

## The Effect of Leverage on Investment, Dividends, and Company Value on The Real Estate Industry in Indonesia

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### Abstract

The purpose of this study is to examine and explain the effect of leverage on the value of real estate companies listed on the Stock Exchange in Indonesia, with investment and dividend as mediators. The population in this study is all real estate companies listed on the Indonesia Stock Exchange. The total population was as many as 44 companies. The analytical method used is Generalized Structural Component Analysis (GSCA). The results of this study indicate that high dividend payments will cause decrease in value of company. Intense competition in real estate sector, companies to survive in industry must have product innovations. Consequence of dividend payments is that companies will use high amounts of leverage. Empirically, previous research examining the interaction between leverage, investment, dividends, and company value has produced inconsistencies in research results (gaps). This research focuses on the real estate industry in Indonesia.

*Keywords:* Leverage, driver for investment, dividends, value of real estate companies.

### 1. Introduction

Leverage is an external funding source used by companies in the form of debt from creditors. The consequence of using leverage is that the company is burdened by interest charges. Leverage has an important role in the management of corporate finance, as it can affect investment policies and company dividend policies. Leverage is associated with corporate investment funding activities. Leverage can also affect the value of the company. The role leverage plays has encouraged many academics to analyze it comprehensively.

Leverage can help financial activities, both for funding activities and investment activities. Leverage can also affect financial policies, i.e., funding policies, investment policies, and dividend policies. Leverage is not only useful in helping companies related to their financial operations, but it also represents a mechanism for companies to be able to create corporate values. Miller and Modigliani [68] reveal that companies that use leverage will be able to reduce corporate tax payments, thereby increasing the value

of the company. Ross [77] also reveals that companies that use leverage are considered or trusted as companies that have good business prospects in the future, leading to an increase in the value of the company.

As leverage is important for companies, this study is interested in testing the role of leverage in investment policies, dividend policies, and corporate value creation. The important role leverage plays will be explained by several opinions.

First, leverage has an important role in investment activities. Several alternatives are available to fund investments, namely: a) retained earnings, b) leverage, and c) issued shares. Myers [71] state that the order of a funding structure in companies consists of retained earnings in the first place, then followed by the use of leverage, and the last alternative is the issued shares; this was later known as pecking order theory. The rationale of Myers [71] is that the source of funding that has the lowest capital cost is retained earnings, so this comes in the first place. Based on the pecking order theory, when funding derived from retained earnings does not meet the investment funding requirements, the alternative funding source used is leverage. If the use of leverage is considered too high, then the company can use funding originating from the issuance of company shares. In general, companies tend to use high amounts of leverage, and this indicates that leverage is a favorite source of funding for companies.

Second, the use of corporate leverage also affects investment policies and corporate dividend decisions. In general, leverage is used by companies as one of the funding mechanisms for corporate investment activities. A company uses leverage when it experiences a lack of funding from retained earnings. The greater the lack of funding for corporate investment, the higher the amount of leverage used. When referring to the pecking order theory Myers [71], new companies will use leverage because companies experience a lack of investment funding. The use of leverage is also motivated to (a) supervise the actions of creditors to company managers (see Easterbrook [40]; Jensen, [56]), and (b) transfer the risk from company shareholders to creditors (see Kalay[58]). On the other hand, the use of leverage by the company can also influence the dividend policies. The higher the use of leverage by the company as a source of funding, the more restricted the dividend policies will be. Based on the debt covenant theory (see Kalay [58]), companies that use high amounts of leverage are those that tend to pay dividends in small amounts or even not paying dividends. This is done by creditors to prevent the motives of shareholders to transfer welfare from creditors to shareholders.

Third, the use of corporate leverage also affects the value creation of the company. The ultimate goal of corporate financial management is on how companies increase its value. The value creation has led to many studies to find out the mechanism to maximize it, whether through leverage or investment or paying dividends. High amounts of investment and high dividends will cause an increase in the value of the company. The use of high leverage, which causes positive interactions on investment policies, dividend policies and company value, has led many companies to use leverage as one of their funding sources (see Limba, et al. [64]).

This research re-examines the positive role of leverage on investment policies, dividend policies, and corporate value creation. Previous opinions have stated that the use of

high leverage will bring a positive impact on corporate investment funding — the higher the investment, the higher the profitability of the company will be. High profitability will cause the company to have the ability to pay dividends to shareholders. Companies that fund high amounts of investment and pay high dividends will have high corporate value.

The use of leverage, as previously explained, can influence investment policies and company dividend policies. This will also affect the value of the company. The interaction between leverage, investment, dividends and company value has led to theoretical and empirical debates.

Several arguments are behind this research to examine the impact of leverage on the real estate industry in Indonesia. The real estate industry is an industry with the characteristics of using quite high leverage in its funding structure. Theoretically, there are differences of opinion regarding the use of high leverage, as previously explained. According to Ross [77], the use of high leverage will increase the value of the company. Kalay [58] believes that companies that use high leverage will face consequences in limiting the dividend policy. In contrast to previous thoughts, according to the static trade-off hypothesis (see Myers [71]), the use of company leverage to a certain extent will be able to increase the value of the company due to a tax reduction, but to a certain degree, the use of high leverage will reduce the value of the company because it increases bankruptcy rates.

