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Determinant Factors of Firm Value: Cash Holdings and Dividend Policy as Mediation

Eka Yudhyani¹, Umi Kulsum², Faizal Reza³, Astrid Napita Sitorus⁴,
Nanda Wahyu Indah Kirana⁵

^{1,2,3}Management Program, ⁴Accounting Program, Faculty of Economics and Business,
Universitas 17 Agustus 1945 Samarinda, Jl. Ir. H. Juanda, No.80 Air Hitam, Kec. Samarinda
Ulu, Kota Samarinda, Kalimantan Timur 75123, Indonesia.

⁵Accounting Program, Faculty of Economics and Business, Universitas Pembangunan Nasional
Veteran Jawa Timur, Jl. Raya Rungkut Madya, Surabaya, Jawa Timur 60294, Indonesia

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Abstract

In times of uncertainty such as a crisis, a company needs to maintain its value for its investors. Theory suggests that for uncertainty, the company needs to have cash holding, but on the other hand, it needs to pay dividends. Therefore, this research aims to prove the relationship between factors that affect firm value with cash holding and dividend policy as mediation. We conduct this research on the manufacturing company from 2015 to 2021 registered on Indonesia Stock Exchange. Using the purposive sampling method, 82 company was chosen and 574 data was studied. To test our hypotheses, we use SmartPLS. The results proved that cash holding can influence firm value, while dividend policy cannot. For the indirect effect, we found that profitability and net working capital indirectly affect firm value through cash holding. We explain the theory and practical implications and describe our study's limitations. For future research, we suggest differentiating firm value before and during a financial crisis, and the industry sector that has the worst, moderate, and light impact from the crisis.

Keywords: firm value, cash holdings, dividend policy, cash conversion cycle, net working capital, profitability.

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¹ Eka Yudhyani
Email: yudhyanieka@gmail.com

INTRODUCTION

The establishment of a company must have a goal, which is not only to gain profits with existing resources but also to improve the financial performance of a company and maximize its value. The firm value will increase when a company has good financial performance to investors. Increasing firm value is the company's hope because it will show the prosperity of shareholders (Khumairah & Suprihadi, 2021). The wealth of the owner will be higher, which can be seen from the high share price (Awulle et al., 2018). Firm value is an assessment given by investors related to the performance of a company related to stock prices (Sondakh, 2019) and is the value of the market of outstanding equity and debt securities owned by the company (Husna & Satria, 2019).

In 2019, before the economic crisis occurred due to the Covid-19 pandemic in Indonesia, it had begun to correct slightly and there was a decrease in the value of shares of manufacturing companies in Indonesia. With the Covid-19 pandemic beginning in March 2020, the stock value fell even further in 2020. Figure 1 shows a graph of the 2016-2020 stock value. In 2019 there was a slight decrease in the value of the shares from 3.8343 in 2018 to 3.7041 and decreased drastically at the start of the pandemic to 2.2280.

One of the reasons for the decline in company value in 2020 was due to the covid-19 pandemic. Bareksa (2020) reported that the covid pandemic has an impact on all levels of society, especially on the survival of a business, Chairman of the Board of Commissioners of the Financial Services Authority, Wimboh Santoso, explained that this covid pandemic depressed the economy so that the level of public consumption decreased which caused a decrease in revenue and turnover of a business. Hamesya (2022) stated that the spread of the coronavirus affected capital market trading on the Indonesia Stock Exchange because most share prices had decreased so it was a negative signal that made investors more interested in selling their share ownership.

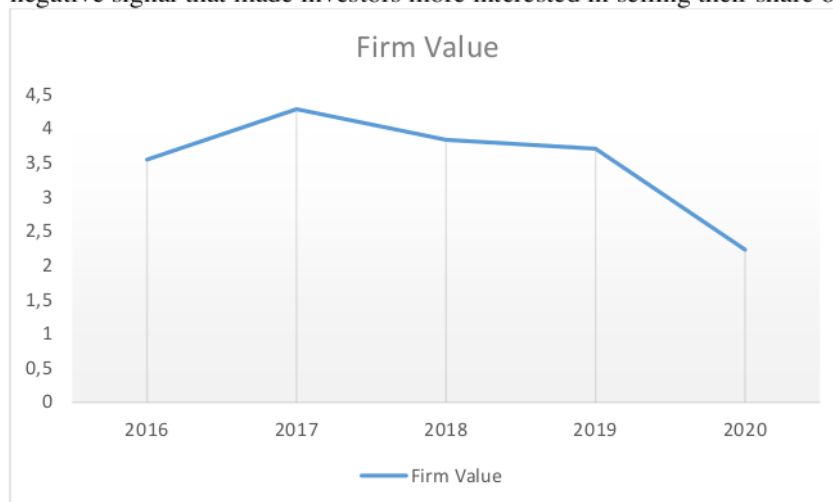


Figure 1. Firm Value 2016-2020

Source: Data firm value processed

Based on previous research, fundamentally, firm value can be influenced by net working capital (Boisjoly et al., 2020; Budi Setyawan, 2021), growth opportunity (Alfira et al., 2021; Wulandari & Setiawan, 2019), capital expenditure (McConnell, 1985; Salimah & Herliansyah, 2019; Ullah et al., 2021), cash conversion cycle (Amelia & Kitri, 2019; Ceylan, 2021; Doğan & Kevser, 2020), and profitability (Akhmadi & Januarsi, 2021; Harahap et al., 2019; Jihadi et al., 2021; Mubyarto, 2020; Tui et al., 2017). However, as far as the author is aware, there are still few studies that use cash holding and dividend policy as intervening or mediating variables. In this study, we use these two variables as intervening variables because some existing research has not proven whether these two variables have a direct impact on the firm value or an indirect impact. Therefore, this research is important to do to make a better model of the factors that affect firm value.

A company's ability to maximize the prosperity of its shareholders can be reflected in its firm value. A crucial aspect that needs to be taken into consideration is the company's value because it is a measure of investors in assessing whether the company is successful in achieving its business goals (Aksan & Gantjowati, 2020; Oyedokun et al., 2020). In addition, a company's prospects may be reflected in its high value. (Suryandani, 2018). Firm value is a measurement used to determine the views or assessments given by investors regarding the performance of a company related to stock prices (Masytari, 2019; McConnell, 1985). Companies that have high share prices can increase the firm value since maximizing the affluence of the company and prospering the stockholders is reflected in the high share prices. The value of the firm is also the market value of equity securities and debt outstanding owned by the company (Jihadi et al., 2021).

