THE FINANCIAL DETERMINANTS OF CORPORATE CASH HOLDINGS FOR INDONESIAN FIRMS

Gary E. Powell, Queens University of Charlotte

ABSTRACT

I survey the CFOs of the 250 largest Indonesian companies to learn their views about the financial determinants of corporate cash holdings. Results suggest strong support for an optimal tradeoff approach to cash holdings, and some support for a hierarchy explanation for holding excess cash. Indonesian managers support the views that firms prefer holding larger cash balances to avoid the risk of costly financial distress or bankruptcy and those firms with greater uncertainty in future cash flows tend to hold more cash to prevent under-investment in future profitable projects. I also find support for the view that the primary cause for a firm's excess cash balances is the accumulation of internally generated cash flows, not the issuance of new securities in the capital markets. Results show mixed support for some agency cost explanations and also find evidence that the managers of firms that exhibit high cash flow volatility may hold more cash to ensure the ability to invest in new profitable projects given that internally-generated cash flows exhibit high levels of volatility.

Keywords: Cash Holdings, Agency Problems, Free Cash Flows, Managerial Ownership, Borrowing Constraints, Corporate Diversification, Financially Constrained

INTRODUCTION

The increased level of corporate cash holdings in many countries represents a significant development over the past few decades. The Federal Reserve Bank of St. Louis reports that cash holdings of all non-financial U.S. corporations, excluding utilities, grew at an annual growth rate of 10% between 1995 and 2010, from $1.2 trillion to nearly $5 trillion. Data from the World Scope database shows that cash holdings of corporations in 45 countries rose nearly doubled from about 9% in 1995 to more than 17% in 2004. It is not surprising, therefore, that a large body of research focuses on the financial determinants of a firm's cash holdings.

Managers of firms holding excess cash have considerable discretion to employ excess cash to fund new capital investments, invest in research and development, pursue acquisitions, pay dividends, repurchase shares, reduce debt, or to simply continue holding the excess cash. Jensen (1986) suggests that managers may hold cash for reasons that are not in the best interests of shareholders. By holding excess cash, managers can avoid raising funds externally which can submit their firms to the disciplining scrutiny of external capital markets. Managers can use excess free cash flows to then pursue their own spending objectives.

Initial research by Opler, Pinkowitz, Stulz and Williamson (1999), Kim, Mauer and Sherman (1998), Almeida, Campello and Weisbach (2004), Guney, Ozkan and Ozkan (2007) focus on the cash holdings by firms in the U.S. and other developed countries. More recent studies, including Dittmar and Mahrt-Smith (2007), Chang and Noorbakhsh (2009), Al-Najjar (2013) focus on cash holdings for international firms in both developed and developing countries. These studies provide mixed results for both developed and emerging market countries

on a number of key issues including the determinants of cash holdings, whether an optimal level of cash holdings exists, the effects of cash holdings on operating performance, and how agency problems may affect a firm's incentives to hold or spend cash.

This study employs a survey research methodology to examine the views of managers of Indonesian companies that trade on the Indonesian Stock Exchange (IDX) about issues related to corporate cash holdings. In particular, what do Indonesian managers believe are the most important determinants of cash holdings? This study also investigates whether the managers of Indonesian firms believe in a tradeoff model or a hierarchy approach for a firm's cash holdings. This study is important because it provides managerial insights about corporate cash holdings in Indonesia, a developing country in Southeast Asia. By soliciting managers' views on corporate cash holdings of Indonesian firms, this study provides direct evidence that complements and extends extant empirical research which relies on secondary data. While Powell and Baker (2010) survey managers of U.S. firms on reasons for holding cash, to my knowledge, this is the first survey-based study to comprehensively examine managers' beliefs about cash holdings outside the U.S. and, in particular, a developing country.

