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LIQUIDITY IN MALAYSIAN PUBLIC LISTED COMPANIES

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Abstract

Cash holdings are the lifeblood of any company, especially those looking forward to invest in new projects and grow in the process. Cash can be generated internally from operations or supplied by external sources. Many start-ups and new ventures can not generate adequate revenue internally to fund all their capital needs and therefore they are dependent on external suppliers. A firm becomes financially constrained when all of its existing sources of capital are unable or unwilling to supply the desired amount of funds. Therefore, maintaining appropriate levels of liquidity within the firm is crucial towards the smooth operations of any business. Managers are more likely to reserve large proportion of cash as firm's assets for the purpose of capital expenditure, dividend payment to shareholders, and future investment opportunities (Almeida et al, 2002). The present study focuses on determining the levels of Corporate Cash Holdings of Malaysian Firms, across different size and different industries. Moreover, the behavior of different determinants affecting a firm's cash holding has also been studied. Evidence from prior research indicates that these variables or determinants are constantly used in evaluating the cash holdings and these determinants include firm size (Kim et al., 1998), leverage factor (Opler et al., 1999), agency cost / ownership concentration (Grossman and Hart, 1988), growth opportunity (Shleifer and Vishny, 1992), internal source of financing (Ranjan D'Mello et.al 2007), and cash flow volatility (Minton and Schrand, 1999).

Firm Size

Titman and Wessels, (1988) explained that larger firms are more likely to be diversified and thus less likely to face financial distress. This situation enables larger firms to raise funds externally at lower cost as compared to smaller firms because the size of a firm can be an inverse proxy for the degree of informational asymmetry between insiders and outsiders. In other words, larger the firm's size, lower the fund raising cost and there is no need to hold so much cash in the coffers. Thus, a negative relation should be expected between size and cash holding. While Almeida et al. (2004) contended that large firms are able to access capital markets easily compared to small firms because large firms face fewer restrictions.

Leverage

Firms can maintain financial flexibility through large cash reserves and unused debt capacity (low leverage) and it generates a negative relationship between firms' cash reserves and leverage (Graham and Harvey, 2001).

Ownership

Large shareholders, having claims on large fraction of the firm's cash flow, can monitor managers more effectively. Consequently, in the presence of a large shareholder, managerial discretion is likely to be curbed and agency costs between management and shareholders are expected to be lower (Stiglitz, Shleifer & Vishny, 1985).

This, in turn, leads to the cost of external financing being lower for firms with large shareholders, implying less need to hold large cash balances.

Growth Opportunity

If a firm has investment opportunities that would increase its value the opportunities are taken. But in the face of cash shortage, it may have to pass up some of these investments. Hence firms with such opportunities would hold greater amounts of cash in an attempt to make it less likely that they will have to give up valuable investment opportunities in some form. In addition, it is important to note that firms with greater growth opportunities are expected to incur higher bankruptcy costs (Williamson, 1988). This is because growth opportunities are intangible in nature and their value falls sharply in financial distress and bankruptcy. This would in turn imply that firms with greater growth opportunities have more incentives to avoid financial distress and bankruptcy and hence hold more cash and marketable securities.

Internal Source of Financing

According to Ranjan D'Mello et al (2007), firms can finance investments by using operation cash flows, issuing external securities, or liquidate its assets. Firms with insufficient liquid assets and volatile cash flows would reserve more cash to reduce its dependence on external financing. Guney et al (2006) contend that there is a negative relation between the firm's Cash Holding and its Liquid Assets. Liquid assets can be seen as substitutes for cash holdings when the firm has cash shortfalls.

Cash Flow Volatility

Kim et al. (1998) argued that cash flow provides a ready source of liquidity for investment and maturing liabilities. Firms, with higher cash holdings, tend to reduce the risk of pass up investment opportunity and facing

financial distress. For example, Minton and Schrand (1999) show that firms with higher cash flow volatility permanently forego investment rather than reacting to the cash flow shortfalls.

Cash Holdings Theories

The Corporate Cash Holdings' behavior patterns are usually explained under three theories, namely, Trade off Model, Pecking Order Theory and Free Cash Flow Theory. The Trade off theories suggest that optimal level of Cash Holdings is determined by weighting the marginal costs and marginal benefits of holding cash. The Pecking Order Theory (Myers, 1984), suggests that firms finance investments firstly with retained earnings, then with safe debt and risky debt, and finally with equity. When current operational cash flows are sufficient enough to finance new investments, firms repay debt and accumulate cash. When retained earnings are not enough to finance current investments, firms use the accumulated Cash Holdings and, if needed, issue debt. Free Cash Flow Theory by Jensen (1986) explains that managers have incentive to reserve cash to increase the amount of assets under their control and to gain discretionary power over the firm cash policy and investment decision. With the cash holdings, they do not have to raise external funds and could undertake investments that may have a negative impact on shareholders' wealth.