Cash Holding is a measurement used to find out the amount of cash or cash equivalents owned company to be able to use it to meet the needs of a company. Cash Holding is also a company policy in managing finances appropriately, namely by holding or keeping cash over the company's costs (Asante-Darko et al., 2018; Habib et al., 2021; Isshaq et al., 2009; Minh HA & Minh TAÍ, 2017). Habib et al. (2021) proved that cash holding positively affects firm value in an unconstrained firm. Ameer (2012), Minh HA & Minh TAÍ (2017), and Chandra & Feliana (2020) also found that cash holding positively affects firm value. In contrast, Isshaq et al. (2009) indicated that cash holding has no effect on the value of the company, as well as the results of Habib et al. (2021), proved that cash holding has a negative effect on firm value in a constrained firm, Ameer (2012) discovered that cash holdings negatively affect the firm value for closely held firms.

Based on agency theory, Jensen & Meckling (1976), agency conflicts arise because of a difference in goals and interests between managers and shareholders share. A high level of cash holding in a company can give rise to an agency conflict between managers and shareholders in managing cash. This is because the manager who has the power to manage cash tends to do actions that can benefit himself and not shareholder interests. Meanwhile, shareholders tend to want to take actions that can increase company profits such as making high investments with returns high too. However, when managers also intend to invest the idle cash on hand, they will increase the firm value. When firms have more cash in hand, it also signals that they have no liquidity problem. Therefore, the first hypothesis is:

H1: Cash holding positively affects firm value.

The dividend policy of a company can be seen through the dividend payout ratio. The ratio can show the amount of payment company dividends to shareholders. Through dividend payments, companies can signal to investors that they are paying attention to the welfare of shareholders. In addition, through information regarding the amount of dividend payments, investors can know the good or bad prospects of the company in the future (Chaudry et al., 2015)(Chaudry et al., 2015).

According to the theory of bird in the hand (Angelo, 2013; Chaudry et al., 2015), investors are more like returns in the form of dividends rather than capital gains because they are considered safer. Companies that offer high dividends will attract interested investors because an increasing number of investors interested in a company with high dividend payments will increase stock prices companies (Atmikasari et al., 2020).

Research conducted by Ali (2020) resulted that the dividend policy has a positive effect on the value of the company. This is because the dividend policy is able to anticipate risks that may arise due to corporate bankruptcy and anticipate the solvency of the bank. In contrast, Sondakh (2019) proved that dividend policy negatively affects firm value. However, Results from Atmikasari et al. (2020) and Chaudry et al. (2015) proved that dividend policy positively affects firm value. The second hypothesis is:

H2: Dividend policy positively affects firm value

Net Working Capital is part of the current assets owned by the company to be used for funding operational activities without disturbing the liquidation of the company. The company must have current assets exceed its current liabilities because this net working capital not only includes the number of assets owned. However, it also includes the number of current liabilities to be paid (Autukaite & Molay, 2011; Muharromah et al., 2019).

The Trade-off Theory explains that to be able to maximize the value of the company needs to optimize the management company (Maheshwari & Rao, 2017). So, the company needs to balance between benefits (marginal benefit) and costs incurred (marginal cost) company to have the availability of cash (Sari & Hastuti, 2020). Companies that have great working capital management however if it cannot be managed properly and strategically it will impact the decline in the firm value. This is due to the capital excessive network can cause a company to become an inefficient use of funds. Despite being often termed as a non-earning asset, the firms motivate to hold more cash than their normal working capital requirement (Maheshwari & Rao, 2017).

Net Working Capital basically can act as a substitute for cash owned by a company because it can be changed at any time to cash if companies need it for funding (Opler et al., 1999). This is following the pecking order theory (Myers & Majluf, 1984). They argued that the company will tend to use internal funding first rather than using external funding because it is cheaper and has no risk. However, if the funds are not sufficient will use external funding in the form of issuance of debt and equity.

The research results of Wulandari & Setiawan (2019) explained that net working capital has a positive effect on the cash holding of a company. This is due to net working capital being part of current assets and a substitute for cash owned by a company so that if there is an increase then automatically the cash owned by the company also experienced enhancement. It is the same

with the results of Suci & Susilowati (2021), that is, if the availability of net working capital increases, cash also increases. Cash is a part of current assets and total assets including components used to measure the level of net working capital of a company. Therefore, the third hypotheses are:

H3a: Net working capital positively affects firm value

H3b: Net working capital positively affects cash holding

H3c: Net working capital negatively affects dividend policy

H3d: Cash holding mediates the relation between net working capital and firm value

H3e: Dividend policy mediates the relation between net working capital and firm value

Growth Opportunity is a signal that the company is in good condition because it has the opportunity to develop (Wulandari & Setiawan, 2019). Every year company also has a goal of growth in order able to maintain the value and sustainability of the company as well can expand its business by making investment opportunities as well as businesses that can benefit the company (Opler et al., 1999).

The signalling theory explained that an act of management in how to manage a company can be a guide or a signal for current or potential investors related to the view of the company's business prospects in the future (Connelly et al., 2011). Growth Opportunity has a positive influence on the value of the firm because the company has high-growth opportunities that will be in the interests of investors to increase the value company. Growth opportunities provide positive signals expected by investors because it shows the company is in good condition to increase its firm value and also obtain the expected rate of return for investors (Wulandari & Setiawan, 2019).

According to Fajaria & Isnalita (2018), a growth opportunity is an opportunity or capability that the company has to be able to expand the company. In taking advantage of opportunities such as growth, the company also needs sufficient funds to be used to fund its activities in carrying out the stages of company growth useful in the future. Muharromah et al. (2019) found that the greater the growth opportunities within a company, the greater the need for funds required by the firm to pay for expansion activities. So that in order to fulfill the need for these growth funds, the company will establish a policy to have a level of cash availability that much first. On the contrary, the results of research from Alfira et al. (2021) indicated that growth opportunity negatively affects cash holdings. A company that owns high growth opportunities will make companies hold back the cash it has. It is based on the speculative motive of cash holding is the company's motive in having cash to use in various business opportunities that can be done to the benefit of the company. Meanwhile, Sualekhhattak & Hussain (2017) found that growth opportunities cannot influence dividend policy.

