

## **An Investigation Of Free Cash Flow Againsts Investment Decisions And Company Value**

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### **Abstract**

Investment choices are closely tied to the internal and external funding sources. The market friction affects investment decision, and debt financing decision. The relationship between cash flow and investment efficiency has been extensively examined when making investment decisions. In terms of agency cost justifications, managers frequently spend internal funds when a company has a strong free cash flow. This study aims to synthesize and to test empirically the impact of free cash flow on investment choices and company valuation as a supplemental factor. Manufacturing firms registered on the Indonesia Stock Exchange made up the study's sample. Purposive sampling was utilized to gather the data, and a sample of 117 businesses was obtained. The findings show that the boosting free cash flow had a positive impact on business value. Investment choices were affected by free cash flow. Additionally, the causal relationship between free cash flow and firm value was mediated by investment choices. With an observation period from 2016 to 2022, it can be concluded that free cash flow has a favorable and significant impact on company valuation and investment decisions on the Indonesia Stock Exchange.

**Kata Kunci:** Free cash flow, Investment Decisions, Company Value

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### **INTRODUCTION**

Free cash flow provides financial flexibility for companies to make larger investments. Free cash flow is a representation of cash flows for an accounting period in a company's financial statements. The quantity of free cash flow in a healthy corporation indicates the amount of money it has available for use in its debt strategy (Afiezan et al., 2020; Toumeh, 2020). With sufficient free cash flow, companies can finance new projects without relying on external funding sources such as loans or issuing new shares. The high free cash flow can influence investment decisions by giving companies more opportunities to grow their business (Fusheng et al., 2015). Shareholders will gain from investments with promising futures, and vice versa (Jiang, 2016; Dirman, 2020). However, when a manager makes a poor investment decision, they have a propensity to hide the company's subpar performance from investors (Bukit & Nasution, 2015).

Furthermore, agency theory by Jensen, (1986 in Hill & Nasution, 2015) stated that in managing company investments it should contain an adequate portion of debt, because debt is a control mechanism against the tendency of managers to behave opportunistically. Policy regarding. The inclusion of debt raises the company's risk while also increasing the projected rate of return; this is a trade-off that occurs in capital structure. Increasing debt creates more risk, which tends to reduce stock prices even though the projected rate of return increases (David & Ali, 2023). The company will have more capacity to preserve present earnings the more steady the profit is, and as a result, the profit quality will be higher (Vakilifard & Shahmoradi, 2014).

Debt can be used to control the excessive use of free cash flow which tends to be used by managers in investment projects with negative NPV, which causes inefficiency in managing the company by management. Managers may be encouraged to work harder and make wiser investment decisions as a result of this debt (Park & Shawn, 2013). Managers have to be more cautious when using debt to meet the demand for finances to add fresh capital. According to Jensen and Meckling (1976 in David & Ali, 2023) claims that using debt can lessen the requirement for outside stock for the business and lessen agency issues between management and shareholders.

Furthermore, the theory underlying corporate funding decisions is the pecking order theory, Myers (1984 in Serrasqueiro, Z., & Caetano, 2015) which states that businesses have a propensity to choose their funding sources based on a risk hierarchy (pecking order theory). Information asymmetry is the foundation of the pecking order theory. Information asymmetry will have an impact on the financial structure of the organization by restricting access to outside funding sources. If a firm finances its investment by issuing shares, investors would typically view this as bad news given the information asymmetry (Lee & Jae, 2019). As a result, businesses will favor funding their investments in descending order of risk (Mardasari, 2014). The pecking order hypothesis, which asserts that businesses often use internal equity first and external funding if necessary, is sometimes used to describe this issue. So that harm can be done and even people who play significant roles can try to participate in a highly damaging existence. Investors and creditors who will invest will take the company's financial troubles into account (Dirman, 2020).

Some previous studies stated that the influence of transaction costs on firm leverage adjustments has been highlighted in recent study. We are aware that chances for adjusting leverage at relatively modest marginal costs can arise from free cash flow realizations. We discover that a firm's free cash flow characteristics have an impact on both the leverage target and the rate of change toward that objective (Faulkender et al., 2012). Regression analysis showed a significant correlation between free cash flow and return on equity (Vakilifard & Shahmoradi, 2014). In industries with superior information quality and industries with a higher degree of investment irreversibility, the impact of public corporate presence is stronger (Badertscher & White, 2013). Healthy companies' financial issues are significantly impacted by free cash flows and the interest coverage ratio, whereas investment and profitability have little impact. The financial troubles of healthy organizations were not significantly impacted by investment or management (Meryana, 2021).

