



Determinants of Cash Holdings in State-Owned Enterprises Listed on the Indonesia Stock Exchange during the Period 2015–2021

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ABSTRACT

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This research was conducted to empirically investigate the determinants affecting the cash holdings of state-owned enterprises in Indonesia. The sample consisted of 15 state-owned companies listed on the Indonesia Stock Exchange (IDX) over a 7-year period (2015-2021). The study employed the ordinary least squares (OLS) research model. The results of this research indicate that leverage and BI rate significantly affects the cash holdings of state-owned enterprises in Indonesia. However, cash flow volatility, and capital expenditure do not have a significant impact on cash holdings. This study contributes to the literature on the determinants of cash holdings in state-owned enterprises in Indonesia.

KEYWORDS:

Cash holdings, leverage, cash flows volatility, capital expenditures, interest rate.

I. INTRODUCTION

After the 2008 financial crisis, many companies engaged in significant cash accumulation. Lee & Song (2010) revealed that following the Asian financial crisis, companies in Asia increased their cash holdings above the average. This aligns with the precautionary motive outlined in Keynesian economics, suggesting that cash accumulation aims to protect companies from unforeseen situations that may require significant fund disbursement. Bates et al. (2009) suggested that companies need to retain cash to address unexpected possibilities. The need to hold cash will be higher for companies with excellent investment opportunities, as they are more likely to face financial difficulties.

Unexpected possibilities such as the financial crisis in 2008 had an impact on companies in Indonesia, including State-Owned Enterprises (SOEs). Megginson et al. (2014) research conducted in China indicates that privatized SOEs tend to increase their cash holdings as they no longer receive financial support from the government. Cases against SOEs have begun to surface recently, such as the cases of Jiwasraya, Krakatau Steel, and Garuda Indonesia, facing financial crises.

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Cases against SOEs have begun to emerge recently, such as the cases of Jiwasraya, Krakatau Steel, and Garuda Indonesia, which are facing financial crises. Jiwasraya has defaulted on customer funds, Krakatau Steel has losses for eight consecutive years from 2012 to 2019 which led to debt restructuring (Ekasari & Fahrurrozi, 2020).

Garuda Indonesia has a problem with the annual book report on 2018, which did not comply with accounting standards, at the beginning of the report Garuda recorded a profit, after correction it was revealed that Garuda experienced financial losses in 2018 (Tindige et al., 2020). The latest case involves Waskita Karya, with a debt of IDR 84.3 trillion, leading to financial difficulties.

Several empirical studies have been conducted by previous researchers in various countries to explore factors influencing cash holdings, numerous contradictions have been identified. Diaw (2021), Tripathy & Uzma, (2020), Sethi & Swain (2019), Aftab et al. (2018), Guizani (2017), Maheshwari & Rao (2017), Shabbir et al. (2016), Wasiuzzaman (2014), and Uyar & Kuzey (2014) found that leverage has a negative impact on cash holdings. This is attributed to leverage being considered a substitute for holding a substantial amount of cash and securities. In contrast, Setiawan & Rachmansyah (2019) found different results, indicating that leverage does not affect cash holdings in manufacturing companies in Indonesia.

The effect of cash flow volatility in Diaw (2021) has insignificant results on cash holdings. Similarly, Sethi & Swain (2019) cash flow volatility does not affect cash

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holdings in manufacturing companies in India. Uyar & Kuzey (2014) found no significant impact of cash flow volatility on cash holdings in Turkish companies, and Wasiuzzaman (2014) reported the absence of an effect of cash flow volatility on cash holdings in Malaysian companies. In contrast, a significant and positive relationship between cash flow volatility and cash holdings was found in companies in Saudi Arabia. Saudi companies face higher cash flow risks, leading them to hold more cash as a precautionary measure (Guizani, 2017).

Research on the relationship between capital expenditure and cash holdings conducted by Jinkar (2013) found that capital expenditure does not have a significant impact on cash holdings decisions. On the other hand, a negative relationship between capital expenditure and cash holdings was identified by Guizani (2017) in Saudi Arabian oil companies. A positive relationship between capital expenditure and cash holdings was found in studies by Aftab et al. (2018) and Setiawan & Rachmansyah (2019).