Therefore, it can be concluded that if a company experienced an increase in the level of growth opportunities owned, the level of the company's cash holding too increased. This is because the available cash will later be used to fund the development activities company, namely by doing business opportunities and investment, and have a guarantee in minimizing financial risk distress that is likely to occur as a result of an investment. The fourth hypotheses are:

H4a: Growth opportunity positively affects firm value

H4b: Growth opportunity negatively affects cash holding

H4c: Growth opportunity positively affects dividend policy

H4d: Cash holding mediates the relation between growth opportunity and firm value

H4e: Dividend policy mediates the relation between growth opportunity and firm value

Capital expenditure is a measurement used to assess the level of expenditure of the company's capital in funding its investment activities for acquiring and repairing fixed assets or long-term assets that can increase the effectiveness of the company (McConnell, 1985). Capital Expenditure is a relatively large corporate expenditure however not routine that can provide benefits for more than one-period accounting or in the long term.

The decision to use cash for capital expenditures can result in agency conflicts. Following agency theory (Jensen & Meckling, 1976), conflict arises in a corporate relationship from differences in goals and interests between **the owner of the company** (principal) and **the manager of the company** (agent). Managers tend to choose to invest with low risk. Meanwhile, shareholders tend to vote for making high-risk investments because they can generate high returns as well (Muharromah et al., 2019). As a result, it is possible to draw the conclusion that the company's value will rise proportionally to the value of its long-term assets and capital expenditures. This is because a company that has high fixed assets or long-term assets can help in increasing optimal productivity so that the level of effectiveness in managing the company was also good. An increase in the value of the company can cause investors to be attracted to invest in companies that result in the demand for stock also going up.

In the Pecking Order Theory (Myers & Majluf, 1984), internal funding is preferred over external funding since internal funding is cheaper and does not have a risk. Cash holding is capable to mediate the role of capital expenditure and company value. This is due to the fact that the company's value can be increased through capital expenditures aimed at optimizing operational and production effectiveness. So, the company requires a large enough fund to be able to do a large capital outlay. Meanwhile, Abor & Bokpin (2010) uncovered that capital expenditure and investment negatively affect dividend policy. The firms must choose whether they will use company resources to invest in capital expenditure or to pay dividends, so dividend policy will mediate the influence of capital expenditure and the value of the firm. Therefore, the fifth hypotheses are:

H5a: Capital expenditure negatively affects firm value

H5b: Capital expenditure negatively affects cash holding

H5c: Capital expenditure negatively affects dividend policy

H5d: Cash holding mediates the relation between capital expenditure and firm value

H5e: Dividend policy mediates the relation between capital expenditure and firm value

The cash conversion cycle is a measurement used to find out how much time the company to obtain cash from its operational activities starting from purchases to receipt of cash from sales (Chang, 2018). The company must consider the cash conversion cycle because the cycle determines what efforts should be needed to obtain optimal cash according to the target time. The study of Chang (2018) empirically proved that the cash conversion cycle negatively affects firm value.

The results of research conducted by Ceylan (2021), the cycle of cash conversion has a negative effect on firm value. This matter is due to the longer cash conversion cycle received will negatively impact the effectiveness and liquidity of a company so it becomes a signal that is not good for investors. Research by Amelia & Kitri (2019) also explained that companies that have a short cycle give a positive signal to investors because it signifies being able to manage the company's performance efficiently effectively and efficiently by being able to collect receivables quickly and slow down payments to suppliers but still maintain credibility.

In line with the signalling theory, Telly & Ansori (2017), mentioned that the actions taken for managing a company will provide a signal to investors regarding the conditions experienced by the company, whether it is in good or bad conditions that will impact the value company. Therefore, the length of the cash conversion cycle, the longer it will make the company receive the proceeds from the sales that have been made. As a result, it is difficult for the company to make adequate funding causing the company value to decrease. Due to the company experiencing financial difficulties will give a negative signal or bad impression to investors because the company is considered unable to manage the company properly. This signal contributes to the demand for shares decreasing causing the value of the company to get worse. Therefore, the sixth hypotheses are:

H6a: Cash conversion cycle negatively affects firm value

H6b: Cash conversion cycle positively affects cash holding

H6c: Cash conversion cycle negatively affects dividend policy

H6d: Cash holding mediates the relation between the cash conversion cycle and firm value

H6e: Dividend policy mediates the relation between the cash conversion cycle and firm value

Profitability ratios describe the company's ability to manage its investment funds. One of the uses of profit obtained by the company other than to be kept as retained earnings, it also can be paid as dividends. According to Akhmadi & Januarsi (2021), companies with high profitability ratios will do dividend payments to increase shareholder confidence because it has invested funds in the company which will later be managed by management.

Research conducted by Harahap et al. (2019) and Jihadi et al. (2021) found that companies that own high profitability ratios will show their ability to make dividend payments to their shareholders. Furthermore, if experiencing a loss (minus net profit) then the company will not pay dividends. The company's profitability ratios that describe the capabilities company in obtaining profits are one of the factors that affect investor interest. According to signalling theory, the company will give a signal to the external party that they have made various efforts to maintain performance which is illustrated through the acquisition of stable profits. Stable profit earning means that the company is not experienced a minus profit (loss) so that it can make payments dividends to stockholders. Concerning the ratio of firm profitability increased, the company will increase the amount of payments and dividends so that the value of the firm increases in the view of current and potential investors.

On the contrary, Tamrin et al. (2017) found that profitability negatively affects dividend policy. However, research conducted by Akhmadi & Januarsi (2021) discovered that an increase

in the company's profitability ratios will result in the occurrence increase in the company's dividend policy (Dividend Payout). Cash deposits can mediate the relationship between the cash conversion cycle and company value. This is due to the long cash cycles. It can create the longer the company gets cash receipts, so the company will find it difficult to meet the funding requirements resulting in disruption of operational and production effectiveness or a company discovered that the cause a decrease in value of the company. The increase in profitability will increase the value of the company (Akhmadi & Januarsi, 2021). Cash deposits can mediate the relationship between the cash conversion cycle and company value. This is due to the long cash cycles it can create the longer the company gets cash receipts, so the company will find it difficult to meet the funding requirements resulting in disruption of operational and production effectiveness company and causing a decrease in the value of the company (Wulandari & Setiawan, 2019). The seventh hypotheses are:

H7a: Profitability positively affects firm value

H7b: Profitability positively affects cash holding

H7c: Profitability positively affects dividend policy

H7d: Cash holding mediates the relation between profitability and firm value

H7e: Dividend policy mediates the relation between profitability and firm value

Figure2 shows the relationship of variables in this study

RESEARCH METHOD

The population in this study is all manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2015 to 2021, with 223 companies. We used the purposive sampling method to determine the sampling number. Based on the criteria of the sampling method, the number of data processed is 574 data from 82 companies. The data was derived from the official website of the Indonesia Stock Exchange (IDX) www.idx.co.id and the company website related to the report of the company's annual financial year 2015 - 2021

Measurements

We study five independent variables (capital expenditure, growth opportunity, net working capital, cash conversion cycle, and profitability), two intervening variables (cash holding and dividend policy), and one dependent variable (firm value). Table 1 shows the measurement of each variable.