On contrary with the other studies stated that according to the partial test results, only liquidity has an adverse and significant impact on debt policy; free cash flow, company size, and profitability have no such impact (Afiezan et al., 2020). The findings suggest that the widely held belief that funding assets through debt financing is not long-term sustainable. It might boost profits temporarily, but it is not a long-term solution, as poor investment choices, debt commitments, and an overall rise in financial risk will eventually result in a reduction in the sustainable cash flows available to managers to finance their investments (Japhet Imhanzenobe, 2020).

Moreover, free cash flow in this research is to know the company still has free cash flow after financing whole the investment. Information on operating cash flow is a good predictor of the company's financial health for investors. If a company generates a healthy quantity of cash flow, creditors or investors will feel confident that it can fulfill its obligations and stay out of financial trouble. If a firm finances its investment by issuing shares, investors would typically view this as bad news given the information asymmetry. As a result, businesses will favor funding their investments in descending order of risk.

A connection between corporate investment choices and internally generated cash flows would not exist in the ideal capital market since businesses would have raised money on the stock market when they needed it to fund their projects. If a business has extra funds available to fund its positive net present value (NPV) initiatives (Kadioglu & Aykut, 2017), then, the stockholders would receive this extra money (Toumeh, 2020). When purchasing stocks, investors frequently use the composite stock index as a benchmark. Multiple indices of all listed stocks on the Indonesia Stock Exchange are combined in this index. Consequently, before making any investment decisions, investors must understand the notion of synthetic stock indexes (Marjohan et al., 2023). Moreover, investors need to understand the idea of firm value since it shows how the market views the company. Investors want companies with high values because they signal shareholder prosperity. A high firm value is a sign of a corporation performing well (Faradila & Effendi, 2023).

This research is conducted on manufacturing companies because there is a phenomenon regarding the high contribution of the manufacturing companies sector to the Indonesian economy because the manufacturing sector provides multi-effects, ranging from product added value to employment. In addition, the manufacturing sector also shows that the regulations and investment climate in Indonesia are quite good. As well as the high share price of the manufacturing sector which means that the manufacturing sector has a high corporate value. Previous research results shows that there are still differences in research results (research gap) regarding the factors that influence companies value, so it has urgency to carry out further research to synthesize and test empirically the effect of free cash flow and leverage on companies value and investment decisions, as intervening variables.

This study aims to synthesize and to test empirically the effect of free cash flow and leverage on companied value and investment decisions, as intervening variables the manufacturing companies sector to the Indonesian economy because the manufacturing sector provides multi-effects, ranging from product added value on companies value and investment decisions on the Indonesia Stock Exchange with an observation period from 2016 to 2022.

## **METHODS**

### **Data Types and Sources**

The type of data used in this study was quantitative data, namely data expressed by numbers indicating the magnitude of the value of the variable under study (Creswell, 2014); (Harrison et al., 2020). While the source of data in this study is secondary data, namely data obtained from other parties who have collected it first. The data sources used consist of: (1) Indonesian Capital Marker Directory (ICMD), published from 2016 to 2022; (2) Annual reports for all Manufacturing companies that are members of the sample, for 2016 to 2022; (3) JSX Monthly Statistics, for issues from January 2016 to December 2022. (4) Dissertations and journals related to this research

This research is cross-sectional and time series or termed panel data (pooled data) based on the dimensions of time and time sequence because in addition to obtaining samples in the form of events at a certain time, they also take samples based on time sequence.

### **Data analysis method**

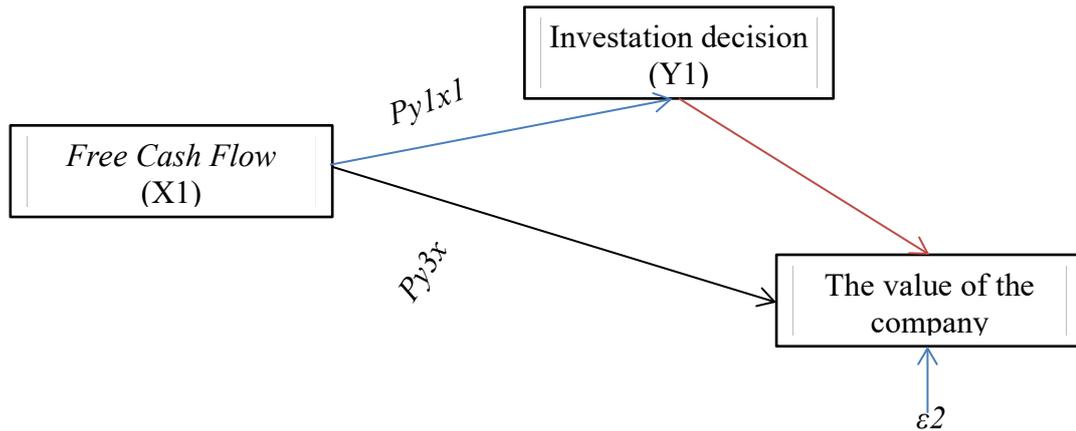
In order to ascertain in this study, a structural equation model, also known as structural equation modeling (SEM), which examines the causal link between latent variables included