Empirically, previous research examining the interaction between leverage, investment, dividends, and company value has produced inconsistencies in research results (gaps). The theoretical debate and inconsistency from previous studies have encouraged researchers to reexamine the theory and previous research that discusses the effect of leverage on investment, dividends, and company value (see Indarti, et al. [54]). This research focuses on the real estate industry in Indonesia. Based on the description of the background, the purpose of this study is to examine and explain the effect of leverage on the value of real estate companies listed on the Stock Exchange in Indonesia, with investment and dividend as mediators. The limitation of the problem in this research is that it is only done in the real estate industry. The results of this study cannot be generalized to other industries and new research is needed for this.

## **2. Theoretical Review on the Relationship of Research Variables**

### **2.1 The effect of leverage on investments**

Theoretically, some thoughts can explain the influence of leverage on investment. Myers [70] states “the firm financed with risky debt will, in some states of nature, pass up valuable investment opportunities—opportunities which could make a positive net contribution to the market value of the firm”, so this statement indicates that the higher the company uses leverage, the more it can limit the funding of corporate investment activities. The restrictions in investment policies due to the use of leverage will lead to another problem, the under-investment problems. The high the use of leverage by

the company will make the creditors dominate the control of the investment policy; this will make the company unable to maximize all growth opportunities (investment opportunities) it has (an under-investment problem). Creditor may try to limit investment, with the aim to maintain the level of company liquidity. If the company has the level of expected liquidity, then creditors will be sure that the company can return the obligation to use leverage along with the interest. Empirically, Myers [70] reinforces research by Sajid, et al. [78], Ascioğlu, et al. [16], and Aivazian, et al. [6] confirming that leverage has a significant negative effect on investment.

Companies that use leverage have two objectives, (a) obtaining a lack of funding sources and (b) for funding investments with the aim of gaining future profits. Companies that have limited internal funding sources (retained earnings) will tend to use leverage. The internal funding sources will be very dependent on the high and low profitability of the company. The higher (lower) profitability of the company, the higher (lower) the retained earnings will be. However, this condition also greatly depends on whether the company pays dividends or not. Companies that have high profitability (and tend to have high retained-earnings) will tend to use low leverage and vice versa. This argument has been strengthened by Bevan and Danbolt [20], Cheng and Shiu [32], Delcoursé [36], Ni and Yu [72], Al-Najjar and Taylor [10], Abor and Biekpe [1], Crnigoj and Mramor [34], Karadeniz, et al. [62], Morri and Cristanziani [69] that profitability has a significant negative effect on leverage.

The low profitability of the company will lead it to find a solution by funding the investment with the aim to get a profit in the future. This has the consequence of having to use leverage. The higher the funding needs for investment, the more likely the company will be to use high amounts of leverage. The problem that arises when a company decides to use leverage is that the company will face restrictions from creditors on company policies, i.e. the investment policy. According to Myers in Aivazian, et al. [6], creditors will make restrictions on the investment policy.

The argument behind Myers's thoughts in Aivazian, et al. [6] is the one proposed by Kalay [58], that creditors will make restrictions on investment policies with the aim of avoiding motives from the company. The motives include (a) motives for transfer of investment risks from the company to creditors, and b) motives for transfer of welfare from creditors to the company. The next paragraph will explain these two motives.

Companies will try to fund all company investment opportunities. The higher the funding for investment, the higher the profits expected in the future will be. Regarding investment, there are fundamental problems related to benefits in the future. Theoretically, investment categorized as profitable in the future is the one that has a positive NPV. However, the NPV concept does not take into account investment risks. If the company has set an investment to be funded and has made a decision to use leverage, then the next question is whether the risk of the investment will be fully borne by the company. Surely, the company in this case does not fully bear the risk of the investment; the risk it bears is limited to the amount of internal funding sources (retained earnings) used to fund the investment. The higher (lower) retained earnings used to fund investment, the higher (lower) the risk for company-funded investment will be. The remaining

risk of the investment, of course, will be borne by creditors (the party giving leverage to the company). The higher (lower) external funding sources from the use of leverage to fund the investment, the higher (lower) creditors' risk of company-funded investments will be. This condition may lead the company to transfer risk of investment from the company to creditors.

In other conditions, if the company's investment has produced profits in the future, then the question is on who will enjoy these benefits. The party who enjoys the benefits of the investment is the company and shareholders. The company will get the net profit, while shareholders will get company dividends. Creditors in this case cannot enjoy the benefits derived from investment; they only obtain leverage payments along with the interest. If compared to the results or welfare obtained between the company and creditors, then the level of welfare obtained by the company will be relatively higher compared to creditors. This is known as the motive of the company to transfer welfare from creditors to the company.

These two motives represent a form of difference in interests or agency problems between the company and creditors. The company (in this case, shareholders) will tend to motivate company managers to fund company investments using leverage. The effort of creditors to prevent this motive is by restricting the investment policy. Creditors tend not to fund investment, which is considered a high-risk investment. If the company insists on funding its investment through leverage, creditors will also be able to impose higher interest costs.

The use of leverage also has consequences for over-investment problems. Shareholders try to control the actions of company managers who try to improve their welfare; this is known as agency problem (see Jensen [56]). The efforts of company managers to improve their welfare, in general, are done by funding investments that are not profitable (do not have a positive NPV), for example, buying a car or renovating an office. The company managers also seek to increase the company's assets through the holding of the net income. The consequence of the managers' actions is the declining level of welfare of shareholders. This has made shareholders to encourage company managers to use company leverage. With the use of leverage, shareholders expect creditors to be able to limit investment funding considered unprofitable.