LITERATURE REVIEW

Early studies by Baumol (1952) and Miller and Orr (1966) develop theoretical models for optimal cash holdings based on the tradeoff between the opportunity costs of holding cash and the transaction costs incurred by converting interest-bearing assets into cash. More recent studies by Opler et al. (1999) and Kim et al. (1998) incorporate strategic factors into their models for optimal cash holdings and identify additional factors that can influence a firm's cash holdings including the extent of investment opportunities, volatility of firm cash flows, leverage, information asymmetries, agency costs, capital market constraints, ability to raise cash by cutting dividends or selling assets, and the use of derivatives.

Financial Determinants of Corporate Cash Holdings

Both Kim et al. (1998) and Opler et al. (1999) find that a firm's cash holdings increase with the level of investment opportunities and the uncertainty in future cash flows. Kim et al. (1998) use growth in leading economic indicators as a proxy for the extent of profitable investment opportunities, while Opler et al. use market-to-book ratios. They argue that firms with more abundant investment opportunities and greater uncertainty in future cash flows may hold more cash to ensure being able to fund future investments when internally generated cash flow is low and raising funds externally is too costly. The opportunity costs of having to forego future investments when liquid funds are low or when external funds are too expensive is higher for those firms with more valuable investment opportunities.

Baskin (1987) argues that firms with abundant investment opportunities also have an incentive to hold more cash to maintain their competitive positions within an industry. Holding excess cash may deter competition in a firm's product markets. For example, Froot (1993) cites Intel's use of excess cash holdings to maintain its competitive position in the early 1990s. Chen and Chuang (2009) examine the cash holdings of high-growth, high-tech firms listed on NASDAQ and find that firms hold excess cash to maintain their competitive positions.

Opler et al. (1999) argue that firms with abundant investment opportunities that bear greater information asymmetries with investors will hold more cash to avoid the agency problems of underinvestment (Myers and Majluf, 1984). They hypothesize that firms with higher

R&D expenses face greater information asymmetries and therefore hold more cash to ensure being able to fund positive-NPV projects without having to issue new securities to investors at a discount. Pinkowitz, Stulz and Williamson (2016) find that U.S. firms hold more cash on average than similar foreign firms, and argue that the differences in cash holdings between U.S. and foreign firms can be explained by the more highly R&D intensive nature of the U.S. firms.

Myers (1977) argues that agency problems between debtholders and shareholders increase the cost of issuing new debt and may cause firms to forego investing in profitable projects. Because this underinvestment problem is more acute for highly-leveraged firms, managers avoid these agency costs of debt by choosing low levels of debt or by holding more cash. Opler et al. (1999) suggest that firms with higher market-to-book ratios have greater investment opportunities, and should therefore hold more cash as they will incur higher costs if their financial condition worsens.

Jensen (1986) argues that managers may hold excess cash to allow flexibility for pursuing their own spending objectives. By funding projects from cash holdings, they avoid the disciplines of raising funds externally in the capital markets, which may allow them to undertake projects the capital markets would not be willing to finance. Stulz (1990) argues that this agency problem of free cash flow is more acute for low market-to-book firms. Increasing the level of managerial ownership may reduce the agency costs of managerial discretion by aligning the interests of managers and shareholders. Based on these arguments, Opler et al. (1999) suggest that a firm's cash holdings should be inversely related to market-to-book ratios and managerial ownership.

Managers may also squander free cash flows by pursuing dubious acquisitions. Harford (1999) finds cash-rich firms are more likely to pursue acquisitions, and those cash-rich firms with a greater likelihood of agency problems, as measured by low managerial ownership, account for much of the acquisition activity. Consistent with a free cash flow hypothesis, Harford finds both a negative stock price reaction to acquisition announcements and subsequent poor operating performance of the acquiring firms. Opler et al. (1999), however, do not find evidence that managers waste cash on value-destroying acquisitions.

Ozkan and Ozkan (2004) investigate how managerial ownership affects cash holdings for a sample of U.K. firms. They find the level of cash holdings falls as managerial ownership increases up to 24%, increases as ownership increases to 64%, then falls again at higher levels of ownership. This result contrasts with those of Papaioannou, Strock, and Travlos (1992) who do not find a relation between managerial ownership and cash holdings. On the other hand, Guney et al. (2007) find that firms with high ownership concentration and strong investor protection hold less cash. Nikolov and Whited (2014) employ a dynamic model of finance and investment to show that perquisite consumption by a firm's managers affects a firm's cash holdings. They find that low managerial ownership has been a key factor in the increased cash holdings by firms.