In addition to internal factors mentioned above, external factors such as interest rate can also influence a company's cash availability. Research conducted by Bayyurt & Nizaeva (2016) found a positive relationship between interest rate and cash holdings in manufacturing companies listed on the Istanbul Stock Exchange. Chen & Mahajan (2008) discovered a positive relationship between interest rate and cash holdings across 45 countries, while a similar positive relationship was also identified by Stone et al. (2018) in companies in the United States. However, differing results were found by Gao et al. (2017), who concluded that interest rate in the United States have a negative impact on cash holdings.

II. LITERATURE REVIEW

Cash Management

Cash is a current asset that can be utilized at any time owned by a company and recorded on the balance sheet under current assets. It can also be deposits in banks that are readily withdrawable. Cash management is a system of company management that regulates cash flow to maintain liquidity and utilize idle cash, involving cash planning. Financial managers need to effectively handle both incoming and outgoing cash flows (Kasmir, 2010).

Weston, J. F., & Copeland (1985) explained that an appropriate cash model for companies with fluctuating cash expenditures is the Miller Orr cash model. Miller and Orr developed the cash management model in 1966 by incorporating stochastic processes for periodic changes in cash balances. They assumed that cash inflows and outflows are not constant but fluctuate. Miller and Orr determined upper and lower control limits and a target cash balance.

Cash Holdings

Weygandt et al. (2016) defines cash as the most easily convertible current asset that does not require a long time for conversion and can be used at any time. This is because cash is an asset that can be readily converted into other types of assets. According to Ginglinger & Saddour (2008), cash holdings refer to the amount of cash that a company sets aside for the purpose of conducting various activities. Gill & Shah (2012) explain that cash holdings are the cash held by a company either in hand or invested in liquid assets and distributed to investors.

Cash Holdings Motives

There are three motives of cash holdings, namely transaction motives, precautionary motives, and speculation motives (Keynes, 1936): (a) Transaction Motive, this motive implies that a company holds cash to finance transactions that occur in the operational activities of the company, such as salary and wage payments, raw material purchases, administrative expenses, tax payments, bills, dividends, and so on. This research employs the variables of leverage to represent the transaction motive. The reason for selecting these two variables is that companies need to routinely make debt payments to creditors and distribute dividends to shareholders; (b) Precautionary Motive, this motive interpreted as companies maintaining cash holdings to anticipate unforeseen events such as financial difficulties or to seize investment opportunities. Opler et al. (1999) explain that the precautionary motive for holding cash may arise because the company faces cash flow shortages, which can hinder it from investing in profitable projects if the company lacks liquid assets. These difficulties can result from high cash flow volatility, leading to financial challenges. We refer to the motivation for holding liquid assets as the precautionary motive. Bates et al. (2009) in their research explain that capital expenditure can proxy for investment opportunities. Capital expenditure is calculated as a cash outflow. Companies that make capital expenditures in the form of fixed assets will increase their capacity to get funding (Setiawan & Rachmansyah, 2019). Cash will be used to finance higher capital expenditures or investments so companies will have fewer internal resources and accumulate less cash; (c) Speculative Motive, this motive implies that a company will use cash for new investment opportunities perceived as beneficial. According to Keynes (1936), in the speculative motive, companies will hold cash in response to changes in interest rate as indicated by changes in bond and debt prices. The speculation motive highlights the function of cash as a store of value. When companies anticipate a decline in the economy or asset prices in the future, they will save cash and seize those investment opportunities. Conversely, if companies anticipate an increase in the economy or asset prices in the future, they will invest cash in assets and enjoy the profits from the increase in asset prices. Therefore,

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investment opportunities and asset prices are the primary determinants in the decision of whether a company should hold cash currently (Hou & Liu, 2020).

Hypothesis Development

Leverage and Cash Holdings

Leverage is the company's ability to incur debt when its business and investment activities require capital. Before deciding to issue debt, a company will first use its liquid reserves, and if the company has internal surpluses, it will pay off its debt (Guizani, 2017). Companies with a high leverage ratio indicate that they have low cash reserves due to obligations to pay debt installments plus interest on the debt they hold (Afif & Prasetiono, 2016).