## **2.2. The effect of leverage on dividends**

Theoretically, several thoughts can explain the influence of leverage on dividends, one of which is by Kalay [58] revealing the existence of (a) motives for transfer of investment risks from the company to creditors and (b) motives for transfer of welfare from creditors to the company; these have encouraged creditors to limit the dividend policy.

Dividend payment is one source of welfare for shareholders. The higher the dividend paid, the higher the level of welfare of shareholders. Therefore, shareholders tend to encourage company managers to pay company dividends using leverage. The interaction between company managers and company shareholders about dividend payments then raises new problems, namely agency problems, between company shareholders and creditors.

If the company does not pay dividends, then shareholders will not get their welfare, and this is not desired by shareholders. In addition to dividends, according to Kalay [58], company shareholders can use two mechanisms to maximize their welfare level, by encouraging managers to (a) reduce corporate investment funding or sell company assets with the aim that the company can pay dividends, and b) use leverage to pay dividend to shareholders. These two options, which are in accordance with the two motives aforementioned, have prompted creditors to limit the dividend policy; this becomes the second option. The condition leads to new problems, i.e. the occurrence of differences in interests or agency problems between the company and creditors. To prevent this, creditors will limit the dividend policy, in which creditors will ask companies to reduce payment of dividends or even not pay dividends if they use leverage.

Al Taleb [12] has found indications that companies that use high leverage will tend to pay high amounts of dividends. In general, companies that use leverage have two objectives, (a) to obtain funding sources, and (b) to fund investments with the aim of obtaining future profits. Related to the problem of lack of funding sources, the use of leverage is a response to cover the funding shortfall. Theoretically, the amount of use of leverage is in accordance with the amount of funding shortages to fund investment. However, the question is whether leverage is only used to fund investment. Another aspect needs to be taken into account in order to analyze the use of leverage, i.e. the operational needs of the company associated with the new investment. Related to this, new problems arise on how much leverage can be used to fund investments and cover operational costs: it is a problem of estimation, (a) under-estimates leverage, and b) over-estimates leverage (Higgins [51]). Ideally, the amount of leverage used must be in accordance with the need to fund investments and cover operational costs.

### 2.3. The effect of leverage on the company value

There are arguments on the influence of leverage on firm value. First, Ross [77] reveals that the information conveyed has credibility, and then company managers can use leverage, because the use of high leverage by companies is considered a signal about quality of the company. The assumptions that underlie this thinking, among others are (a) company managers have better information about company prospects, and (b) company managers will get performance compensation, where shareholders know about the terms of the compensation. Compensation incentives for performance causes company managers to increase company value. The consequence of this incentive is the higher the value of the company, the higher the level of welfare (compensation) will be received by the company managers, and vice versa, if the company value is low, the company managers will be “punished” according to the compensation agreement. Company managers try to increase company value by conveying information about the company’s prospects to the market. The information must have credibility. Mechanisms that can be used by companies for the information delivered to be credible is by using high amounts of leverage. Shareholders tend to like companies with high leverage because the use of high leverage is considered a credible signal regarding the prospects in the future.

Two thoughts exist about the role of leverage that companies use to create company profitability in the following year. The first is considering the use of high leverage to increase the profitability of the company. In contrast to the first thought, the second thought considers the use of high leverage to reduce the profitability of the company. The basis of this argumentation is the consequence of financial constraints because of using leverage; the higher the use of leverage by the company, the higher the financial constraints faced by the company. The forms of financial constraints carried out by creditors include (a) creditors will limit the use of high company free cash flow to fund investments that do not have a negative NPV, with the aim of avoiding over-investment problems and (b) creditors will also limit the use of funds used by companies to fund investments that are considered by creditors to have a high risk.

The theory from Aivazian, et al. [6] reveals creditors tend not to fund company investments in companies that have used high amounts of leverage and have no growth opportunities. Based on this argument, the approval of the use of leverage from creditors to fund corporate investment opportunities is considered good news by the Stock Exchange, so the Stock Exchange will react positively to the company's stock price. The Stock Exchange will see investment opportunities funded by companies through leverage that have been assessed as having high and profitable growth opportunities in the future.

It has been explained previously that the high use of leverage to fund corporate investment would have a positive impact on the company value, but on the other hand, the use of high leverage also has an impact on increasing the company value. Empirically, this argument is reinforced by research from Chen, et al. [30] who have found indications that companies with low risk tend to have high company value. The conclusion that can be drawn from Myers [71] is that the use of leverage at a certain level will be able to increase the company value, and conversely the use of excessive leverage can reduce the company value.

#### **2.4. The effect of investment on the company value**

The theory on the influence of investment on the company value is presented by Miller and Modigliani [68] that investment made by companies is an important factor in increasing the company value. The theory of Miller and Modigliani [68] is the main theory on the importance of investment in the creation of the company value. According to these two thoughts, the higher the company funds its investment, the higher the company value to be obtained; this is because, with the investment, the company has the ability to generate corporate profitability in the future. The higher the investment, the higher the profitability in the future (Fukui and Ushijima [46]), finding evidence of company R & D has a positive effect on company profitability). The higher profitability will lead to the higher company value (reinforced research from Ghosh [49]; Connelly, et al. [33]).