Inner Model Analysis

After testing for construct reliability and validity, we perform inner model analysis. According to Ghozali & Latan (2015), there are three methods to analyze the Inner Model. First, if the R-Squared or Adjusted (R²) value calculated is 0.75 then the model is strong, if the value is equal to 0.50 then the model is moderate, and if the value of 0.25 indicates that the model is weak. Second, if the predictive relevance value (Q²) > 0 then it shows that there is predictive relevance in the variable model independent with dependent. Meanwhile, if the predictive value relevance (Q²) < 0 then

indicates that there is no predictive relevance in the independent variable model with the dependent. Third, model fit is used to show the results of the fit indicator namely Average R-square (ARS) and Average Path Coefficient (APC) which have a value criterion of <0.05 , and Average Inflation Variance Factor (AVIF) which has criteria < 5 .

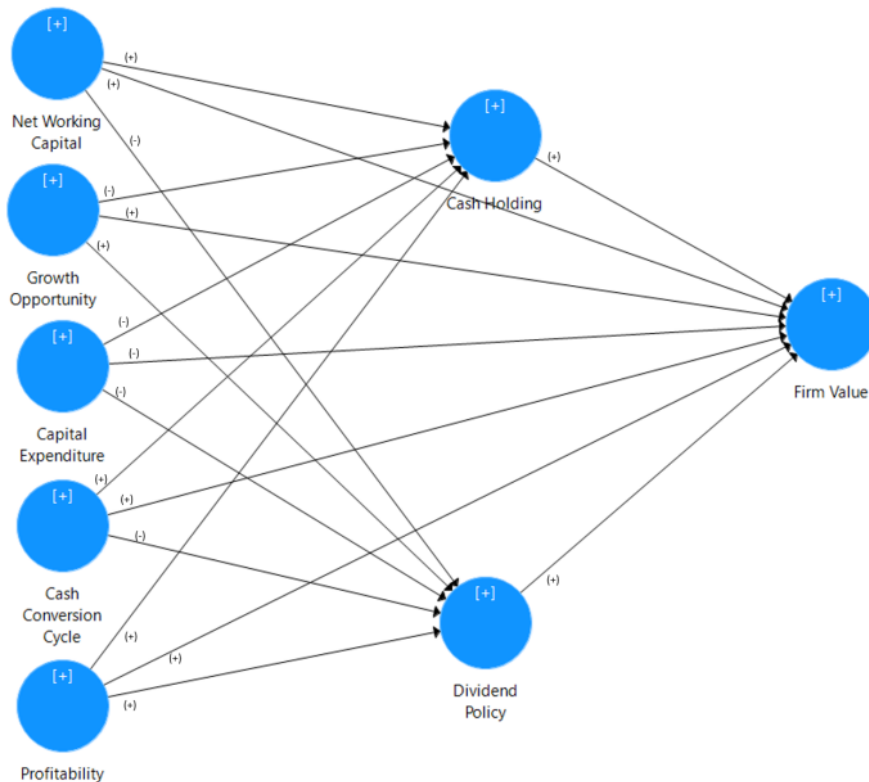


Figure 2. The Extension Model of Firm Value Determinants

Hypothesis Testing

The hypothesis testing is done by using the path analysis that can be used to perform direct and indirect testing for intervening variables or mediating relationships between variables independent with dependent (Ghozali & Latan, 2015). The criterion in testing the hypothesis in research is if the value significant or p-value of ≤ 0.05 or 5%, the hypothesis in this study is accepted. In addition, it is necessary to look at the direction of the beta coefficient, positive or negative.

Table 1. Measurement of Variables

Variables	Description	Measurement
Dependent:		
Firm Value	the company's ability to generate profits can be seen through the investors' willingness to pay its shares.	$FV = \frac{\text{Market Value Share} + \text{Debt}}{\text{Total Assets}}$ (Akhmadi & Januarsi, 2021)
Independent:		
Net Working Capital	The ratio determines the level of current assets that are used to pay its current liabilities with total assets	$NWC = \frac{\text{Current Assets} - \text{Current Liability}}{\text{Total Assets}} \times 100\%$ (Muharromah et al., 2019)
Growth Opportunity	A ratio to determine the level of growth opportunities of the company at that time in the future by taking advantage of investment opportunities.	$SG = \frac{\text{Sales}_t - \text{Sales}_{t-1}}{\text{Sales}_{t-1}}$ (Muharromah et al., 2019)
Capital Expenditure	The capital expenditure to finance its investment activities to acquire and repair assets fixed or long-term assets	$CE = \frac{\text{Fixed Assets}_t - \text{Fixed Assets}_{t-1}}{\text{Total Assets}_{t-1}}$ (Ullah et al., 2021)
Cash Conversion Cycle	Time for the company to get cash from its operational activities starting from purchasing to cash receipts from sales	$CCC = \text{Days Inventory} + \text{Days Receivable} - \text{Days Payable}$ (Muharromah et al., 2019)
Profitability	the company's ability to obtain profit made by utilizing available source	$ROA = \frac{\text{Net profit after tax}}{\text{Total Assets}} \times 100\%$ (Akhmadi & Januarsi, 2021)
Mediation:		
Cash Holding	The amount of cash or equivalent cash owned by the company to be used to fulfill the needs of a company.	$CH = \frac{\text{Cash or equivalent cash}}{\text{Total Assets}}$ (Muharromah et al., 2019)
Dividend policy	The firm's policy in distributing a portion of the profits to shareholders by paying dividends or saving them in retained earnings to finance future investments. Dividend policy is proxied by Dividend Pay-out Ratio (DPR)	$DPR = \frac{\text{Dividend per Share}}{\text{Earning per Share}} \times 100\%$ (Akhmadi & Januarsi, 2021)

RESULTS AND DISCUSSION

The estimation for outer loading factor - convergent validity for each variable is > 0.7 indicating that all variables are valid. While the composite reliability and Cronbach Alpha for each variable also > 0.7 indicate that all variables are reliable.

The results of the R-Squared or Adjusted (R2) values obtained were used to determine the ability of the variables to affect the relationship between the independent variables on the variables

dependent. The value of the determinant coefficient of R-Squared or Adjusted (R²) on the Firm Value is 0.417 (41.7 %) or 0.385 (38.5 %). The determinant coefficient value R-Squared or Adjusted (R²) in cash holding, is 0.638 (63.8%) or 0.622 (62.2 %). Finally, the value of the R-square on dividend policy is 0.569 (57%).