Research shows that firm size may affect a firm's cash holdings with small firms holding more cash because they are more likely to face borrowing constraints (Whited, 1992, Fazzari and Petersen, 1993) and to avoid the higher issuance costs they incur when raising external funds (Barclay and Smith, 1996). Opler et al. (1999) find that large firms with strong credit ratings hold less cash, but Kim et al. (1998) find an insignificant negative relationship.

Horioka and Terada-Hagiwara (2014) study cash holdings for a large sample of 11 Asian economies and find that cash flow has a positive impact on a firm's cash holdings for small firms that are financially constrained. They also find evidence that the cash flow sensitivity of cash

declined after the global financial crisis. Ghaly, Dang and Stathopoulos (2017) find that a firm's dependence on skilled labor affects its cash holdings. Firms that require more highly-skilled labor face higher labor adjustment costs in response to cash flow shocks and will thus hold more precautionary cash. They find the effects of labor skills on cash holdings to be more pronounced in firms that are financially constrained.

John (1993) argues that firms may use borrowing as a substitute for holding cash or other liquid assets. Research by Kim et al. (1998) supports this argument, they find cash holdings are inversely related to debt ratios. Guney et al. (2007) employ a large sample of firms from France, Germany, Japan, the United Kingdom, and the United States and find a negative relationship between cash holdings and leverage at low levels of leverage, but find that the relation turns positive at high levels of debt. They reason that debt acts as a substitute for cash holdings at low debt levels but that the cost of financial distress increases at high levels of debt which causes a firm to increase its cash holdings. This latter finding is consistent with Opler et al. (1999) who argue that firms with greater likelihood of financial distress should hold more cash.

Al-Najjar (2013) examines the determinants of cash holdings for the four largest emerging market countries including Brazil, Russia, India and China. His study finds that the cash holdings of firms in these emerging markets are related to firm size and leverage as predicted by previous studies. Based on his findings, he argues that the financial determinants of cash holdings in developed and emerging market countries are largely similar.

Duchin (2010) and Bakke and Tiantian (2017) examine the relationship between corporate diversification and cash holdings. Duchin finds that the diversification of investment opportunities in multidivision firms allows these firms to hold less cash than do stand-alone firms. Duchin also finds that cash holdings are positively related to the correlation between cross-divisional investment opportunities. Lower cash holdings are also associated with higher correlations between investment opportunities and cash flows for a firm. The above effects are more pronounced for financially-constrained firms. Bakke and Tiantian (2017) also find that diversified firm hold less cash than focused firms. The argue that investment dynamics are more important than financing frictions in explaining differences in cash holdings among diversified firms.

Harford, Klasa, and Maxwell (2014) find that firms with greater refinancing risk hold more cash. They find that refinancing risk for firms has increased in recent years as the maturity of firms' long-term debt has decreased. They contend that holding more cash helps to mitigate the effects of refinancing risk. Azar, Kagy and Schmalz (2016) contend that the cost of carry, defined as the spread between the cost and return of holding cash, explains the increased level of cash holdings by U.S. and foreign firms.

Because firms can conserve cash by reducing dividends or raise cash by selling assets, Opler et al. (1999) hypothesize that dividend-paying firms or those that can easily sell assets hold lower levels of cash. Shleifer and Vishny (1992) find that companies with firm-specific assets hold more cash because they cannot easily or quickly sell their assets to raise cash. Opler et al. (19999) argue that firms with multiple product lines and low inventory levels relative to sales have shorter cash conversion cycles and therefore hold less cash. They argue that firms using derivatives can reduce their cash holdings by coordinating risk management and cash management activities.