Another argument that supports the statement that the higher the investment, the higher the profitability in the future will be, and the higher profitability will lead to higher company value, are that companies that finance high amounts of investment are large

companies (empirically, reinforced by research by López-Iturriaga and Rodríguez-Sanz [65]; Gedajlovic, et al. [48]; Richardson [76]), and large companies are companies that have high corporate value (empirically, reinforced by research by Fich and Shivdasani [43]; Luo and Hachiya [66]).

Companies that finance high amounts of investment are companies that use high amounts of leverage (empirically, reinforced by research by López-Iturriaga and Rodríguez-Sanz [65]; Bolbol and Omran [23]). Companies that use high leverage are also companies that have high corporate value (empirically, reinforced by research by Byun, et al. [25]; Chen, et al. [30]; Florackis, et al. [44]; Ehie and Olibe [41], who have found evidence of leverage having a positive effect on the company value).

Companies that finance high amounts of investment are companies that have high growth opportunities (empirically, reinforced by research by López-Iturriaga and Rodríguez-Sanz [65]; Aivazian, et al. [6]; Ascioğlu, Hegde, and McDermott [16]), and companies that have high growth opportunities are companies that have high company value.

## 2.5. The effect of dividends on the company value

The argument that dividends play a role in the creation of company value is based on several theories, namely the bird-in-the-hand theory, dividend signaling theory, and clientele effect. The idea of the bird-in-the-hand theory reveals that investors tend to avoid uncertainty to get a return. This condition has caused investors to tend to prefer dividends compared to capital gains, because returns from dividends are considered to have a relatively lower risk than capital gains.

In subsequent developments, the dividend signaling theory has developed (see Bhattacharya, [21]). The thought of Bhattacharya [21] reveals dividend payments to shareholders is a signal about the company's prospects in the future. The higher the dividend paid to shareholders, the better the company's prospects will be in the future. Empirically, this argument is reinforced by research by Venkatesh [80], confirming that indications of corporate dividend announcements would be able to replace earnings announcements to provide information about prospects in the future. The consequence of this thinking is if the company announces dividend payments or increases dividend payments, then the market will react positively. Conversely, if the company announces a decrease in dividend payments or even the company does not pay dividends, it will get negative reactions by the market. Other studies that support Bhattacharya [21] include Aharony and Dotan [4], Kao and Wu [61], and Nissim and Ziv [73] who find indications that dividend changes can predict profits in the future. Baker, et al. [17] and Baker, et al. [18] have also found indications that one of the factors considered by managers in influencing corporate dividend payments is the expected level of profit in the future.

The other thought is the clientele effect, which reveals companies pay dividends to company shareholders because of the willingness of the shareholders to obtain dividends. The preference of certain shareholders on dividends indicates a demand for company dividends. If the company does not want to meet the preferences of some of these investors, the company does not maximize its value.



Other arguments that support dividends as having an important role in the creation of the company value are as follows:

1. Companies that pay high dividends are large companies (empirically, reinforced by research by Gedajlovic, et al. [48]; Deshmukh, et al. [38]; DeAngelo et al. [35]; Renneboog and Trojanowski [75]; Denis and Osobov [37]; Chen, et al. [28], and large companies are companies that have high company value (empirically, reinforced by research by Fich and Shivdasani [43]; Luo and Hachiya [66]).
2. Companies that pay high amounts of dividends are low risk companies (empirically, reinforced by research by Manos [67]; Bulan et al. [24]; Pattenden and Twite [74]), and companies that have low risk is a company that has high company value (empirically, reinforced by research by Chen et al. [30]).
3. Companies that pay high dividends are companies that use high leverage (empirically, reinforced by research by Adedeji [2]; Dutta [39]; Renneboog and Trojanowski [75]). Companies that use high leverage are companies that have high corporate value (empirically, reinforced by research by Byun, et al. [25]; Chen et al. [30]; Ehie and Olibe [41], who find evidence of leverage having a positive effect against the company value).

Based on the description of theoretical explanations and previous research findings, the following hypotheses can be formulated:

1. Leverage affects the investment of real estate companies.
2. Leverage affects the dividends of real estate companies.
3. Leverage affects the value of real estate companies.
4. Investment affects the value of real estate companies.
5. Dividends affect the value of real estate companies.

### 3. Research Method

This study is explanatory research. Explanatory is research conducted with the intention to explain an influence of variables through testing hypotheses. The population in this study is all real estate companies listed on the Indonesia Stock Exchange. The Indonesia Stock Exchange is the party that organizes and provides a system as well as a means to bring together the sale and purchase offers of other parties for the purpose of trading securities between them. The total population was as many as 44 companies. This study used four variables, which consisted of one exogenous variable and three endogenous variables. The categorized variables in exogenous variables are leverage ( $X$ ) and as endogenous variables ( $Y$ ) are (a) investment [ $Y1$ ], (b) dividends [ $Y2$ ], and (c) the company value [ $Y3$ ]. The analytical method used is Generalized Structural Component Analysis (GSCA).

Table 1: Weight Estimate of Indicators of Each Variable.

