10.35448/jrat.v12i1.5193

Suri, A., Wulandari, R., & Setiyowati, S. W. (2020). Analisis pengaruh profitabilitas, struktur modal, kepemilikan manajerial dan dewan komisaris independen terhadap nilai perusahaan. *Jurnal Riset Mahasiswa Akuntansi (JRMA)*, *8*(1), 1–7.

Susilawaty, T. E. (2021). The Effect of Debt Tax Shield and Non Debt Tax Shield on Capital Structure on Advertising Printing Media Companies Listed in Indonesia. *Enrichment: Journal of Management*, *12*(1), 639–646.

Triherawati, D., & Nusraningrum, D. (2021). The effects of Job Stress and Compesation on Employee Turnover Intention as Mediated by Organizational Commitment (At Dinas Pariwisata and Kebudayaan DKI Jakarta). *International Humanities and Applied Sciences Journal*, *4*(1), 45–54.

Umdiana, N., Nailufaroh, L., & Megawat, F. T. (2021). Faktor-Faktor Struktur Modal Menurut Trade Off Theory. *Jurnal Riset Akuntansi Tirtayasa*, *06*(02), 106–119.

Wati, L., Hariani, L. S., & Y, D. W. (2019). Pengaruh Profitabiltas, Likuiditas Dan Good

Corporate Governance Terhadap Struktur Modal (Studi Pada Perusahaan Otomotif Yang Terdaftar Di Bursa Efek Indonesia Periode 2013- 2017). *Jurnal Riset Mahasiswa Akuntansi*, *7*(1), 1–10.

Yunira, H. (2022). Pengaruh Debt Tax Shield dan Efektif Tax Rate Terhadap Struktur Modal Pada Perusahaan Advertising Printing Media. *Owner*, *6*(2), 1144–1156. https://doi.org/10.33395/owner.v6i2.534

Zamri, N. A., Purwati, A. S., & Sudjono. (2016). Pengaruh Rasio Profitabilitas dan Leverage terhadap Earnings Per Share (EPS) (Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Tahun 2012-2015). *Al-Tijary Jurnal Ekonomi Dan Bisnis Islam*, *1*(2), 151–166.