The results of the hypothesis testing can be seen in figure 3 and table 2 for direct effects and table 3 for the indirect effect.

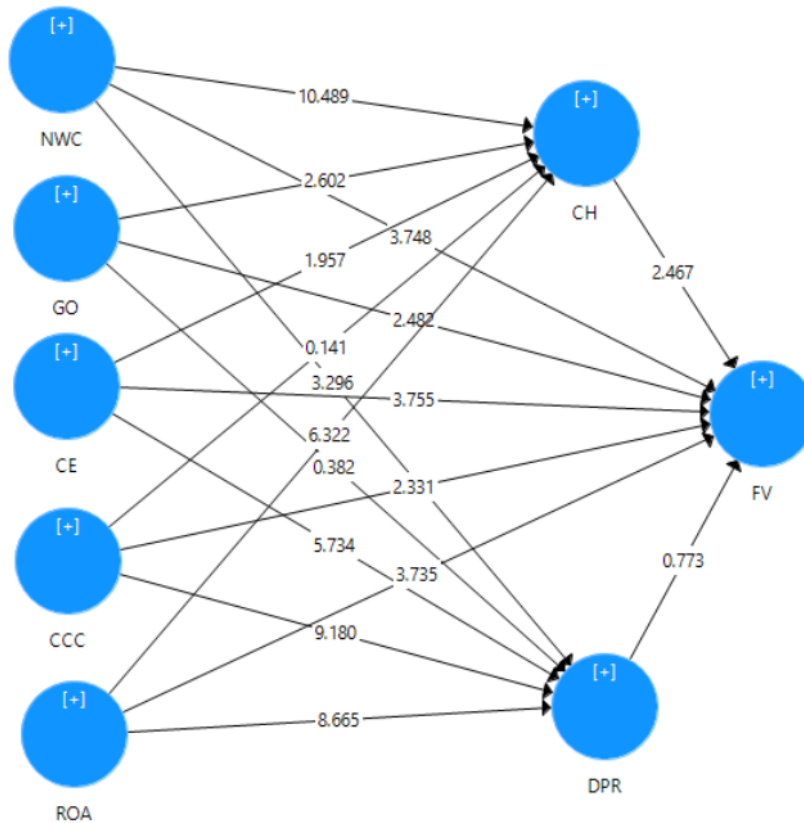


Figure 3. Hypothesis Testing

The direct effect hypothesis in this study consists of H1, H2, H3abc, H4abc, H5abc, H6abc, and H7abc. The results in table 2 show that only 4 hypotheses have not been proven to be verified, namely H2, H4c, H5b, and H6b. While the indirect effect hypotheses (H2de, H3de, H4de, H5de, H6de, and H7de), only two hypotheses have been proven, namely H3d, dan H7d. It means cash holding mediates the influence of net working capital and profitability on firm value. However, dividend policy cannot be proven as mediation since dividend policy can not influence firm value (H2).

Table 2. Path Analysis – Direct Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (IO/STDEVI)	P Values	Decision
CE -> CH	-0.150	-0.128	0.079	1.892	0.059	H5b rejected
CE -> DPR	-0.186	-0.198	0.032	5.753	0.000	H5c accepted
CE -> FV	-0.111	-0.115	0.031	3.518	0.000	H5a accepted
CCC -> CH	0.008	0.000	0.057	0.132	0.895	H6b rejected
CCC -> DPR	-0.316	-0.322	0.034	9.220	0.000	H6c accepted
CCC -> FV	0.144	0.136	0.061	2.375	0.018	H6a accepted
CH -> FV	0.155	0.168	0.064	2.411	0.016	H1 accepted
DPR -> FV	-0.026	-0.029	0.034	0.778	0.437	H2 rejected
GO -> CH	-0.071	-0.068	0.026	2.698	0.007	H4b accepted
GO -> DPR	0.009	0.003	0.024	0.373	0.710	H4c rejected
GO -> FV	0.453	0.426	0.176	2.582	0.010	H4a accepted
NWC -> CH	0.608	0.627	0.062	9.872	0.000	H3b accepted
NWC -> DPR	-0.174	0.166	0.053	3.272	0.001	H3c accepted
NWC -> FV	0.203	-0.211	0.051	3.958	0.000	H3a accepted
ROA -> CH	0.119	0.117	0.020	5.850	0.000	H7b accepted
ROA -> DPR	-0.173	-0.173	0.019	8.974	0.000	H7c rejected
ROA -> FV	0.159	0.166	0.039	4.119	0.000	H7a accepted

Note: CH = Cash Holding, DP = Dividend Policy, FV = Firm Value, NWC = Net Working Capital, GO = Growth Opportunity, CE = Capital Expenditure, CCC = Cash Conversion Cycle, and ROA = Profitability.

Table 3. Path Analysis – Indirect Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (IO/STDEVI)	P Values	Decision
CE -> CH -> FV	-0.023	-0.020	0.016	1.454	0.147	H5d rejected
CCC -> CH -> FV	0.001	0.000	0.010	0.114	0.909	H6d rejected
GO -> CH -> FV	-0.011	-0.011	0.007	1.641	0.101	H4d rejected
NWC -> CH -> FV	0.094	0.107	0.045	2.065	0.039	H3d accepted
ROA -> CH -> FV	0.018	0.019	0.007	2.588	0.010	H7d accepted
CE -> DPR -> FV	0.005	0.006	0.007	0.715	0.475	H5e rejected
CCC -> DPR -> FV	0.008	0.009	0.011	0.745	0.457	H6e rejected
GO -> DPR -> FV	0.000	0.000	0.001	0.238	0.812	H4e rejected
NWC -> DPR -> FV	-0.005	-0.005	0.006	0.731	0.465	H3e rejected
ROA -> DPR -> FV	0.005	0.005	0.006	0.732	0.465	H7e rejected

Note: CH = Cash Holding, DP = Dividend Policy, FV = Firm Value, NWC = Net Working Capital, GO = Growth Opportunity, CE = Capital Expenditure, CCC = Cash Conversion Cycle, and ROA = Profitability

The role of cash holding on firm value

The first hypothesis was accepted or proven so changes in the increase or decrease in cash holdings are able to affect the value of a company. These results are in line with Habib et al. (2021) proved that cash holding positively affects firm value in an unconstrained firm. Ameer (2012), Minh HA & Minh TAI (2017), and Chandra & Feliana (2020) also found that cash holding positively affects firm value. A high level of cash holding is able to increase the firm value. This is due to the company having high cash can make managers take action in managing the cash owned by the company, by providing the opportunities in increasing the firm value.