Harford et al. (2008) find an interaction between cash holdings, managerial ownership, dividend payouts, and a firm's corporate governance. They find that U.S. firms with low insider

ownership and weak governance hold lower levels of cash. The weakly-governed firms also tend to repurchase shares instead of paying dividends to avoid future payout commitments.

Legal, institutional and cultural factors may also affect cash holdings. Using a sample of firms from the United States, United Kingdom, France, Germany, and Japan, Guney et al. (2007) find that firms with strong creditor protection carry excess cash to avoid financial distress. They find that firms with strong investor protection and high ownership concentration hold less cash. Chang et al. (2009) examine how cultural factors may influence corporate cash holdings in 45 countries. They find that firms hold more cash in countries where individuals have a longer term orientation, tend to avoid uncertainty more, and are culturally more masculine.

Several studies have examined the effects of the 2008-2009 financial crisis in the U.S. on corporate cash holdings. Blissa, Chengb and Denis (2015) find that the shock ot the supply of credit during the crisis increased the benefit of holding cash, and that firms reduced disbursing cash to shareholders via dividends and share repurchases to, in effect, create a substitute form of financing. These effects were more pronounced among firms with higher leverage and more valuable growth options. Acharya, Almeida and Campello (2013) find that firms will hold more cash reserves during periods of heightened aggregate volatility to avoid higher spreads and shorter maturities imposed by banks on their undrawn credit lines during these risky periods.

Optimal Tradeoff vs. Hierarchy Approach to Cash Holdings

Opler et al. (1999) develop a financing hierarchy approach where changes in internally generated cash flows drive changes in cash holdings. In particular, a firm's cash holdings increase with firm profitability when it does not require external financing. When internally generated cash flow exceeds what is needed to fund investment opportunities, firms pay down debt and/or increase their level of cash holdings. No optimal level of cash exists in this hierarchy approach because firms will be indifferent between using internally generated cash flows to repay debt or accumulate cash. Their empirical findings, however, do not support a financing hierarchy explanation for corporate cash holdings.

Kim et al. (1998) find support for a tradeoff model where the optimal level of cash increases with the cost of external financing, volatility of cash flows, and return on future investment opportunities and decreases with the difference in returns between physical and liquid assets. Opler et al. (1999) also find support for a tradeoff model where small firms with strong growth opportunities and riskier cash flows hold more cash and large firms with strong credit ratings hold less. Opler et al. (1999) finds that strongly-performing firms tend to hold more cash than the amount predicted by their model, and firms tend to acquire those holdings from internally generated cash flows, not by issuing securities.

SURVEY DESIGN

I mailed a survey instrument in March 2014 to the chief financial officer (CFO) of the 250 largest Indonesian, non-financial firms, based on year-end 2013 market capitalization. A cover letter assured recipients that their answers would be completely confidential and released only in summary form. If the CFOs preferred not to respond to the survey personally, they were asked to give it to someone actively involved in their firm's cash management decisions. Each mailing included a cover letter and a self-addressed stamped envelope. I received 62 responses to the first mailing and 33 from the second, which took place in June 2014. The 86 responses represent a 34.4% response rate.

The survey contains three questions providing background information and 29 closed-end statements on the determinants of corporate cash holdings and whether an optimal tradeoff or hierarchy explanation better explains managers' approach to determining levels of cash holdings.

The questionnaire contains a copy number to permit testing for non-response bias and to avoid including duplicate responses. The survey instrument is available upon request. I consulted experts in both survey design and in corporate liquidity when designing these statements to avoid including statements that respondents might not properly understand or might not elicit the appropriate information. The survey asks respondents to indicate their level of agreement or disagreement with each statement about corporate cash holdings in large, publicly-held U.S. corporations in general where SD=strongly disagree (-2), D=disagree (-1), UND=undecided (0), A=agree (+1), and SA=strongly agree (+2).