in structural equations, was used (Wang, Q., & Sun, 2017). To assess survey data, interpret research findings, and test hypotheses, descriptive analysis, measurement model testing, overall model testing, structural model testing, and relationship testing of observed variables were utilized.

Several statistical application programs are utilized to speed up the analysis process, including the SEM (Structural Equation Model) program's packages AMOS (Analysis Moment of Structure) version 22 and SPSS (Statistical Program for Social Science) version 22 (Daniel Arkkelin, 2014; Zein, et al., 2019).

The structure used based on the empirical research framework is as follows:

Effect of Free Cash Flow, and Investment Decisions on Company Value:



Sub Structure of Causal Relations X1, X2, Y1 to Y2.

Information:

Endogenous Variable (Y) = Value

Exogenous variables (X1, X2, Y1, and Y2) = Free Cash Flow, investment decisions and firm value

**Population and Sample**

A population is a group of people or scientific objects that share particular traits and attributes (Creswell, 2021). Based on these traits and attributes, the population can be described as a collection of people or things under observation that share at least one trait. All companies in the manufacturing sector that are listed on the Indonesia Stock Exchange (IDX) comprised the study's population, with observational periods ranging from 2016 to 2022. Up until the time of the study, 117 businesses from the infrastructure, utilities, and transportation sectors were listed on the Indonesia Stock Exchange.

The reasons for using this timeframe are as follows: First, this study used panel data or pooled data, which is a combination of cross-sectional data and time series data. So, the wider the time span used, the greater the number of samples that can be obtained; Second, data for 2016 is used as the beginning of the period, with the hope that financial reports can be obtained with more objective company conditions, because they are relatively far from the financial crisis that occurred in 1997; Third, the data for 2022 is used as the end of the period, because at the time of data collection, the Indonesia Stock Exchange (IDX) last published the ICMD for 2022, which contains the company's financial statements for 2022.

The sampling method used in this study was purposive sampling. The sample criteria used in this study are as follows: (1) the company publishes financial reports as of December 31 for the 2016 financial year to 2022 financial year; (2) the company has information relating to various measurement variables, such as: company value proxied by Tobin's Q, free cash flow, leverage proxied by the Debt on equity ratio (DER), investment decisions proxied by the price earning ratio, Based on the business phenomena described. It can be seen that the total number of manufacturing sector companies listed on the IDX between 2016 and 2022 was 142

companies. Next, the sample selection process adopted in this study is presented, and was presented in Table 1.1 as follows:

Table 1.1 Process for selecting research samples for the 2016-2022 period

No	The criteria used	The Number
1.	Public company listing until 2022	868
2.	Non-manufacturing company	663
3.	Manufacturing company	205
4.	Manufacturing companies that are not listed consecutively during the 2016-2022 period	<del>-24</del> 128
6.	Complete manufacturing companies meet variable requirements over the 2016-2022 period Companies that deserve to be sampled	<u>117</u>

Source: Reworked Indonesian Capital Market Directory

Based on Table 1.1 above, the criteria for the number of samples use the required minimum number of samples. For the SEM model, the minimum number of samples required is 100-200 units or the minimum number of samples is 5 x independent variables/indicators, opinion of Ghozali (2007 in Windiana, L., & Bakhtiar, 2020). So that the total companies included in the criteria to be sampled were 117 companies.