Variable	Indicator	Weight	SE	CR
<i>Leverage</i>	DAR	0.236	0.063	3.75*
	DER	0.524	0.046	11.39*
	LTDTA	0.386	0.042	9.19*
Investment	ITA	0.649	0.085	7.65*
	ITFA	0.555	0.102	5.45*
Dividend	Div/TA	0.259	0.050	5.20*
	DPR	0.326	0.047	6.98*
	DY	0.190	0.042	4.51*
Company Value	SR	0.479	0.062	7.73*
	MBVE	0.484	0.056	8.63*
	Tobin's Q	0.238	0.061	3.90*

#### 4. The Results of Data Analyses

Evaluation of the measurement model is intended to test whether an indicator in measuring measures the latent variables or not. Evaluation of measurement models with formative indicators is done by looking at the probability value on the outer weight (weighting the measurement model). The testing criteria state that if an indicator has a Critical ratio (CR) with an asterisk ( $CR \geq t\text{-table at } 2.00$ , alpha at 5%) then the indicator is declared valid is used to measure (form) the latent variable. The following is a summary of the results of testing the validity of the formative measurement model.

Leverage has three indicators that. Seen from weight estimate, as it is formative, then the DER indicator reflects or describes leverage best with a value of weight estimate of 0.524. The weight of Total Debt to Total Assets Ratio (DAR) to the leverage variable at 0.236 indicates that the Total Debt to Total Assets Ratio (DAR) indicator forms a leverage variable positively and significantly. This means that the increase in the Total Debt to Total Assets Ratio (DAR) indicator tends to increase leverage. The weight of the Debt to Equity Ratio (DER) to the leverage variable is 0.524 indicating that the indicator forms a leverage variable positively and significantly. This means that the increase in the Debt to Equity Ratio (DER) indicator tends to increase leverage. The Long-Term Indicator Weight of Debt to Total Assets (LTDTA) to the leverage variable is 0.386 indicating that the Long-Term indicator Debt to Total Assets (LTDTA) forms the leverage variable positively and significantly. This means that the increase in Long-Term indicators Debt to Total Assets (LTDTA) tends to increase leverage.

Investment has two indicators. Seen from weight estimate, as it is formative, then the ITA indicator reflects or describes the investment variable most with a value of weight estimate at 0.649. The weight of Investment to Total Asset (ITA) on investment is 0.649 indicating that Investment to Total Asset (ITA) forms investment positively and significantly. This means that increased Investment to Total Asset (ITA) tends to increase

investment. The weight of Investment to Total Fixed Asset (ITFA) on investment is 0.555 indicating that Total Fixed Asset (ITFA) forms investment positively and significantly. This means an increase in Investment to Total Fixed Assets (ITFA) tends to increase investment.

Dividend has three indicators. Seen from weight estimate, as it is formative, then the DPR indicator reflects or describes the dividend variable most with a value of weight estimate is 0.326. The weight of Dividend to Total Assets (Div/TA) on the dividend variable is 0.259 indicating that the Dividend to total Asset (Div/TA) forms the dividend variable positively and significantly. This means that the increase in Dividend to total Asset (Div/TA) indicators tends to increase dividends. The weight of the Dividend Payout Ratio (DPR) indicator on the dividend variable is 0.326 indicating that the Dividend Payout Ratio (DPR) indicator forms the dividend variable positively and significantly. This means that increasing Dividend Payout Ratio (DPR) indicators tend to increase dividends. The weight of the Dividend Yield (DY) on the dividend variable is 0.190 indicating that the Dividend Yield (DY) indicator forms the dividend variable positively and significantly. This means that the increase in Dividend Yield (DY) indicators tends to increase dividends.

Company value has three indicators. Seen from weight estimate, as it is formative, then the MBVE indicator reflects or describes the company value most with a value of 0.484. The weight of the Stock Returns (SR) indicator for the company is 0.479 indicating that the Stock Returns (SR) indicator forms the company value positively and significantly. This means that the increase in the Stock Returns (SR) indicator tends to increase the value of the company. The weight of the Market Book to Equity Ratio (MBVE) to the company value is 0.484 indicating that the Market Book indicator Value to Equity Ratio (MBVE) the company value positively and significantly. This means that the increase in Market Book indicators of Value to Equity Ratio (MBVE) tends to increase the value of the company. The Tobin's Q weight for the company value variable is 0.238 indicating that the Tobin's Q indicator forms the company value positively and significantly. This means that the increase in the Tobin's Q indicator tends to increase the value of the company.

Goodness of fit model is used to determine the ability of exogenous variables to explain the diversity of endogenous variables, or in other words to know the contribution of the overall GSCA model to endogenous variables. The goodness of fit model index in the GSCA analysis with the formative indicator model is Fit and A Fit. The fit value is 0.639; this can indicate that leverage, investment, and dividend contributes 63.9% to the diversity of company value in Indonesia, while the remaining 36.1% is explained by other variables not discussed in this study.

Testing the hypothesis of direct influence is intended to test whether there is a direct influence of exogenous variables by endogenous variables. Hypothesis testing can be shown by the value of the critical ratio (CR). The testing criteria state that if the critical ratio value gets an asterisk ( $CR \geq t\text{-table at } 2.00$ ), then there is a significant effect of exogenous variables on endogenous variables. The hypothesis testing on the direct effect of exogenous variables on endogenous variables is presented in Table 2.

Table 2: Hypothesis Testing - Real Estate Companies in Indonesia.