Problem Statement

Malaysian top 30 cash-rich firms reserve a significant proportion of cash and cash equivalents in their assets even though there is an opportunity cost associated with Cash Holdings. Keynes (1936) suggested that there are two major benefits to Cash Holdings. First, a firm can enjoy reduction in transaction costs by using cash as mode of payment without having to liquidate its liquid assets and this is known as Transaction Motive. Second, a firm

usually uses cash reserve as hedging tools to protect firms from the risk of future cash shortfalls and buffer for operation uncertainty and this is Precautionary Motive. At times of market meltdown, there is also inevitably a liquidity crunch. Many companies find that debts mount and revenue fall, drying up their reserves (Cash and Cash Equivalents) as some of their market shares shrink. But it is also during these times that buying opportunities crop up at bargain prices. Companies with a huge cash position would grab this once-in-a-lifetime chance. Having strong cash pile enables companies to aggressively expand their market share, organically or via Mergers and Acquisitions through buy out of weaker competitors. However, there is no guarantee that cash-rich companies will outperform the market. But at least the chances of going bust are lower. Given such tight liquidity situation, substantial amount of cash in the companies is crucial for survival. However, the trade-off of large cash holding in their coffer becomes an issue of underinvestment. Excessive cash reserve is often seen as Inefficient Liquid Assets that signal the investors that the firms failed to avail investment chances and growth opportunities. In contrast, low cash reserve of companies reflects low liquidity and high credit risk and the chance of companies being taken over by cash-rich companies is greater. Companies with optimal level of Cash Holdings will prosper in the long run.

Jensen (1986) suggested that managers may be motivated to hold large amounts of cash reserves to pursue their own objectives at the expense of shareholders. They can, for example, retain funds to spend on perquisites or for making inefficient investment decisions (Jensen and Meckling, 1976).

Ownership concentrations have strong implications for potential agency problems. It is argued that one way to control the agency problem between managers and shareholders

is to effectively monitor managers. However, average shareholders have weak incentives to monitor managers because the costs of monitoring are likely to outweigh the benefits. (Grossman and Hart, 1988). In contrast, large shareholders, having claims on large fraction of the firm's cash flow, can monitor managers more effectively, especially Government-Linked Companies like Telekom Malaysia, Sime Darby, UMW Holdings and Malaysia Airlines System. Consequently, in the presence of a large shareholder, agency costs between management and shareholders are expected to be lower (Stiglitz, 1985).

This study proposes to study why firms hold large amounts of cash and cash equivalents. Various factors have been responsible for holding cash. Understanding of Cash Holdings Management in companies is essential for them to expand and survive in Malaysian Economy. Companies with growth opportunities are likely to require greater funding for investment purpose. Investment requires massive cash flow to fund the project and hence operating income is insufficient for companies to finance the investment consistently. Hence companies tend to reserve huge Cash Holdings through retained earning to meet future funding needs.

Measurement of Variables

In this research, we investigate the relationship between Cash Holdings level in companies and its determinants by using the Cash Model. The exogenous variables used to evaluate the Cash Holdings of firms in this research include Firm Size, Degree of Leverage, Ownership Structure, Growth Opportunity, Internal Source of Financing, and Cash Flow Volatility. Hypotheses were formulated and validated.

Objectives of the Study

The general objective of this research was to examine the level of Cash Holdings in

top 30 public-listed firms based on their net gearing ratio, debt levels, and cash positions. In a specific manner, this research focuses on the determinants of Cash Holdings in Malaysian top 30 public-listed firms based on their net gearing ratio, debt levels, and cash positions for the period 2005 – 2007.

The specific objectives are,

- I. To discover the level of Cash Holdings of Malaysian top 30 public-listed firms based on their net gearing ratio, debt levels, and cash positions over the period 2005 to 2007.
- II. To examine the determinants of Cash Holdings in Malaysian top 30 public-listed firms based on their net gearing ratio, debt levels, and cash positions over the period 2005 to 2007.
- III. To develop a model of Cash Holdings.