Responses to the survey's background questions yield the following results. The 86 respondents hold high-level positions in their firms: Corporate Secretary (37.2%), CFO (31.4%), Director of Finance (14.0%), Controller (9.3%), and other (8.1%). The vast majority of respondents indicate active involvement in their firm's general liquidity and cash holdings decisions (89.5%). The 86 respondents represent firms from a wide variety of industry groups: service (23.3%), manufacturing (18.6%), retail (14.0%), real estate/property (11.6%), construction, utility, mining, (10.5%), pharmaceutical, transportation (7.0%), oil/gas (5.8%), and information technology (1.2%).

Steps were taken to increase the response rate and hence to reduce potential non-response bias by using multiple mailings, guaranteeing confidentiality, and offering a free summary of results as an incentive to complete the questionnaire. I test for non-response bias by comparing characteristics of responding to those of non-responding firms. Data from Compustat was used to perform t-tests for differences in means in sales, dividend payout, total assets, cash-to-total assets, debt-to-total assets, and market-to-book ratio. I find no statistically significant differences between the two groups for any of these characteristics at the 0.05 level and conclude there are no differences in responding and non-responding firms. Thus, responding firms appear to be representative of the population. These results are available upon request.

SURVEY RESULTS

Table 1 contains a summary of Indonesian managers' responses to 29 statements derived from previous research on the determinants of cash holdings. Statements are ranked by their mean response score. While all statements in Table 1 have theoretical and or empirical support, respondents generally disagree at the 0.01 level with 5 of these statements, as indicated by negative means that are statistically significant (S5, S11, S15, S17 and S22). Respondents are generally undecided, with a mean response that does not differ significantly from 0 at the 0.05 level or greater, for five of the statements (S8, S9, S16, S20 and S27). The mean scores of the remaining 19 statements are positive and differ significantly from 0 at the 0.05 level or higher. Respondents are often undecided with at least 35% being undecided on 11 of the 29 statements.

The discussion begins with the results of survey responses related to the first research question: What do Indonesian managers believe are the most important determinants of cash holdings? I explore various determinants including the effects of leverage and financial distress, refinancing risk, investment opportunities, agency cost explanations, effects of financial constraints, and other effects. Numbers in parentheses after a statement (S#) correspond to the numbers for the survey statements in Table 1. The responses indicate how managers view the statement for Indonesian corporations in general, not for their respective firms.

Determinants of Corporate Cash Holdings

Results indicate that about 83% of responding managers agree or strongly agree that firms prefer holding larger cash balances to avoid the risk of costly financial distress or bankruptcy (S7). The mean response of 0.977 is the second most highly-ranked statement and is highly significant. I also find that about 57% of managers agree or strongly agree that there is a positive relationship between leverage and cash holdings at higher levels of debt where financial distress is possible (S23). These findings suggest that managers of Indonesian firms believe leverage is an important determinant of a firm's cash holdings for firms that have high levels of leverage and may, as a result, experience financial distress.

Research by Guney et al. (2007) suggests, however, that cash holdings and leverage are inversely related at lower levels of firm debt. This study's findings do not support that prediction. About 45% of responding managers disagree or strongly disagree that there is an inverse relation between leverage and cash holdings for firms with low to fairly moderate levels of debt (S22) with a mean score of -0.500 that is highly significant. Finally, managers are, on average, undecided about whether firms base their capital structure decisions on their *net debt ratio*, where net debt is total debt minus cash holdings (S8) with a mean response score of 0.093 that is not significant.

Nearly 80% of responding Indonesian managers agree or strongly agree that firms with greater uncertainty in their future cash flows tend to hold more cash to prevent underinvestment in future profitable projects (S2). This statement represents the third most highly-ranked statement with a mean of 0.930 that is highly significant. Along the same lines, about 70% of responding managers agree or strongly agree that firms with abundant investment opportunities hold higher levels of cash to insulate future capital expenditures from the variability of future internally generated cash flows (S10) with a mean response score of 0.694 that is significant and represents the sixth most highly-ranked statement.

Two additional survey statements lend support to the notion that a firm's cash holdings are affected by their investment opportunities: firms with abundant investment opportunities have a strong incentive to hold excess cash in order to maintain their competitive positions (S12) and managers prefer larger cash balances to provide more discretion in their firm's spending and capital expenditure decisions (S4). The mean response scores of 0.279 and 0.256 are significant and represent the 16th and 18th most-highly ranked statements, respectively.