H1 = Leverage has a negative impact on cash holdings.

Cash Flow Volatility and Cash Holdings

Cash flow is the future cash flow obtained from operating activities, including cash inflows and outflows, to sustain a company's viability. Cash flow volatility refers to the fluctuation in a company's cash flow. Companies with volatile cash flows may face liquidity problems and cash shortages. Therefore, fluctuations in cash flow will influence the company's cash holding policy decisions. Companies with unstable cash flows have the opportunity to spend cash all at once. There are various costs that can lead a company to run out of cash, such as bankruptcy costs. In such cases, it would be better for the company to hold more cash. This aligns with the viewpoint of Bates et al. (2009) that companies with greater cash flow risk should have more cash on hand for precautionary purposes.

H2 = Cash flow volatility has a positive impact on cash holdings.

Capital Expenditure and Cash Holdings

Bates et al. (2009) argue that capital expenditure can be used as a proxy for the costs of financial distress and/or investment opportunities, leading to a positive relationship. Opler et al. (1999) contend that according to the pecking order theory, companies with higher capital expenditures or investments will use cash/liquid assets for these purposes and, as a result, will have fewer internal resources and will rely more on internal funds to finance these investments.

H3 = Capital Expenditure has a negative impact on cash holdings

Interest Rate of Bank Indonesia (BI rate) and Cash Holdings

The level of BI rate can influence the interest rate on loans and deposits. This can provide options for companies regarding whether to invest or accumulate cash. Interest rate is closely related to loan and investment interest rate for companies. If Bank Indonesia predicts an increase in interest rate compared to the previous year, companies may take steps to capitalize on this increase by increasing deposits. Therefore, companies will gather their internal funds to seize such opportunities. Conversely, if interest rate is predicted to decrease in the following year, companies may seek new investment opportunities by buying stocks or bonds, thus reducing the cash held by the company, Kusumawati & Mardiaty (2019).

H4 = BI rate has a positive impact on cash holdings.

III. RESEARCH METHOD

The population in this study consists of all SOEs listed on the Indonesia Stock Exchange from 2015 to 2021, totaling 19 companies. The sampling technique employed is purposive sampling, a method used to select a sample that is representative according to predefined criteria. This study excludes companies in the banking sector, resulting in a sample of 15 SOEs. To empirically investigate the determinants of cash holdings in SOEs, this research employs a multiple linear regression model. The equation for the research model is as follows:

where:

- CH = Cash Holdings of the company
- LEV = Leverage of the company
- CFV = Cash Flow Volatility of the company
- CPX = Capital Expenditure of the company
- IR = BI Rate

$$CH_t = \alpha + \beta_1 LEV_t + \beta_2 CFV_t + \beta_3 CPX_t + \beta_4 IR_t$$

	CH	LEV	CFV	CPX	R
Mean	0.14562	0.60759	0.05701	0.03377	0.05500
Median	0.13800	0.63510	0.04000	0.01360	0.05000
Max	0.41970	1.85000	0.22200	0.76000	0.07750
Min	0.00500	0.10490	0.00780	-0.4900	0.03500
Std. Dev.	0.09179	0.22873	0.04716	0.11018	0.01458
Obs	105	105	105	105	105

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Dependent Variable (Y)

Cash Holdings

Cash holdings is a financial ratio that compares a company's cash and cash equivalents to its total assets. The formula for calculating cash holdings is as follows (Diaw, 2021; Guizani, 2017; Sethi & Swain, 2019):

$$= \frac{\text{Cash holdings}}{\text{Total Assets} - \text{Total Cash and Equivalents}}$$