However, the results of this study are not in line with Habib et al. (2021), who proved that cash holding has a negative effect on firm value in a constrained firm, Ameer (2012) discovered that cash holdings negatively affect the firm value for closely held firms., which explained that Cash Holding does not affect the value company. This is due to the level of cash availability owned and controlled by financial managers because companies tend to use cash to meet all needs. So much whether or not the level of cash owned by the company does not affect the value of a company. Based on agency theory, Jensen & Meckling (1976), agency conflicts arise because of a difference in goals and interests between managers and shareholders share. A high level of cash holding in a company can give rise to an agency conflict between managers and shareholders in managing cash. This is because the manager who has the power to manage cash tends to do actions that can benefit himself and not shareholder interests.

The role of dividend policy on firm value

The second hypothesis states that dividend policy has a positive effect on firm value. The results of the study based on statistical tests indicate that the dividend policy variable has a positive effect on firm value, so H2 is not proven true and cannot be accepted. Based on this, it can be concluded that dividend policy is not a factor that can affect firm value. It means that even though the dividend payout ratio does not affect firm value, it can be interpreted alternatively. During and after some time of crisis, not many companies will pay a dividend to the investors since they need their cash to stay the business. This result cannot confirm the bird in hand theory (Angelo, 2013).

This research is not in line with research conducted by Atmikasari et al. (2020) which states that dividend policy has a positive effect on the value of the company. High dividend payout by the company to shareholders can be used as a signal to external parties that the welfare of investors is well cared for and good prospects for the company in the future. This will be interesting to the interest of potential new investors because it is following the bird-in-the-hand theory of returns return in the form of dividends is preferred because it is less risky than capital gains (Chaudry et al., 2015).

However, this study's results are following Sondakh (2019) who found that the dividend payout ratio or policy negatively affects company value. This is because the company could deceive shareholders and potential investors regarding performance companies that are not doing well when experiencing losses with pay dividends by withdrawing funds from retained earnings.

The net working capital – direct and indirect effect on firm value

From all the direct effects of the third hypothesis (H3abc), all hypotheses of direct effect (H3abc) proved and verified as expected. The effect of net working capital on cash holding means that if there is an increase or decrease in net working capital, the cash holding level in a firm will also decrease or increase. The results of this study are in line with the research of Wulandari & Setiawan (2019) which explains that net working capital has a positive effect on the cash holding of a company. This is because net working capital is part of current assets and a substitute for cash owned by a company so if there is an increase, the cash owned by the company will automatically increase.

The indirect effect of H3de and H3d hypotheses in this study are rejected or not proven, while H3e is verified. So, it can be concluded that if there is an increase or decrease in dividend payout, it is not able to mediate its effect on the relationship between net working capital and the value of a company. On the contrary, the change in cash holdings will affect net working capital on firm value. The relationship between net working capital and cash holding is a substitution so that net working capital can be changed at any time into cash if the company needs it (Opler et al, 1999).

This is due to the understanding that an increase or decrease in net working capital may not necessarily affect the value of a company. Because a company using net working capital must be optimal under its operational needs and have no more cash to pay a dividend (Sondakh, 2019). This shows that in relation to dividend policy, the high net working capital owned by a company does not necessarily have a good impact on the value of the company if it is not managed properly.

Growth opportunity – direct and indirect effect on firm value

From all the direct effects of the fourth hypothesis (H4abc), the hypotheses of direct effect H3ab proved and verified as expected, while H4c has not been verified. The effect of growth opportunity on cash holding and firm value means that if there is an increase or decrease in net growth opportunity, the cash holding level in a firm will also decrease or increase and companies tend to pay a dividend. These results are in keeping with Fajaria & Isnalita (2018). An opportunity or potential for the business to grow is known as a growth opportunity. The business needs adequate funding to carry out the stages of company growth necessary for the future in order to take advantage of chances like expansion.

These results are not following the study of Alfira et al. (2021) and Sualekhhattak & Hussain (2017). According to research by Alfira et al. (2021), growth opportunity has a negative impact on cash holdings. Companies will withhold cash from a company that has significant growth potential. It is founded on the speculative motive of holding cash, which is the company's motive in having the capital to use in a variety of business opportunities that can be done for the company's advantage. Sualekhhattak & Hussain (2017) discovered that growth prospects had little bearing on dividend policy.

All the indirect effects (H4de) are rejected or not proven. Growth opportunities have offered a positive signal as expected by current or potential investors that the company is in good condition so they can acquire the expected rate of return as well can increase the firm value (Connelly et al., 2011). However, companies that have high growth do not guarantee high cash

availability either. This matters due to companies that growth using the available cash to take advantage of the opportunities that are owned to be able to develop the company as well increase the value of a company. So, the companies will choose to invest rather than have available cash to fulfill their operational activities.

Capital expenditure – direct and indirect effect on firm value

From all the direct effects of the fifth hypothesis (H5abc), the hypotheses of direct effect H5ac proved and verified as expected, while H5b has not been verified. The effect of capital expenditure on the value of the firm and dividend payout ratio or policy means that if there is a decrease in capital expenditure, the firm value and the level of dividend payout ratio in the firm will increase. These results are in line with the research of Abor & Bokpin (2010) that investors would be more interested in companies that have a high level of capital expenditure because the decision to invest can provide significant benefits in the future. However, Muharromah et al. (2019) found that capital expenditure has a positive influence on firm value. The capital expenditures in a company are used to finance the repair or acquisition of new fixed assets to increase the effectiveness of the company and minimize the risks that occur in operational and production activities.

All the indirect effects (H5de) are rejected or not proven. It means that both cash holding and dividend policy cannot mediate the relationship between capital expenditure on firm value. The increase or decrease in cash holdings as well as the announcement of dividends do not influence the value of a firm in association with capital expenditure. Capital cost to meet the needs of spending funds does not only come from the availability of cash held in a company since companies can also use funding from an external source, such as loans from creditors. So, high spending on capital may not necessarily reduce the availability of cash holdings. The increase or decrease in capital expenditure of the company does not guarantee that it influences the value of the company. Capital expenditure paid will be able in increasing the efficiency of a company needs to consider the proper management. Not necessarily those who have large capital expenditures have a good performance and vice versa. So, increasing firm value depends on the decision to pay for capital expenditure that must be managed optimally.