## RESULTS AND DISCUSSION

### Results

Hypothesis Testing of Empirical Research Models. By comparing the p-value with a significance level (alpha) of 0.05, hypotheses were tested. If the p-value is less than 0.05, Ho was found to be in error and H1 was approved. In contrast, if the p-value was more than alpha 0.05, Ho was approved and H1 was disregarded. The following table shows the outcomes of this study's test of the hypothesis:

Table 2 SEM Structural Model: Direct Influence

No	Connection	Std Coefficient	CR	SE	P-values	Conclusion
1	Free cash flow (X1) to investment decisions (Y1)	0.190	8,884	0.021	0.000	Significant
2	Free cash flow (X1) against firm value (Y2)	0.944	2,858	0.330	0.004	Significant
3	Investment Decision (Y1) on Firm Value (Y2)	0.257	3,427	0.075	0.000	Significant

Source: Primary Data Processed

$$PER = 0.190 FCF + 0.010 LEV \dots\dots\dots (5.1)$$

$$P \quad (0.000) \quad (0.855)$$

$$Cr (8.884) \quad (0.183)$$

Structural equation 1.2 above also shows that the effect of free cash flow on investment decisions was indicated by a coefficient value of 0.014, a coefficient direction that was in accordance with the statement of hypothesis 1b. The results of testing this causality relationship found enough evidence to accept the hypothesis by having a critical ratio (cr) of 4.537 with a sig-t value of 1.96 which means a positive and significant influence at the level of  $\alpha = 0.5\%$ . Thus hypothesis 1b, which states that increasing free cash flow will have a positive effect on investment decisions, can be accepted.

$$\begin{array}{l}
 \text{TBSQ} = 0.944 \text{ FCF} + 0.231 \text{ LEV} \dots\dots\dots(5.7) \\
 \text{P} \quad (0.004) \quad (0.027) \\
 \text{Cr} \quad (2,858) (2,208)
 \end{array}$$

The effect of free cash flow (X1) on the value of Tobin's q (Y2) is indicated by the direction of the coefficient according to the statement of hypothesis 6b. The result of a coefficient of 0.066, a test of this causality relationship, finds sufficient evidence to accept the hypothesis because it has a critical ratio (cr) of 2.032 with a sig-t value of 1.96 which means a positive and significant influence at the level of  $\alpha = 0.5\%$ . Thus hypothesis 6b, which states that an increase in free cash flow (X2) will have a positive effect on firm value (Y4), can be accepted.

Based on the structural equation above, it can be seen that the influence of the investment decision (Y1) on Tobin's q (Y2) is indicated by a coefficient value of 0.258, a coefficient direction that is in accordance with the statement of hypothesis 5a. The results of testing this causality relationship found sufficient evidence to accept the hypothesis because it has a critical ratio (cr) of 5.311 with a sig-t value of 1.96 which means a positive and significant effect at the level of  $\alpha = 0.5\%$ . Thus hypothesis 5a which states that an increase in investment decisions (y1) will have a positive and significant effect on the value of Tobin's q (Y3) was accepted.

In addition to testing the direct effect, the SEM also recognizes the indirect effect as follows:

Table 3 Structural Model of SEM Results: Indirect Influence

Indirect Influence	Direct Influence Coefficient	Indirect Influence Coefficient	Information
X1 → Y1 → Y2	X1 → Y1 = 0.190 *	Y1 → Y2 = 0.257*	0.00184541* Significant
X2 → Y1 → Y2	X2 → Y1 = -0.010 *	Y1 → Y2 = 0.257*	0.0202766* Significant

Source: Appendix

Ket : \* significant, <sup>ns</sup>not significant

**The Effect of Free Cash Flow on Companies Value Mediated By Investment Decisions.** In testing the effect of investment decisions in mediating free cash flow on firm value,  $p_2 = 0.190$ ;  $p_4 = 0.257$ ;  $Sp_2 = 0.330$ ;  $Sp_4 = 0.075$ . The mediating effect shown by the multiplication coefficient ( $p_1p_7$ ) is tested with the Sobel Test as follows:

$$\begin{aligned}
 Sp_1p_4 &= \sqrt{p_4^2 Sp_2^2 + p_2^2 Sp_4^2 + Sp_2^2 Sp_4^2} \\
 &= \frac{\sqrt{(0.257)^2 \times (0.330)^2 + (0.190)^2 \times (0.075)^2 + (0.330)^2 \times (0.075)^2}}{0.0080083611}
 \end{aligned}$$

To calculate the t statistic for the effect of mediation, use the following formula

$$\begin{aligned}
 t &= \frac{p_1p_4}{Sp_1p_4} \\
 &= \frac{0.04883}{0.0080083611} \\
 &= 6.09737740223 \\
 &= 6,010
 \end{aligned}$$

With a significance level of 0.05 with t table 1.96, it can be concluded from the calculation above that t-count of 6.010 was greater than t-table (1.96), it meant that the investment decisions can mediate free cash flow on firm value.