Independent Variable

Leverage

Leverage measures the proportion of total assets owned by a company that is financed by debt (Gitman & Zutter, 2015 in Simanjuntak, S. F., & Wahyudi 2017)). Leverage can be calculated using the following formula (Sethi & Swain, 2019; Aftab *et al.*, 2018; Guizani, 2017):

$$\text{Leverage} = \frac{\text{Total Liability}}{\text{Total Assets}}$$

Cash Flow Volatility

The trade-off theory posits that higher volatility in cash flows implies a greater likelihood of cash shortages at any given point in time. The measurement of cash flow volatility involves determining the standard deviation of cash flow fluctuations from operational activities within a specified timeframe for a company. In this research, the methodology for calculating cash flow volatility follows the approach outlined by Sethi and Swain (2019):

$$\text{Cash flow volatility} = \frac{\text{Standard Deviasi from Operation Cash Flow}}{\text{Total Assets}}$$

Capital Expenditure

Investment activities encompass both capital expenditures and corporate acquisition expenditures. The cash level in most companies is observed to decrease when investment activities increase. Capital expenditure is measured by the change in net fixed assets from time t-1 to time t, relative to total assets (Aftab *et al.*, 2018).

4.2 Regression result

This research discusses about factors that influence the cash holdings of state-owned enterprises (SOEs) listed on the IDX from 2015 to 2021. Below are the regression results of this stud

Table 2. Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.134278	0.050189	2.675476	0.0087
LEV	-0.102387	0.050917	-2.010859	0.0470
CFV	0.059899	0.273062	0.219361	0.8268
CPX	-0.069065	0.062891	-1.098162	0.2748
IR	1.317764	0.518811	2.539969	0.0126
R-squared	0.161751			

Capital Expenditure

$$= \frac{\text{Fixed Assets}_t - \text{Fixed Assets}_{t-1}}{\text{Total Assets}}$$

BI Rate

The BI Rate is a policy of Bank Indonesia issued every month following the board of governors' meeting to regulate the financial system, reflecting the economic conditions of a country. The BI Rate policy serves as a reference for financial institutions or the public in conducting monetary financial activities. This research utilizes the BI Rate for the year 2015 to 2021.

IV. RESULT

4.1 Descriptive Statistics

Based on table 1 above, it can be concluded that cash holdings as the dependent variable has an average value (mean) of 0.145 or 14.5%. The standard deviation of cash holdings is 0.091 (below the average value), meaning that cash holdings have a relatively even level of data variation. Leverage has an average of 0.607 which means that each average level of leverage owned by SOEs in Indonesia is 60.75%. The standard deviation is 0.228 (below average), meaning that this variable has low data variation. Cash Flow Volatility has the smallest (minimum) value of 0.0078 and the largest (maximum) value of 0.222. While the average value (mean) of this variable is 0.057 or 5.7%. The standard deviation of this variable of 0.047 is below the average, which means that this variable has low data variation.

Capital expenditure is the use of funds by a company to buy or increase real investment. This variable has the smallest (minimum) value of -0.49 and the largest (maximum) value of 0.76. The average value (mean) of this variable is 0.033 and the standard deviation of 0.11 is above the average value. This variable has a high level of data variation. BI rate has the smallest (minimum) value of 0.035 and the largest (maximum) value of 0.075. The average value (mean) of this variable is 0.055 and the standard deviation of 0.0145 is below the average value. This variable has a low level of data variation

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The coefficient of determination (R^2) obtained in this study is 0.1617, indicating that 16.17% of the independent variables, such as leverage, cashflow volatility, capital expenditure, and BI rate in this research, are capable of explaining the dependent variable cash holdings. The remaining 83.83% is explained by other factors not examined in this study.

To determine whether the regression model in this study is significant and to assess whether the independent variables can predict and explain the dependent variable, an F-test is conducted. Subsequently, a t-test is performed to examine the individual impact of each independent variable on the dependent variable partially. The following are the results of the F-test and T-test.

Table 3. Results of the F-test

R-squared	0.161751	Mean dependent var	0.049860
Adjusted R-squared	0.128221	S.D. dependent var	0.068415
S.E. of regression	0.063879	Sum squared resid	0.408051
F-statistic	4.824072	Durbin-Watson stat	1.515703
Prob(F-statistic)	0.001340		

Based on the results of the F-test, the probability value is 0.00, which is smaller than the significance level alpha of 5%. From these results, it can be concluded that the regression equation formed is significant. This implies that

the independent variables in this study, comprising leverage, cash flow volatility, capital expenditure, and BI interest rates, have the ability to significantly predict and explain the dependent variable, cash holdings.