Exogenous	Endogenous	Path Coefficients	SE	CR
<i>Leverage</i>	Investment	-0.468	0.04	11.70*
<i>Leverage</i>	Dividend	0.529	0.027	19.59*
<i>Leverage</i>	Company Value	-0.555	0.246	2.26*
Investment	Company Value	0.03	0.158	0.19
Dividend	Company Value	-0.351	0.175	2.01*

Note: \* Significant, (Level of Significance (Alpha) = 5%)

Source: Research data analyzed (Appendix 8)

1. The effect of leverage on investment results in the value of the critical ratio (CR) of 11.70\*. The value of the critical ratio is marked with an asterisk ( $CR \geq t$ -table at 2.00); it can be interpreted that there is a significant effect of leverage on investment.
2. The effect of leverage on dividends results in the value of the critical ratio (CR) of 19.59\*. The value of the critical ratio is marked with an asterisk ( $CR \geq t$ -table at 2.00); it can be interpreted that there is a significant effect of leverage on dividends.
3. The effect of leverage on the company value results in the value of the critical ratio (CR) of 2.26\*. The value of the critical ratio is marked with an asterisk ( $CR \geq t$ -table at 2.00); it can be interpreted that there is a significant effect of leverage on the company value.
4. The effect of investment on the company value results in the value of the critical ratio (CR) of 0.19. The value of the critical ratio is not marked with an asterisk ( $CR < t$ -table at 2.00); it can be interpreted that there is no significant effect of investment on firm value.
5. The effect of dividends on the company value results in the value of the critical ratio (CR) of 2.01\*. The value of the critical ratio is marked with an asterisk ( $CR \geq t$ -table at 2.00); it can be interpreted that there is a significant effect of dividends on the company value.

#### 4.1. The effect of leverage on investment on real estate companies

The first hypothesis (H1) is leverage affects investment. The results of this study support under-investment theory (see Myers [70]). Empirically, for the Indonesian context, the results of this study support research from Sajid, et al. [78]. The results of the analysis find evidence of leverage having a significant negative effect on investment. The results of this study also do not support Franklin and Muthusamy [45] and López-Iturriaga and Rodríguez-Sanz [65]. Contributions to under-investment theory (Myers [70]) for the capital market in Indonesia are indications of creditors and shareholders

of the company having the same interests, namely limiting the company's investment activities.

Based on the under-investment theory, on companies that use leverage, creditors will have control over the investment policies. The higher the use of leverage, the higher the creditors' control over the investment policy will be. Restrictions on company investment policies, especially for (a) controlling company free cash flow and (b) investment funding that is considered high risk. Based on this explanation, it is known that the under-investment theory belongs to the agency theory (see Jensen and Meckling [55]), discussing two conflicts of interest, namely conflicts between company managers and company shareholders. The agency theory also states that company shareholders require the cost of supervision and control, which is then known as the agency cost, to be able to control the actions of company managers. The supervision and control is expected to make the interests of company managers to be equal or in accordance with the interests of shareholders. To reduce the agency cost borne by shareholders, shareholders will motivate company managers to use leverage. According to Jensen and Meckling [55], the goal is when companies use leverage, creditors will also play a role in monitoring and controlling the actions of company managers, so shareholders can minimize the agency costs borne.

When referring to the pecking order theory (see Myers [71]), it is acceptable that companies use leverage because companies experience a lack of investment funding. This is because the use of leverage represents a relatively lower capital cost compared to issuing new shares. Another reason companies being reluctant to issue new shares is that company managers tend to avoid delusions of company shares. Viewed from the agency theory, issuing new shares will create conflict between old and new shareholders. To avoid potential conflicts, shareholders motivate company managers to use leverage in funding investment activities. In addition to the motive for the lack of internal funding from retained earnings, there are reasons why company managers are motivated by shareholders to use leverage. According to Kalay [58], the motives are (a) transfer of risk from shareholders to creditors, and (b) transfer of welfare from creditors to shareholders.

Further analysis of the two motives described earlier is explained as follows. The results of this study support the idea of Kalay [58] regarding the transfer of risk from shareholders to creditors. The negative influence of leverage on investment has indicated creditors provide restrictions on the investment policy. Examples of restrictions on company investment policies are restrictions on high-risk investments and minimum requirements for liquidity level. This is done by creditors to prevent the transfer of risk from shareholders to creditors. Then, the results of this study show a positive influence of leverage against dividends; this does not support the second motive proposed by Kalay [58]. The findings of this study are interesting because they will provide criticism from the debt covenant theory (see Kalay [58]). Agency problems between companies (company managers and shareholders) with creditors, actually never happened. The first reason is that when the company has obtained the approval of using leverage from creditors, this actually indicates that there is no agency problem between the two parties. When there is an agreement between the company and the creditors related to the use

of leverage, then there has been an alignment of interests between the company (company managers and shareholders) with creditors. The interests of company managers are companies getting funding sources at a 7 cheaper cost compared to issuing new shares.

Second, the use of corporate leverage also affects investment policies and corporate dividend decisions. In general, leverage is used by companies as one of the funding mechanisms for corporate investment activities. The company uses leverage when the company experiences a lack of funding from retained earnings. The greater the lack of funding for investment, the higher the amounts of leverage used will be. When referring to the pecking order theory (see Myers [71]), new companies will use leverage because companies experience a lack of investment funding. Companies use leverage, also motivated to (a) supervise the actions of creditors to company managers (see Easterbrook [40]; Jensen [56]), and (b) transfer of risk from company shareholders to creditors (see Kalay [58]).