A key issue addressed in previous research is whether agency conflicts affect a firm's level of cash holdings. Survey results support some of the agency cost explanations. In particular, I find that about 43% of responding managers agree or strongly agree (but with another 31% who are undecided) that manager prefers larger cash balances to provide more discretion in their firm's spending and capital expenditure decisions (S4). With a mean score of 0.256 that is statistically significant, this finding provides support for the agency problems of managerial discretion argument by Jensen (1986). About 41% of respondents agree or strongly agree (with another 38% undecided) that firms with higher market-to-book ratios hold higher levels of cash (S26). This finding provides support for Opler et al. (1999) who suggest that firms with high market-to-book ratios are more likely to incur an underinvestment problem due to the agency costs of debt. The support for agency cost explanations (S4 and S26) are tempered by being only the 18th and 19th most highly-ranked statements.

Results suggest that managers are either undecided about or express disagreement with other statements related to agency cost explanations. In particular, responding managers are undecided, on average that firms with higher cash balances will generally invest more in R&D

(S9) and that firms with higher levels of managerial ownership hold higher levels of cash (S27). Managers express disagreement, on average that firms hold excess cash balances to avoid the disciplining effects from the capital markets that may accompany raising funds externally (S5) and managers of cash-rich firms who make diversifying acquisitions will hinder their firm's future operating performance and reduce shareholder wealth (S11). Statements S5 and S11 represent the two most negatively-ranked statements in Table 1 with negative mean response scores that are highly significant.

My results find support for Almeida et al. (2004) who find that a firm's cash holdings are affected by whether or not a firm is financially constrained. Managers generally agree that financially constrained firms are more likely to save cash from internally generated cash flows to fund future investment opportunities (S18) and financially constrained firms are more likely to seek optimal levels of cash holdings that balance the profitability of current and future investments than firms that are not financially constrained (S19). Mean response scores for both are positive and significant, and these statements represent the fifth and eighth ranked statements. Responding managers, however, are generally undecided about the statement that financially constrained firms are more likely to use excess cash flows to increase cash holdings instead of paying down debt than firms that are not financially constrained (S20).

Responses from four additional statements provide additional insight about managers' views of cash determinants: the level of cash holdings for a firm is inversely related to the spread between the return on its physical assets and the return on liquid asset holdings (S25), because large firms enjoy economies of scale when issuing securities, they tend to hold smaller cash balances than smaller firms (S13), and larger firms with stronger credit ratings and greater access to the capital markets hold less cash (S6). Each has a mean response score that is positive and significant, but are not among the most highly-ranked statements. I find that managers are generally undecided about the statement that diversified firms which exhibit low correlations between the investment opportunities across their different divisions tend to hold less cash than firms that are not as well-diversified (S16).

Finally, I investigate managers' views on several factors that Opler et al. (1999) suggest may affect corporate cash holdings. I find that managers generally disagree with the statement that firms with substantial assets in non-core business segments that cannot be easily sold will carry relatively higher levels of cash balances (S15). This finding does not support the predictions that Opler et al. (1999) derive from Vishny et al. (1992). The majority of respondents also disagree that managers and firms with multiple product lines will have lower cash conversion cycles and will tend to hold relatively lower cash balances (S17). This finding is also not consistent with the predictions of Opler et al. (1999).

Optimal Tradeoff and Financing Hierarchy Explanations

This study also investigates whether the managers of Indonesian firms believe in a tradeoff model or a hierarchy approach for corporate cash holdings. Survey results offer support for an optimal tradeoff approach for cash holdings based on results from two statements. About 73% of responding Indonesian managers agree or strongly agree that firms strive to hold an optimal level of cash that maximizes shareholder value and operating performance (S28). The mean response score of 1.047 is highly significant and represents the most-highly ranked statement in Table 1. In addition, about 57% of responding Indonesian managers agree or strongly agree that firms strive to hold optimal levels of cash that trade off the opportunity costs of holding too much cash against the trading costs of holding too little (S1). The mean score of

0.488 is significant and represents the 12th most highly-ranked statement. These results support the general notion of an optimal tradeoff approach for cash holdings, consistent with studies by Kim et al. (1998) and Opler et al. (1999).