Table 4. Results of the T-test

Variable	t-Statistic	Prob.	Decision
C	2.675476	0.0087	
LEV	-2.010859	0.0470	<i>Hypothesis 1 Accepted</i>
CFV	0.219361	0.8268	<i>Hypothesis 2 Rejected</i>
CPX	-1.098162	0.2748	<i>Hypothesis 3 Rejected</i>
IR	2.539969	0.0126	<i>Hypothesis 4 Accepted</i>

Referring to the formed regression equation and the results of the T-test, among the four independent variables in this study, there are two variables declared to have an influence with an alpha significance criterion of 5%, which are leverage and the BI rate. Meanwhile, the other two variables do not have an influence on cash holdings.

The Influence of Leverage on Cash Holdings

Indonesian state-owned enterprises are known to have a high level of leverage. The amount of debt held by SOEs in 2022 is reported to be IDR 1.640 trillion, showing an increase of 3.8% from the previous year, which was only IDR 1.580 trillion (bumn.go.id). Leverage can be an indicator for companies that they can easily obtain funds from external sources; a high level of debt in a company can be used as a substitute, so the company does not need to hold large amounts of cash. Companies with a large size that have large activities tend to have less cash because their cash needs are used for operational purposes and debt payments. This finding is consistent with research by Diaw (2021), Tripathy & Uzma, (2020), Sethi & Swain (2019), Aftab et al. (2018), Guizani (2017), Maheshwari & Rao (2017), Shabbir et al. (2016), Wasiuzzaman (2014), and Uyar & Kuzey (2014).

Therefore, hypothesis 1 in this study is accepted which indicating that leverage has a negative effect on cash holdings.

The Influence of Cash Flow Volatility on Cash Holdings

The precautionary motive for cash holdings explains that companies maintain cash reserves to anticipate unforeseen events such as financial difficulties due to macroeconomic factors or internal company issues. Cash flow volatility reflects the fluctuations in a company's cash flow. The magnitude of the influence of cash flow volatility on cash holdings is found to be not significant at both the 5% and 10% significance levels. In this study, many companies have low volatility or tend to be stable and as predicted by the company. This is what causes the cash flow volatility variable to have no effect on cash holdings in this study. This finding is consistent with research by Diaw (2021), Sethi & Swain (2019), Uyar & Kuzey (2014), and Wasiuzzaman (2014). Consequently, hypothesis 2 in this study is rejected, indicating that cash flow volatility does not significantly impact cash holdings.

The Influence of Capital Expenditure on Cash Holdings

Capital expenditure, representing the precautionary motive in this study, is found to be not significant regarding cash holdings, leading to the rejection of hypothesis 3 in this research. The magnitude of capital expenditure undertaken by SOEs does not appear to affect their cash holdings. The average ratio held by this variable is 0.033 or 3.3%. The small ratio indicates that the capital expenditure by SOEs is still very low, thus not exerting a significant influence on changes in cash holdings. Additionally, SOEs tend to rely on external funding or loans due to the nature of capital expenditure, which can be used as collateral by the company. In addition to external funding, companies can also lease, which is seeking financing in the form of providing capital goods for use by the company as a leasing tenant for a certain period of time based on periodic payments. With this option, the company can reduce spending on the purchase of capital goods. These research findings align with Jinkar (2013), who stated that there is no significant influence of capital expenditure on cash holdings. Hypothesis 3 in this study is rejected.

The Influence of BI Rate on Cash Holdings

The speculative motive posits that companies will use cash for new investment opportunities, taking into account changes in interest rate. According to Keynes (1936), the determining factor for the magnitude of the demand for money for this speculative motive is the level of interest rate. Interest rates arise from the demand and supply of money by the market. Interest rates have a negative impact on the value of securities; if interest rates increase, the value of securities will decrease. Therefore, fluctuations in interest rates will directly affect the price of securities. Interest rates for deposits and savings are set based on the BI Rate. When the BI Rate increases, the return from banking investments such as deposits and savings will also increase, which makes many investors sell their stocks and switch to investing in the banking sector. This study aligns with previous research by Chen & Mahajan (2008), Stone et al. (2018), and Kusumawati & Mardiaty (2019), stating that the interest rate has a positive influence on cash holdings. Therefore, hypothesis 4 in this study is accepted, indicating that the BI rate significantly affects cash holdings within the context of the examined SOEs in Indonesia during the study period.