Significance of the Study

This study of Cash Holdings in public-listed firms in Malaysia should play a significant role in bridging the literature gap between developed countries and developing countries such as Malaysia. This research would help other researchers, especially in the interest of working capital and liquidity management. Since the study of Cash Holdings is still new in corporate finance research in Malaysia, this research paper could serve as pioneer by providing early editions of proper research framework to the rest of researchers in this area. In addition to that, this research could provide guidelines to investors to find out whether listed firms are competent and efficient in managing their Liquid Asset (Cash Holdings). This research provides a comprehensive view on possible Cash Holdings Determinants which justify the efficiency of public-listed firms companies in managing their cash.

Research Design

The initial sample for research consisted of secondary data of 30 Malaysian

public-listed firms. Data were drawn from various different sources like Bursa Malaysia Database; “Stock Performance Guide” published by Dynaquest Pte.Ltd, 30 Malaysia. There were mainly two reasons why the analysis was limited to 30 Malaysian public-listed firms. First, these firms vary widely in size, leverage, ownership structure, future growth, internal funding, and cash volatility as market share differs over time. Second, analysis for these firms may enhance the effect of these factors. In the sample selection, only Malaysian public-listed firms were selected as they permitted sufficient disclosure of financial information. Data for the sample 30 Malaysian public-listed firms existed throughout the period 2005 to 2007.

Data Analysis Procedure

Before the data analysis was performed, several observations from prior study of others researchers through their publication and research journals, compiled in the Science Direct Journal Database, were studied. Using measurement of Cash Holdings and its determinants found in prior studies, ratio analysis was performed in Microsoft Excel. After this ratio information was gathered, they were transferred to SPSS 16.0. Model of Cash Holdings and its determinants were developed by using Regression Analysis.

1.1 The variables taken for the study were cash flow volatility, internal source of financing and firm size. Cash Holdings was used as a dependent variable. The result is shown in **Table 1.1**. From the above table, we infer that R value is 0.296 and R² value is 0.088. The result shows that cash flow volatility, internal source of financing and size explain 8.8% of Cash Holdings over a three year period. In the ANOVA test, we studied the relationship between these variables.

H0: There is no relationship between Cash Holdings and Cash Flow Volatility, Internal Source of Financing and Size.

H1: There is a relationship between Cash Holdings and Cash Flow Volatility, Internal Source of Financing and Size.

Table - 1.2 establishes the relationship between Cash Holdings and Cash Flow Volatility, Internal Source of Financing and Size at significance level of 0.047. There is sufficient evidence to prove the relationship between these variables with Cash Holdings. To further validate the impact of independent variables on the dependent variable, a Regression Model was developed. The dependent variable is Cash Holdings and independent variables are cash flow volatility, internal source of financing and firm size. As shown in **Table 1.3**, among the three variables, only firm size (X1) has significant relationship with cash holdings at significant level of 0.017 whereas others are not significant.

2.1 The variable taken for the study was degree of leverage and Cash Holdings was used as the dependent variable. The result is shown in **Table - 2.1** From the table2.1, we infer that R value is 0.210 and R^2 value is 0.044. The result shows that degree of leverage explains 4.4% of cash holdings over a three year period. In ANOVA test, we studied the relationship between these variables.

H0: There is no relationship between cash holdings and degree of leverage.

H1: There is a relationship between cash holdings and degree of leverage

Table - 2.2, indicates the relationship between Cash Holdings and degree of leverage at significance level of 0.047. There is enough evidence to prove the relationship between degree of leverage with Cash Holdings.

To further validate the impact of independent variables on dependent variable, a Regression Model was developed. The dependent variable is Cash Holdings and independent variable is degree of leverage. The

model result is shown in **Table 2.3**. The degree of leverage (X1) has significant relationship with Cash Holdings at significant level of 0.047 in this model.

3.1 The variables taken for the study are internal source of financing, firm size, ownership concentration and degree of leverage. Cash Holdings is used as a dependent variable. The result is shown in **Table - 3.1**.

From the table3.1, we infer that R value is .502 and R^2 value is 0.252. The result shows that degree of leverage manages to explain 25.2 percent of Cash Holdings over a three year period. In ANOVA test, we observed the relationship between these variables and they are shown in **Table - 3.2**.

H0: There is no relationship between cash holdings and degree of leverage.

H1: There is a relationship between cash holdings and degree of leverage.

The Hypothesis H1 is accepted.