As explained earlier, the results of this study do not support Franklin and Muthusamy [45] and López-Iturriaga and Rodríguez-Sanz [65] that leverage has a significant positive effect on company investment. There are two arguments that can explain this. The results of this study also do not support several arguments, explained as follows.

#### **4.2. The Effect of leverage on dividends**

The second hypothesis (H2) is leverage affects dividends. The results of the analysis show that leverage has a significant positive effect on dividends. The results of this study support other studies in the context of Indonesia. The results of this study do not support the debt covenant theory (see Kalay [58]). Empirically, the results of this study support the research of Al Taleb [12]. These results also do not support research by Kaźmierska-Jóźwiak [63], Esqueda [42], Arko, et al. [15], Holmen, et al. [52], Al-Malkawi [8], Aivazian, et al. [5], Chen, Jian, and Xu [28], Al-Kuwari [7], Al-Malkawi [9], Garay and Gonzalez [47], Pattenden and Twite [74] and Agrawal and Jayaraman [3].

The study finds indications that the use of leverage by companies affects the dividend policy, for cases in Indonesia. Creditors will limit company dividend payments for reasons to prevent the motivation of company shareholders to (a) transfer risk from shareholders to creditors, and (b) transfer of welfare from creditors to shareholders (see Kalay [58]). Based on the results of this study, it can be seen creditors do not limit the dividend policy. The opinion of Kalay [58], regarding the dividend policy that the payment of dividends will cause the transfer of welfare from creditors to shareholders, is not proven. There are three possibilities for this. First, creditors have an interest in channeling funds to the company. From the creditors' point of view, the distribution of funds to the company can be considered as a business for future returns because of the interest that will be obtained in the future. Based on this analysis, a higher bargaining position will be with the company. The basis of this argument is that every creditor (in this case, banks) always has a target to get an increase in customers (debtors) from time to time. On the other hand, creditors (in this case, banks) also face competition from fellow creditors (in this case banks). These two reasons underlie why creditors will find it difficult to limit

the dividend policy, if the company uses leverage from a creditor. The risk that will be borne by the creditor, if the creditor restricts the dividend policy (in accordance with the debt covenant theory by Kalay [58], is to lose the prospective debtors. The company will be allowed to reject the limitation of the dividend policy proposed by creditors and will choose other creditors. Based on this analysis, the conclusion from Kalay [58], that the payment of dividends will cause the transfer of welfare from creditors to shareholders of the company, is weak and not proven in Indonesia.

Second, the argument from Kalay [58], that dividend payments will cause the transfer of welfare from creditors to shareholders of the company, is weak, because there is already an alignment of interests between the creditors and the company. When the two parties agree on the use of leverage by the company, there is an alignment of interests between the two. The use of leverage and its terms has been agreed from the beginning by both parties. It is very unlikely that the creditors and company will break the agreement. Based on this analysis, since the beginning, the creditors have realized that there is an investment return to shareholders (in the form of dividends) higher than the investment return from creditors (in the form of interest). Another reason that might explain is that companies do not pay dividends at all accounting periods. Based on the accumulated calculations during the period of using leverage, then investment returns from creditors (in the form of interest) may be higher than the investment return to shareholders (in the form of dividends). This second argument also weakens the theory of Kalay [58] that the company will limit dividend payments because it prevents the motive of transferring welfare from creditors to shareholders.

### **4.3. The effect of leverage on the company value**

The third hypothesis (H3) is leverage affects the value of the company. The results of the analysis find evidence of leverage having a significant negative effect on the company value. The results of this study do not support leverage signaling theory (see Ross [77]). Empirically, the results of this study support research by Konijn, et al. [60], Chen, et al. [26], Ammann, et al. [13], Benson and Davidson [19], Ghosh [49], Fukui and Ushijima [46], Villalonga and Amit [81], Chen, Guo, and Mande [27], López-Iturriaga and Rodríguez-Sanz [65], and Chen, Hexter, and Hu [29]. The results of this study also do not support research by Al-Najjar [11], Chen, et al. [30], Ehie and Olibe [41], Byun, et al. [25], Connelly, et al. [33], Garay and Gonzlez [47], Amidu [14], Kalcheva and Lins [59], Chen and Ho [31], Black and Kim [22], and Henry [50].

The results of this study have several meanings, as follows:

1. The results of this study do not support the signaling theory from Ross [77], which reveals leverage can be used as a mechanism to increase the company value. It is indicated that real estate companies in Indonesia are unable to convey information about company prospects with high leverage.
2. Based on the results of this study, other meanings can explain the negative impact of using high leverage on the creation of the company value. The first argument, along

with the use of high leverage in real estate companies in Indonesia, is that the real estate companies have been unable to keep up with its financial performance. The use of high leverage and poor company performance will have a negative impact on the value of the company. Companies that use high leverage will bear a high interest cost and a high risk of bankruptcy. The high risk of bankruptcy of a company will also have a negative impact on the value of the company. The second argument is that the results of this study indicate that real estate companies in Indonesia are not able to utilize tax protection because of the maximum use of leverage. This is because the benefits obtained by tax protection due to the use of leverage are not worth the risk of bankruptcy that the company is responsible for. This condition is as explained in the trade-off theory (Myers [71]), which reveals the use of leverage at a certain level will be able to increase the value of the company, and conversely the use of excessive leverage can reduce the value of the company.