Cash conversion cycle – direct and indirect effect on firm value

From all the direct effects of the sixth hypothesis (H6abc), the hypotheses of direct effect H6ac proved and verified as expected, while H6b has not been verified. The path coefficient of the cash conversion cycle on firm value and dividend policy means that if the higher cash conversion cycle, the firm value will increase while the level of cash holding in a firm will decrease. These results are in line with Ceylan (2021) and Amelia & Kitri (2019) that the cycle of cash conversion has a negative effect on firm value. Following the signalling theory, Telly & Ansori (2017) remarked that management decisions made for a company will inform investors about the firm's current conditions, whether they are favourable or unfavourable in terms of how they will affect the value company. Because of this, the longer the cash conversion cycle, the longer it will take for the company to get the money from its sales. As a result, it is challenging for the business to raise enough money, which lowers the company's value.

All the indirect effects (H6de) are rejected or not proven. It means that both cash holding and dividend policy cannot mediate the relationship of the cash conversion cycle on firm value. The increase or decrease in cash holdings as well as the announcement of dividends do not influence the value of a firm in association with the cash conversion cycle. The length of time taken by the company to receive its cash return does not guarantee to reduce the value of a company. The length of the cash cycle can be influenced by the high level of debt for purposes of investment. So, the investment can make investors attracted because they receive a high rate of return as well. The level of cash availability by a company is not certain to influence the length of time obtained in receiving cash return since the company does not only use its cash but can also use debt to meet operational needs. In other words, the level of cash availability can also be arranged following the company's policies.

Profitability – direct and indirect effect on firm value

From all the direct effects of the seventh hypothesis (H7abc), all hypotheses of direct effect (H7abc) proved and verified as expected, except for H7c with a negative relationship. The effect of profitability on cash holding means that if there is increasing profitability, the cash holding level in a firm will also increase, and the amount of dividend is decreased. These results are in line with Harahap et al. (2019), Jihadi et al. (2021), and Akhmadi & Januarsi (2021) found that companies that own high profitability ratios will show their ability to make dividend payments with cash holdings. The results also follow Tamrin et al. (2017) that found profitability negatively affects dividend policy. Using the signalling hypothesis, the business will indicate to the public world that it has taken several steps to maintain performance, as evidenced by the acquisition of stable earnings. In order to improve the firm's worth in the eyes of potential investors, the corporation will increase payments and dividends concerning the ratio of increased corporate profitability.

The indirect effect of H7e is rejected or not proven while H7d is accepted. It means that dividend policy cannot mediate the relationship between capital expenditure on firm value while cash holding performs as mediation. The increase in cash holdings influences the value of a firm in association with capital expenditure. Companies have various types of businesses with different characters and cultures. Apart from based on the level of profitability, differences in character and culture can be carried over causing differences in decision-making regarding dividend policy (Atmikasari et al., 2020). The company can still distribute dividends to shareholders taken from retained earnings if there are moderate earnings, so that investors may be tricked that the company is in good condition and prevent the company's value from decreasing.

Robustness test

To test whether the relation of variables in this study is influenced by the company size, we perform the test using the Ln Size of the company. The test indicates that there are similar results for the hypotheses after the robustness test. It means that the relation of variables does not depend on the size of the company (see appendix for the results of this test).

CONCLUSION

Crisis, such as the covid-19 pandemic, has an impact on all levels of society, especially on the survival of a business. Since 2019, there was a slight correction in the firm value and worsen in 2020 when covid-19 attacked Indonesia in the early year of March 2020. The covid pandemic depressed the economy so the level of public consumption decreased which caused a decrease in revenue and turnover of the business. The capital market trading in the IDX got hit by the pandemic which cause most share prices to decrease and impact the firm value. In a time of uncertainty such as a pandemic crisis, the firm will hold its cash to hedge against the uncertainty. Besides, the firm will also change its dividend policy for the same reason. Therefore, our study aims to prove whether cash holding and dividend policy will mediate factors that affect firm value.

We found that of all the direct effects, firm value is negatively influenced by capital expenditure, and positively influenced by the cash conversion cycle, growth opportunity, net working capital, profitability, and cash holding. Cash holding is negatively affected by growth opportunities and positively affected by net working capital and profitability. Dividend policy is negatively influenced by capital expenditure, net working capital, cash conversion cycle, and profitability. Of all the indirect effects, only two hypotheses have been verified. Cash holding mediates the relationship between net working capital and profitability on firm value, while dividend policy cannot mediate the relation since dividend policy has no direct effect on firm value.

Based on the results, this study contributes, first, to the literature on firm value by filling the gap research of the inconclusive results of whether cash holding and dividend policy can mediate the relation of fundamental factors and firm value. Second, this study implied practically that during a crisis, a company tends to not pay dividends because of some fundamental factors. Therefore, investors and potential investors may not be interested in investing in a firm that impacts the firm value. Limitations of this study include, first, we do not differentiate firm value before and during a financial crisis such as the pandemic Covid-19. We suggest that future research may consider the time range such as before, during, and after the financial crisis. Second, even though we have performed the robustness test using the firm size, future research might consider performing the firm differences based on the industry SIC that is mostly, mediate, and slightly influenced by the crisis.

List of Abbreviations

IDX: Indonesia Stock Exchange, SIC: Standard Industrial Classification, CH: Cash Holding, DP: Dividend Policy, FV: Firm Value, NWC: Net Working Capital, GO: Growth Opportunity, CE: Capital Expenditure, CCC: Cash Conversion Cycle, and ROA: Return on Assets (Profitability).

Authors' Contribution

EY provided direction for the entire project, develop research ideas, supervise data collection, and contribute to the writing of articles. The UK developed research ideas and provided input on the

proposed research. FR collected data and performed data processing. ANS collected data and interpretation. NWIK collected data and developed article writing.

Authors' Information

Eka Yudhyani (EY), graduated with a Doctor of Economics (2020), in the post-graduate program at the University of 17 August 1945 Surabaya, Indonesia, and completed the master of science program majoring in management (2011) at Mulawarman University Samarinda, Indonesia, completed her Bachelor's degree majoring in Management (1996) at Mulawarman University Samarinda, Indonesia. She is actively conducting research in management and accounting, currently, the author teaches as a permanent lecturer at the University of 17 August 1945 Samarinda, Indonesia. Email: yudhyanieka@gmail.com.

Umi Kulsum (UK), usually called Umy, completed her bachelor's degree at the Islamic University of Malang and her master's degree at Mulawarman University. She is domiciled in Samarinda City and became a lecturer at the 17 August 1945 University of Samarinda. Email: umykulsum835@gmail.com.