4.1 The independent variables taken for the study cash flow volatility, internal source of financing, sales growth, ownership concentration, firm size and degree of leverage. Cash Holdings was used as the dependent variable. **Table-4.1**, indicates that R value is 0.542 and R^2 value is 0.293. The result shows that cash flow volatility, internal source of financing, sales growth, ownership concentration, firm size and degree of leverage explain 29.3% of Cash Holdings over a three year period.

In ANOVA test, we analysed the relationship between these variables and it is depicted in **Table -2.2**.

H0: There is no relationship between cash holdings and cash flow volatility, internal source of financing, sales growth, ownership concentration, firm size and degree of leverage.

H1: *There is a relationship between cash holdings and cash flow volatility, internal source of financing, sales growth, ownership concentration, firm size and degree of leverage.*

Table-4.2 indicates the relationship between Cash Holdings and cash flow volatility, internal source of financing, sales growth, ownership concentration, firm size and degree of leverage at significance level of 0.04. There is enough evidence to prove the relationship between these variables with Cash Holdings. To further validate the impact of independent variables on the dependent variable, a Regression Model was developed and the result is shown in **Table- 4.3**. The result shows that Firm Size, Degree of Leverage, Ownership Concentration, and Internal Source of Financing have significant relationship with Cash Holdings at significant level of 0.001 to 0.033 whereas Sales Growth and Cash Flow Volatility are insignificant to Cash Holdings.

Overall Results

1 H1: *There is a relationship between cash holdings and cash flow volatility, internal source of financing and size.* Accepted

2 H1: *There is a relationship between cash oldings and degree of leverage.* Accepted

3 H1: *There is a relationship between cash holdings and internal source of financing, firm size, ownership concentration and degree of leverage.* Accepted

4 H1: *There is a relationship between cash holdings and cash flow volatility, internal source of financing, sales growth, ownership concentration, firm size and degree of leverage.* Accepted

In the overall analysis, Cash Holdings had shown a positively significant relationship with the degree of leverage. But firm size has shown a negatively significant relationship with Cash Holdings. The correlation coefficient is

significant at 5%. The correlation coefficient is the highest (0.207*) for degree of leverage and Cash Holdings and the lowest (-0.260*) for firm size and Cash Holdings. In short, the correlation coefficients for these variables are weak. Understanding the Liquidity Management of firms and the factors influencing the liquidity especially the cash and cash equivalent is vital to ensure the smooth operation of firm and its solvency. Internally generated funds such as cash and other liquid assets tend to be less costly as compared to raising external funding such as issuance of IPO or borrowing from the bank. Cash-rich firms are usually associated with potential growth and stability in their business performance. However, excessive cash reserve in the company coffers will lead to the issue of underinvestment and opportunity cost of carry cash. Large firms, especially those with less ownership concentration and public-listed firms, tend to face the agency problem of manager holding excessive cash in their assets at shareholder expense. Therefore, the importance of identifying the determinants of Cash Holdings in these public-listed firms is stressed.

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Table - 1.1 Cash Holdings and Cash Flow Volatility, Internal Source of Financing and Size - correlation

MODEL	R	R SQUARED	ADJUSTED R SQUARE	STANDRAD ERROR OF ESTIMATE
1	.296	.088	.056	10.24852

Source: Stock Performance Guide” published by Dynaquest Pte.Ltd, Malaysia

a. Predictors: (Constant), CFV, IF, Size, CFV refers to Cash Flow Volatility, IF refers to Internal Source of Financing, Size refers to Firm Size

Table - 1.2 - Cash Holdings and Cash Flow Volatility, Internal Source of Financing and Size-Anova

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	868.581	<i>3</i>	<i>289.527</i>	<i>2.757</i>	<i>.047</i>
Residual	9032.771	<i>86</i>	<i>105.032</i>		
Total	9901.352	<i>89</i>			

Source : Stock Performance Guide” published by Dynaquest Pte.Ltd, Malaysia

Table - 1.3 Cash Holdings and Cash Flow Volatility, Internal Source of Financing and Size-regression

Model	B	Std. Error	Standardized Coefficients B	t	Sig
(Constant)	35.362	9.889		3.576	.001
Size	-6.931	2.841	.284	-2.439	.017
IF	.076	.062	.127	1.228	.223
CFV	.001	.001	.074	.634	.528

Source: Stock Performance Guide” published by Dynaquest Pte. Ltd, Malaysia

a. Dependent Variable: Cash Y = B + Y1X1 + Y2X2 + Y3X3 + E

The model developed as $Y = 35.362 - 6.931 X1 + 0.076 X2 + 0.01X3$

Y = Cash Holdings, X1 = Firm Size, X2 = Internal Source of Financing, X3 = Cash Flow Volatility