**Discussion**

**The Effect of Free Cash Flow on Investment Decisions.** The free cash flow variable had a positive and statistically significant impact on investment choices at 0.014, with a p-value substantially lower than the level of  $\alpha = 0.5\%$ . These findings suggest that, if other

variables that influence the magnitude of investment decisions are held constant, a rise in the usage of free cash flow will likewise be accompanied by an increase in investment decisions. The findings of this study support earlier studies that showed free cash flows had a favorable, statistically significant impact on financial performance (Mutende et al., 2017). Managers of organizations with abundant free cash flow will utilize their accounting discretion to boost reported profitability and make investment decisions that aren't always in the best interests of the shareholders. Investors and analysts who are interested in a company's financial performance should consider the firm's historical performance since it affects the quality of the company's financial reports in the present and the future (Sari et al., 2021). The market values of a firm are assessed by the Free Cash Flow to Equity (Nafea et al., 2014).

The results of this study show support for the theory of free cash flow put forward by Jensen (1986 in Muchtar et al., 2014), where companies with large free cash flows tend to prefer investing rather than dividing it in the form of dividends. In making an investment, of course, funding is needed, the greater the available funding (available cash flow), it is expected that more new investment opportunities can be realized. Thus we expect a positive relationship between cash flow and the level of investment. By using EBITDA (earning before interest and taxes, plus depreciation and amortization scaled by total capital) as a proxy for investment. The free cash flow variable had a positive and significant impact on investment choices, with a p-value of 0.000 much and an effect size of 0.014. Due to the greater purchasing flexibility of consumers and the firm's reduced risk of an unanticipated production break, the higher inventory stock helps to improve sales revenue.

Traditional theory also states that there are two interpretations of this positive relationship between free cash flow and investment decisions. First, the relationship is an agency problem management relationship, where managers in companies rich in free cash flow are involved in extravagance. Free cash flow can be an incentive for managers to enlarge the company's business empire (Ball et al., 2016). Managers have the initiative to invest excessively (overinvestment) because of the monetary or non-monetary benefits associated with firm size. Both of these positive relationships reflect the imperfection of capital markets whereby expensive external financing creates the potential for internal cash flows to broaden the set of investment opportunities.

According to this theory, managers have a desire to increase the size of the company so that they sometimes accept detrimental projects that can reduce the welfare of shareholders. The manager's ability to control fluctuations in cash flow within the company must be limited by the use of debt. The use of debt will make company managers pay interest to bondholders so that in making investments managers will be more careful and not invest in projects that are detrimental to the company. Thus, the company is able to keep its cash flow so that it may continue to pay its debt interest obligations and consider debt reduction (Meryana, 2021).

In the pecking order theory states that managers often act underinvestment with the assumption that there is information asymmetry between internal (managers) and the market, where the market lacks knowledge about the quality of the company and its projects, so it is difficult for the market to distinguish between good and bad companies. which companies are bad so the market demands a risk premium that is too high for this risk. Information asymmetry can lead to the rejection of good investment opportunities because external funding is too expensive for company management. As a result, some of the good investment project opportunities are not profitable enough to cover the high cost of external funding, and the good investment opportunities end up being passed over by management. These findings have implications that companies with low growth must seek alternative funding, for example through debt policies.

**Effect of Free Cash Flow on Firm Value Through investment decisions.** The free cash flow variable has a positive and significant effect on firm value of 0.066 with a p-value of 0.037 which is less than the level of  $\alpha = 0.5\%$ . These results are in accordance with the signal theory

which states that the presence of free cash flow within a corporation can give investors a good indication of its future prospects and demonstrate its potential to generate cash in the future. Companies with higher free cash flow rates will generate higher returns than those with lower free cash flow rates. These findings are consistent with evidence from earlier studies that found a link between managing free cash flow and earnings. Ineffective fixed asset investment might act as a mediator between free cash flow and earnings management (Fakhroni, et al., 2018).

Based on the Sobel test above, it shows a calculated t-value of 1,970 greater than t-table 1.96 so that investment decisions can mediate free cash flow on firm value, these results assume that companies with high levels of free cash flow will take advantage of investment opportunities (Net present value (NPV) positive) to increase the value of the company. Managers are expected to take advantage of free cash flow in profitable investment decisions to increase firm value.