My results, however, also show some support for a financing hierarchy approach corporate cash holdings. About 72% of responding managers agree or strongly agree that the primary cause for a firm's excess cash balances is the accumulation of internally generated cash flows, not the issuance of new securities in the capital markets (S14) and another 63% agree or strongly agree that firms with higher levels of internally generated cash flows tend to hold more cash (S3). Means for both statements are significant and represent the fourth and seventh most highly-ranked statements.

Table 1A
FINANCIAL DETERMINANTS OF CORPORATE CASH HOLDINGS

	Statement	Disagree (%)			Agree (%)					
		SD	D	U	A	SA	N	Rank	Mean	t-value
		-2	-1	0	1	2				
S28	Firms strive to hold an optimal level of cash that maximizes shareholder value and operating performance.	0	2.3	24.4	39.5	33.7	86	1	1.06	11.77*
S7	Firms prefer holding larger cash balances to avoid the risk of costly financial distress or bankruptcy.	0	3.5	14	64	18.6	86	2	0.98	13.21*
S2	Firms with greater uncertainty in future cash flows tend to hold more cash to prevent under-investment in future profitable projects.	0	4.7	16.3	60.5	18.6	86	3	0.93	11.78*
S14	The primary cause for a firm's excess cash balances is the accumulation of internally generated cash flows, not the issuance of new securities in the capital markets.	1.2	8.1	18.6	50	22.1	86	4	0.84	8.57*
S18	Financially constrained firms are more likely to save cash from internally generated cash flows to fund future investment opportunities than firms that are not constrained.	0	9.4	29.4	40	21.2	85	5	0.73	6.60*
S10	Firms with abundant investment opportunities hold higher levels of cash to insulate future capital expenditures from the variability of future internally generated cash flows.	0	7.1	32.9	43.5	16.5	85	6	0.69	7.70*
S3	Firms with higher levels of internally generated cash flows tend to hold more cash.	1.2	12.8	23.3	45.3	17.4	86	7	0.65	6.32*
S19	Financially constrained firms are more likely to seek optimal levels of cash holdings that balance the profitability of current and future investments than firms that are not financially constrained.	2.4	7.1	35.3	36.5	18.8	85	8	0.62	6.05*
S23	At higher levels of debt where financial distress is possible, there is a positive relationship between leverage and cash holdings.	0	14	29.1	39.5	17.4	86	9	0.61	5.99*
S25	The level of cash holdings for a firm is inversely related to the spread between the return on its physical assets and the return on liquid asset holdings.	2.3	8.1	36	38.4	15.1	83	10	0.56	5.58*
S13	Because large firms enjoy economies of scale when issuing securities, they tend to hold smaller cash balances than smaller firms.	1.2	7	44.2	36	11.6	86	11	0.5	5.54*
S1	Firms strive to hold optimal levels of cash that trade off the opportunity costs of holding too much cash against the trading costs of holding too little.	2.3	15.1	25.6	45.3	11.6	86	12	0.49	4.68*