Faizal Reza (FR) is a lecturer at the University of 17 August 1945 Samarinda. Some of the written publications that the author has done include writing books and articles in several national and international journals. His interest research is in economic growth, finance, impact valuation, and construction. Email: rezafaizaluntagsmd@gmail.com.

Astrid Napita Sitorus (ANS), usually called Astrid. Completed undergraduate and postgraduate education at Mulawarman University, Samarinda City. Domiciled in Samarinda City, and became one of the lecturers at the 17 August 1945 University of Samarinda. Her research interest is in economics and business. Email: napitaastrid@gmail.com.

Nanda Wahyu Indah Kirana (NWIK), usually called Nanda. Completed undergraduate and postgraduate education at Universitas Pembangunan Nasional Veteran Jawa Timur, Surabaya City. She began her career as an assistant lecturer and became a lecturer after her S2 graduation from the postgraduate accounting program. Her research interest is in financial accounting. Email: nanda.wahyu.ak@upnjatim.ac.id.

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The authors declare no competing interests.

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APPENDIX

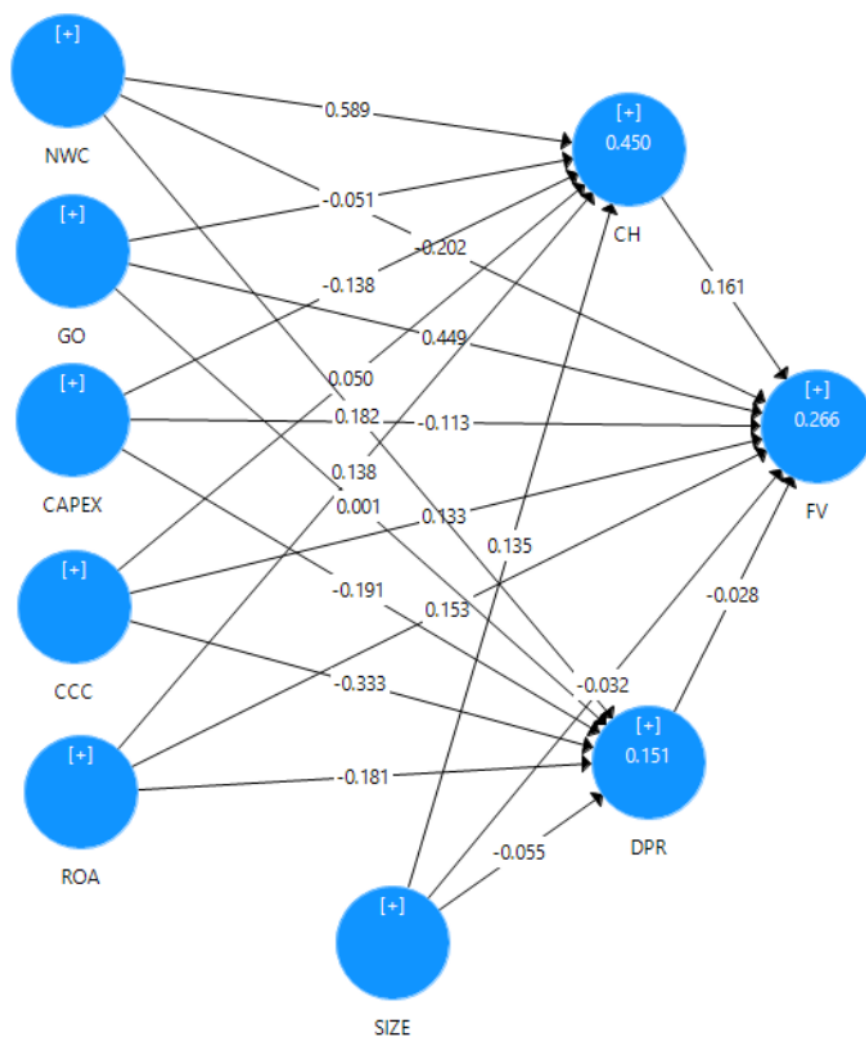


Figure 4. Robustness test of hypotheses with firm size

Table 4. Robustness test: Path Analysis – Direct Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (IO/STDEVI)	P Values
CAPEX -> CH	-0,138	-0,123	0,078	1,765	0,078
CAPEX -> DPR	-0,191	-0,199	0,034	5,628	0,000
CAPEX -> FV	-0,113	-0,118	0,035	3,179	0,002
CCC -> CH	0,050	0,046	0,056	0,906	0,366
CCC -> DPR	-0,333	-0,341	0,030	10,930	0,000
CCC -> FV	0,133	0,123	0,056	2,370	0,018
CH -> FV	0,161	0,176	0,062	2,583	0,010
DPR -> FV	-0,028	-0,033	0,035	0,815	0,415
GO -> CH	-0,051	-0,050	0,027	1,843	0,066
GO -> DPR	0,001	-0,002	0,026	0,026	0,979
GO -> FV	0,449	0,419	0,187	2,402	0,017
NWC -> CH	0,589	0,606	0,061	9,655	0,000
NWC -> DPR	0,182	0,178	0,052	3,524	0,000
NWC -> FV	-0,202	-0,213	0,057	3,556	0,000
ROA -> CH	0,138	0,136	0,019	7,322	0,000
ROA -> DPR	-0,181	-0,183	0,020	9,124	0,000
ROA -> FV	0,153	0,159	0,044	3,503	0,001
SIZE -> CH	0,135	0,138	0,026	5,230	0,000
SIZE -> DPR	-0,055	-0,056	0,038	1,429	0,154
SIZE -> FV	-0,032	-0,034	0,037	0,884	0,377

Table 5. Robustness test: Path Analysis – Indirect Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (IO/STDEVI)	P Values
CAPEX -> CH -> FV	-0,022	-0,021	0,016	1,375	0,170
CCC -> CH -> FV	0,008	0,008	0,010	0,791	0,429
GO -> CH -> FV	-0,008	-0,009	0,006	1,273	0,204
NWC -> CH -> FV	0,095	0,108	0,044	2,163	0,031
ROA -> CH -> FV	0,022	0,024	0,008	2,717	0,007
SIZE -> CH -> FV	0,022	0,024	0,009	2,375	0,018
CAPEX -> DPR -> FV	0,005	0,007	0,007	0,748	0,455
CCC -> DPR -> FV	0,009	0,011	0,012	0,781	0,435
GO -> DPR -> FV	0,000	0,000	0,001	0,015	0,988
NWC -> DPR -> FV	-0,005	-0,006	0,007	0,754	0,451
ROA -> DPR -> FV	0,005	0,006	0,007	0,756	0,450
SIZE -> DPR -> FV	0,002	0,002	0,003	0,584	0,560

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