Myers and Majluf (1984 in Sonjaya, 2017) developed a framework to find out the relationship between financing and investment in conditions where companies have better information than investors. Based on the idea that issuing new shares is the most expensive option, companies with free cash flow can build financial slack by limiting dividends paid to take advantage of existing investment opportunities. The cash can be stored in the form of marketable securities (Martinez-sola et al., 2012). This financial slack can be used to take investment opportunities in projects that provide positive NPV (Kadioglu & Aykut, 2017). So that it will have an impact on increasing the value of the company. Free cash flow and capital structure have significant and positive effects on firm value (Mansourlakoraj, 2015).

Based on the Sobel Test above, it shows that t-count (1.97) was greater than t-table (1.96). The results of this study accepted hypothesis which states that investment decisions are able to mediate the effect of free cash flow on firm value.

An increase in capital structure, especially increased debt capital, gives a signal that the company does not use internal funds or retained earnings for investment needs so that investors respond well and have an impact on increasing company value. With the principle of corporate management both in obtaining and using funds must be based on efficiency and effectiveness. Efficiency in the use of funds means that whatever funds are invested in assets, they must be used as efficiently as possible to produce the maximum level of return on investment.

Therefore, the allocation of funds must be based on proper planning so that idle funds become small. Efficiency in the use of funds directly and indirectly will determine the size of the profits generated from the investment. The financial manager must be wise in carrying out the function of using funds which is always required to look for investment alternatives then be analyzed and the results of this analysis must be able to make a decision which alternative to choose. In other words, managers must make the right investment decisions.

The results of this study are in line with the trade off theory which states that if there is an increase in debt, it will cause an increase in firm value (Nemati, & Jorah 2012). Furthermore, the thing that can be done by financial managers is to be careful in setting company leverage with the aim of optimizing company value. By subtracting certain factors from the free cash flow from operations, such as interest payments and capital expenditures, free cash flow can be determined. Free cash flow yield can then be used to build ratios that provide a more accurate assessment of the company by connecting it to the enterprise market value or market value of equity (Japhet Imhanzenobe, 2020). Therefore, companies should effectively increase profitability to maintain dividend payments to shareholders, as well as to increase profitability to maintain dividend payments to shareholders, as well as to improve their to shareholders, as well as to improve their liquidity base to sustain dividend payments (Adu-Boanyah et al., 2013).

**The Influence of Investment Decisions on Firm Value.** The investment decision variable has a positive and significant effect on firm value of 0.258 with a p-value of 0.000

which is less than the level of  $\alpha = 0.5\%$ . This indicates that the greater the investment decisions issued by the company will have an impact on increasing the value of manufacturing companies. With an increase in the PER value, it indicates that the state of the manufacturing company is healthy and experiencing growth. The decision made by a manufacturing company to invest in high assets is considered by investors as good information.

In times of financial difficulty, possibilities can be found through investments that are more profit-driven, such as participating in the capital market (money market) through fixed income like coupons and others that are more certain (Meryana, 2021). With a high investment decision from the company, future profits will also be high so that it has an impact on increasing the value of the company. High investment decision information provides a good signal to investors about the value of the company. Found that overinvestment is more significantly correlated with financial reporting quality for companies with large free cash flow (Fusheng et al., 2015).

Furthermore, as novelty of this study found that the impact of free cash flows as an intervening variable on investment choices and company value. Free cash flow influence on investment decisions, and substantial effect, are stated that businesses listed on the Indonesia Stock Exchange. The value of a company is positively and significantly impacted by free cash flow and investment choices. Additionally, investment choices significantly and favorably affect the value in Indonesia manufacturing companies.

## CONCLUSION

This study investigates the impact of free cash flow towards companies value and investment decisions as intervening variables. Free cash flow influence on investment decisions, and substantial effect are stated using a sample of 117 businesses listed on the Indonesia Stock Exchange during 2016–2022 period. The value of a company is positively and significantly impacted by free cash flow and investment decisions. Additionally, investment decisions significantly and favorably affect the value of the companies in Indonesia manufacturing companies.

## SUGGESTION AND LIMITATION

As recommendation for further researchers that to obtain firm value, various efforts are needed by managers, namely by improving the managerial ownership structure and improving the external capital structure so that it can directly contribute to firm value. This study only uses pooled data, which is a combination of cross-sectional data and time series data so that it is possible to have bias in the results of the analysis. The limitations of this study are expected to open opportunities for future research to consider non-linear data analysis models, as an effort to obtain more accurate data analysis results.

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