V. CONCLUSION

This study aims to identify the factors that influence the cash holdings policy of SOEs listed on the Indonesia Stock Exchange during the period 2015 to 2021, based on the three cash holdings motives proposed by Keynes. The findings of this study indicate that leverage and BI Rate are variables that significantly affect the level of cash holding of SOEs. Thus, transaction and speculative motives have a more significant influence on SOE cash holdings policy, while precautionary

motives do not show a significant influence on cash holdings policy. Leverage can be an indicator for companies that they can easily obtain funds from external sources, a high level of debt in a company can be used as a substitute, so that companies do not need to hold large amounts of cash. The increase in BI Rate encourages company managers to sell their securities and hold wealth in the form of cash, hoping to avoid capital losses. Variables such as cash flow volatility, and capital expenditure in this study do not have a significant influence on cash holdings.

REFERENCES

1. Afif, S., & Prasetiono. (2016). Analisis Faktor-Faktor yang Mempengaruhi Kebijakan Cash Holding Pada Perusahaan Manufaktur yang Listing di Bursa Efek Indonesia Tahun 2010-2014. *Diponegoro Journal of Management*, 5(4), 1–11.
2. Aftab, U., Javid, A. Y., & Akhter, W. (2018). The Determinants of Cash Holdings around Different Regions of the World. *Business & Economic Review*, 10(2), 151–182. <https://doi.org/10.22547/ber/10.2.7>
3. Bates, T. W., Kahle, K. M., & Stulz, R. M. (2009). Why do US firms hold so much more cash than they used to? *Paper Knowledge. Toward a Media History of Documents*, 64(5) (The journal of finance), 1985–2021.
4. Bayyurt, N., & Nizaeva, M. (2016). Determinants of Corporate Cash Holdings: The Case of An Emerging Market. In *Economy & Business ISSN* (Vol. 10).
5. Chen, N., & Mahajan, A. (2008). *Effects of Macroeconomic Conditions on Corporate Liquidity-International Evidence*.
6. Diaw, A. (2021). Corporate cash holdings in emerging markets. *Borsa Istanbul Review*, 21(2), 139–148. <https://doi.org/10.1016/j.bir.2020.09.005>
7. Ekasari, H., & Fahrurrozi, I. N. (2020). Analisis Faktor Kerugian Pt Krakatau Steel. *Jurnal Mahasiswa Akuntansi (JAMAK)*, 1(1), 97–102.
8. Gao, X., Whited, T. M., & Zhang, N. (2017). *The Interest Sensitivity of Corporate Cash*.
9. Gill, A., & Shah, C. (2012). Determinants of Corporate Cash Holdings: Evidence from Canada. *International Journal of Economics and Finance*, 4(1). <https://doi.org/10.5539/ijef.v4n1p70>
10. Ginglinger, E., & Saddington, K. (2008). Cash holdings, corporate governance and financial constraints. *Corporate Governance and Financial Constraints (July 30, 2008)* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1188843
11. Guizani, M. (2017). The financial determinants of corporate cash holdings in an oil rich country:

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- Evidence from Kingdom of Saudi Arabia. *Borsa Istanbul Review*, 17(3), 133–143.
<https://doi.org/10.1016/j.bir.2017.05.003>
12. Hou, C., & Liu, H. (2020). Foreign residency rights and corporate cash holdings. *Journal of Corporate Finance*, 64.
<https://doi.org/10.1016/j.jcorpfin.2020.101702>
13. Jinkar, R. T. (2013). Analisa faktor-faktor penentu kebijakan cash holding perusahaan manufaktur di indonesia. *Mini Economica*, 42(1), 129–146.
14. Kasmir. (2010). *Pengantar Manajemen Keuangan Edisi Kedua*. Prenadamedia Group.
15. Keynes, J. M. (1936). *The General Theory of Employment Terest and Money*. Macmillan and Company.
16. Kusumawati, A., & Mardiaty, E. (2019). Analisis Faktor-Faktor yang Mempengaruhi Cash Holding Perusahaan Jasa yang Terdaftar Di BEI (Studi kasus pada perusahaan jasa sektor infrasturktur, utilitas dan transportasi tahun 2015-2018). *Jurnal Ilmiah Mahasiswa FEB*
17. Lee, Y., & Song, K. (2010). Financial crisis and corporate cash holdings: Evidence from East Asian firms. In *European Financial Management Association Symposium. Beijing, China: Renmin University*.
18. Maheshwari, Y., & Rao, K. T. V. (2017). Determinants of Corporate Cash Holdings. *Global Business Review*, 18(2), 416–427.
<https://doi.org/10.1177/0972150916668610>
19. Megginson, W. L., Ullah, B., & Wei, Z. (2014). State ownership, soft-budget constraints, and cash holdings: Evidence from China's privatized firms. *Journal of Banking & Finance*.
<https://www.sciencedirect.com/science/article/pii/S0378426614002210>
20. Opler, Pinkowitz, L., Stulz, R., & Williamson, R. (1999). The determinants and implications of corporate cash holdings. *Journal of Financial Economics*, 40(5), 223–228.
21. Sethi, M., & Swain, R. K. (2019). Determinants of Cash Holdings: A Study of Manufacturing Firms in India. *International Journal of Management Studies*, VI (2(2)), 11.
[https://doi.org/10.18843/ijms/v6i2\(2\)/02](https://doi.org/10.18843/ijms/v6i2(2)/02)
22. Setiawan, R., & Rachmansyah, A. (2019). Firm characteristics, macroeconomic variables and cash holdings in Indonesia and Singapore. *International Journal of Innovation, Creativity and Change*, 9(8), 265–286.
23. Shabbir, M., Hashbi, S. H., & Chaudhary, G. M. (2016). Determinants of Corporate Cash Holdings. *Determinants of Corporate Cash Holdings in Pakistan*, 5(International Journal of Organizational Leadership), 50–62.
<https://doi.org/10.1177/0972150916668610>
24. Simanjuntak, S. F., & Wahyudi, A. S. (2017). Faktor–Faktor yang Mempengaruhi Cash Holding Perusahaan. *Faktor–Faktor Yang Mempengaruhi Cash Holding Perusahaan*, 19(1a-1) (Jurnal Bisnis dan Akuntansi), 25–31.
25. Stone, A. L., Gup, B. E., & Lee, J. (2018). New insights about the relationship between corporate cash holdings and interest rates. *Journal of Economics and Finance*, 42(1), 33–65.
<https://doi.org/10.1007/s12197-016-9372-8>
26. Tindige, W., Rogahang, J. J., Mangindaan, J. V., Studi, P., Bisnis, A., & Administrasi, J. I. (2020). *Kinerja Keuangan pada PT. Garuda Indonesia (Persero) Tbk Ditinjau dari Rasio Profitabilitas*. 1(3).
27. Tripathy, A., & Uzma, S. H. (2020). Factors influencing liquidity position of Indian manufacturing companies. *Journal of Accounting in Emerging Economies*, 10(2), 243–260.
<https://doi.org/10.1108/JAEE-02-2019-0053>
28. Uyar, A., & Kuzey, C. (2014). Determinants of corporate cash holdings: Evidence from the emerging market of Turkey. *Applied Economics*, 46(9), 1035–1048.
<https://doi.org/10.1080/00036846.2013.866203>
29. Wasiuzzaman, S. (2014). Analysis of corporate cash holdings of firms in Malaysia. *Journal of Asia Business Studies*, 8(2), 118–135.
<https://doi.org/10.1108/JABS-10-2012-0048>
30. Weston, J. F., & Copeland, T. E. (1985). *Manajemen Keuangan Edisi Kedelapan* (8th ed.). Binarupa Aksara.
31. Weygandt, J. J., Kimmel, P. D., & Kieso, D. E. (2016). *Financial Accounting*. John Wiley & Sons.