3. Easterbrook [40] and Jensen [56] have revealed that the use of leverage by companies will lead to leverage (through creditors) to act as a mechanism to control and supervise the actions of company managers. Both of these thoughts try to explain the mechanism to reduce the agency cost that must be borne by shareholders (as principals), by delegating supervision to company managers to creditors. The motivation will make shareholders to encourage company managers to use leverage in funding the investment activities. The results of this study show that creditors are able to limit the funding of corporate investment or overcome over-investment problems for real estate companies in Indonesia (see Jensen [56]). In accordance with Jensen [56], over-investment problems occur because companies have excessive free cash flow; and to overcome this agency problem, it is better for company managers to distribute the free cash flow to shareholders in the form of dividends. The findings of this study that companies that use high leverage in Indonesia are companies that tend to pay high amounts of dividends. This indicates that shareholders encourage company managers to pay dividends; on the other hand, shareholders also encourage companies to use leverage when companies experience a lack of funding for corporate investment activities. If the creditor allows this to happen, then the level of the company's financial health becomes uncontrolled, which later will have an impact on the company's ability to pay its obligations. The results of this study show that leverage have a significant positive effect on dividends, a finding that is not supportive with Kalay [58]. Related to the agency problem, the findings of this study will provide new knowledge to the theory based on the agent and principal relationships. The contribution of research results to agency theory will be explained in the section on the contribution of research results to business finance theory.
4. The results of this study also find indications that companies that use high leverage in Indonesia will lead to limited funding of corporate investment activities. Company investment is a generator that can create and increase the profitability of a company. The low the investment funding may lead the company to have trouble in creating and increasing the profitability. Companies that experience this condition will tend



to find it difficult to survive and to provide investment returns (dividends) to their shareholders, so that it will ultimately have a negative effect on the value of the company. There is another argument why creditors tend to limit the funding of corporate investment activities. This refers to the theory of Aivazian, et al. [6], which reveals creditors tend not to fund company investments in companies that have used high amounts of leverage and have no growth opportunities. Creditors will analyze the investment proposal submitted by the company. When creditors know that the company has used high leverage and does not have a decent growth opportunity, creditors will tend to refuse to investment funding. This information can then be used as a reference by the capital market, so companies that use high leverage and have no chance of growth will get negative reaction by the capital market.

#### **4.4. The effect of investment on the company value**

The fourth hypothesis (H4) is investment affects the value of the company. The results of the analysis found evidence of investment having no significant positive effect on the company value. The results of this study do not support the Irrelevant Dividend Theory of Miller and Modigliani [68]. Empirically, the results of this study support research by Florackis, et al. [44]. The results of this study do not support research by López-Iturriaga and Rodríguez-Sanz [65]. The results of this study mean that investment made by real estate companies in Indonesia is not an important factor in increasing the value of the company. The high the company funds its investment activities do not help to create the company value.

#### **4.5. The effect of dividends on the company value**

The fifth hypothesis (H5) is dividends affect the value of the company. The results of the analysis found dividend evidence had a significant negative effect on the company value. The results of this study do not support the dividend signaling theory (see Bhattacharya [21]). Empirically, the results of this study support research by Henry [50], Chen, et al. [27] and Stevens and Jose [79]. The results of this study do not support research by Jiang and Stark [57], Hughes [53], Amidu [14], Villalonga and Amit [81], Chen and Ho [31], and Kalcheva and Lins [59].

The results of this study indicate that high dividend payments will cause a decrease in the value of the company. There are several arguments that can explain this. First, the market considers that at present the condition of the company has the opportunity to grow, so the company should focus on funding investment activities. In addition, also, with intense competition in the real estate sector, companies to be able to survive in the industry must have product innovations. The dividend payments are considered inappropriate by the market. The consequence of dividend payments is that companies will use high amounts of leverage. This is reinforced by the results of this study finding an indication of the use of high leverage will cause an increase in dividend payments.

The second argument, the market will react negatively when a company pays dividends. The reason is that when a company pays dividends, the company is indicated

not to have a profitable growth opportunity or investment in the future. When referring to the free cash flow theory (Jensen [56]), to avoid agency problems caused by the use of free cash flow owned by the company to fund investment that do not have a positive NPV (over-investment), the company managers must distribute the free cash flow in the form of dividends. There is a negative reaction with dividend payments, so this does not support the dividend signaling theory (see Bhattacharya [21]). Previously explained, Bhattacharya [21] revealed dividend payments to shareholders is a signal about the company's prospects in the future; the higher the dividend payment to shareholders, the better the company's prospects will be in the future.

## 5. Recommendations

Leverage has a significant effect on investment, dividends, and company value. Evidence of investment has no significant positive effect on the company value and dividend evidence has a significant negative effect on the company value. So it can be concluded that leverage has a very important influence in the field of finance, because leverage itself can affect several factors. Based on the findings of this study, some things can be suggested. As this study has found evidence that leverage has a significant negative effect on investment in Indonesia, the government as the capital market regulator, especially the real estate sector, must provide banking regulations. The banking regulation is expected to be able to accommodate the interests of real estate companies (related to investment policy) and creditors (related to credit policy); the banking regulations must be able to facilitate business people in accessing credit from banks. The study also reveals that dividend payments by companies do not always increase company value (or result in positive reaction by the market), as stated by Bhattacharya [21]; thus further research is suggested to examine market reaction to the announcement of dividend payments.

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