Table 1B
FINANCIAL DETERMINANTS OF CORPORATE CASH HOLDINGS

S6	Larger firms with stronger credit ratings and greater access to the capital markets hold less cash.	0	17.6	40	31.8	10.6	85	13	0.35	3.63*
S24	Firms that hold persistent large excess levels of cash will have relatively stronger operating performance than other firms that do not.	0	14.1	44.7	35.3	5.9	85	14	0.33	3.83*
S21	By holding large cash reserves, a firm can deter competition in the product market and help maintain its competitive position.	1.2	20.9	31.4	40.7	5.8	86	15	0.291	2.98*
S12	Firms with abundant investment opportunities have a strong incentive to hold excess cash in order to maintain their competitive positions.	0	18.6	40.7	34.9	5.8	86	16	0.279	3.10*
S29	Firms with greater refinancing risk for their debt hold more cash to help mitigate refinancing risk.	8.3	14.3	29.8	31	16.8	84	17	0.333	2.62*
S4	Managers prefer larger cash balances to provide more discretion in their firm's spending and capital expenditure decisions.	2.3	23.3	31.4	32.6	10.5	86	18	0.256	2.35*
S26	Firms with higher market-to-book ratios hold higher levels of cash.	4.7	16.5	37.6	34.1	7.1	85	19	0.224	2.13*
S9	Firms with higher cash balances will generally invest more in R&D.	8.2	17.6	30.6	41.2	2.4	85	20	0.118	1.08
S8	Firms base their capital structure decisions on their net debt ratio, where net debt is total debt minus cash holdings.	7	25.6	29.1	27.9	10.5	86	22	0.093	0.78
S16	Diversified firms which exhibit low correlations between the investment opportunities across their different divisions tend to hold less cash than firms that are not as well-diversified.	6	21.7	42.2	25.3	4.8	83	21	0.012	0.11
S27	Firms with higher levels of managerial ownership hold higher levels of cash.	5.9	24.7	47.1	20	2.4	85	23	-0.118	-1.23
S20	Financially constrained firms are more likely to use excess cash flows to increase cash holdings instead of paying down debt than firms that are not financially constrained.	9.4	29.4	32.9	21.2	7.1	85	24	-0.129	-1.11
S22	There is an inverse relation between leverage and cash holdings for firms with low to fairly moderate levels of debt.	9.5	35.7	50	4.8	0	84	27	-0.5	-6.22*
S15	Firms that have substantial assets in non-core business segments that cannot be easily sold will carry relatively higher levels of cash balances.	13.3	37.3	41	6	2.4	83	25	-0.53	-5.44*
S17	Firms with multiple product lines will have lower cash conversion cycles and will tend to hold relatively lower cash balances.	23.5	31.8	31.8	11.8	1.2	85	26	-0.647	-5.92*
S5	Firms hold excess cash balances to avoid the disciplining effects from the capital markets that may accompany raising funds externally.	25	38.1	34.5	2.4	0	84	28	-0.857	-9.54*
S11	Managers of cash-rich firms who make diversifying acquisitions will hinder their firm's future operating performance and reduce shareholder wealth.	20.2	57.1	21.4	1.2	0	84	29	-0.964	-12.91*

This table reports managerial views of respondents on 29 statements about corporate cash holdings in Indonesian corporations in general. Respondents use a five-point scale to record their views where **SD**=strongly disagree (-2), **D** = disagree (-1), **UND**=undecided (0), **A**=agree (+1), and **SA**=strongly agree (+2). The t-value is a one sample, two-tailed test. Percentages may not add to 100 due to rounding. The statements are ranked in declining order by their means. T-values followed by an asterisk are statistically significant at the 0.05 level.

CONCLUSIONS

This study examines the views of the CFOs of Indonesian companies whose stocks trade on the Indonesian Stock Exchange (IDX) about issues related to corporate cash holdings. Using a survey approach, the paper explores their views on the determinants of cash holdings and investigates whether they believe in a tradeoff model approach or a financing hierarchy approach for a firm's cash holdings.

My results support previous theoretical and empirical research findings that firms prefer holding larger cash balances to avoid the risk of costly financial distress or bankruptcy, and that firms with greater uncertainty in future cash flows tend to hold more cash to prevent under-investment in future profitable projects. I also find support for the view that the primary cause for a firm's excess cash balances is the accumulation of internally generated cash flows, not the issuance of new securities in the capital markets. I find only weak and mixed support for agency cost explanations and also find evidence that the managers of firms that exhibit high cash flow volatility may hold more cash to ensure the ability to invest in new profitable projects given that internally-generated cash flows exhibit high levels of volatility. Results also provide suggest strong support for an optimal tradeoff approach to cash holdings, and some support for a hierarchy explanation for holding excess cash.

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