Table 2.1- Cash holdings and degree of leverage -Correlation

MODEL	R	R SQUARED	ADJUSTED R SQUARE	STANDRAD ERROR OF ESTIMATE
1	.210	.044	.033	10..3731

Source :Stock Performance Guide” published by Dynaquest Pte.Ltd, Malaysia

a. Predictors: (Constant), Lev, Lev refers to Degree of Leverage

Table - 2.2- Cash Holdings and Degree of Leverage - ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	437.532	<i>1</i>	<i>437.532</i>	<i>4.068</i>	<i>.047</i>
Residual	9463.820	88	<i>107.543</i>		
Total	9901.352	89			

Source: Stock Performance Guide” published by Dynaquest Pte.Ltd, Malaysia

Table - 2.3 Cash Holdings and Degree of Leverage - Regression Analyses

Model	B	Std. Error	Standardized Coefficients B	t	Sig
(Constant)	7.181	2.935		2.447	.016
Lev	.111	.055	.284	.210	.047

Source :Stock Performance Guide” published by Dynaquest Pte.Ltd, Malaysia

a. Dependent Variable: Cash $Y = B + Y1X1 + E$

The model developed as $Y = 7.181 + 0.111 X1$, Y = Cash Holdings, X1 = Degree of Leverage

Table - 3.1 - Cash Holdings and Internal Source of Financing, Firm Size, Ownership Concentration and Degree of Leverage - correlation

MODEL	R	R SQUARED	ADJUSTED R SQUARE	STANDRAD ERROR OF ESTIMATE
1	.502	..252	..216	.09359

Source: Stock Performance Guide” published by Dynaquest Pte.Ltd, Malaysia

a. Predictors: (Constant), Lev, Lev refers to Degree of Leverage

Table - 3.2 Cash Holdings and Internal Source of Financing, Firm Size, Ownership Concentration and Degree of Leverage Anova

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	.250	<i>4</i>	<i>.063</i>	<i>7.141</i>	<i>.000</i>
Residual	.745	85	<i>.009</i>		
Total	.995	89			

Source: Stock Performance Guide” published by Dynaquest Pte.Ltd, Malaysia

a. Predictors: (Constant), Lev, b. Dependent Variable: Cash

Table 3.3 Cash holdings and internal source of financing, firm size, ownership concentration and degree of leverage - Regression Analyses

Model	B	Std. Error	Standardized Coefficients B	t	Sig
(Constant)	.309	.090		3.443	.001
Size	-.069	.023	-.280	-2.969	.004
Lev	.195	.055	.368	3.562	.001
OSC	-.043	.014	-.309	-3.469	.003
IF	.231	.067	.386	3.469	.001

Source: Stock Performance Guide” published by Dynaquest Pte.Ltd, Malaysia

a. Dependent Variable: Cash $Y = B + Y1X1 + Y2X2 + Y3X3 + Y4X4 + E$. The model developed as $Y = .309 - .069X1 + .195X2 - .043X3 + .231X4$, Y = Cash Holdings, X1=Firm size, X2 = Degree of Leverage, X3=ownership concentration, X4=Internal source of financing

Table - 4.1 - Cash Holdings and Cash Flow Volatility, Internal Source of Financing, Sales Growth, Ownership Concentration, Firm Size and Degree of Leverage - Correlation

MODEL	R	R SQUARED	ADJUSTED R SQUARE	STANDRAD ERROR OF ESTIMATE
1	.542	..293	..213	9.71265

Source :Stock Performance Guide” published by Dynaquest Pte.Ltd, Malaysia

a. Predictors: (Constant), CFV, IF, Growth, OSC, Size, Lev, CFV refers to Cash Flow Volatility, IF refers to Internal Source of Financing, Growth refers to Sales Growth, OSC refers to Ownership Concentration Size refers to Firm Size, Lev refers to Degree of Leverage

Table - 4.2 Cash Holdings and Cash Flow Volatility, Internal Source of Financing, Sales Growth, Ownership Concentration, Firm Size and Degree of Leverage-ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	2076.315	6	346.052	3.668	.004
Residual	4999.784	83	94.336		
Total	7076.099	89			

Source: Stock Performance Guide” published by Dynaquest Pte.Ltd, Malaysia

a. Predictors: (Constant), CFV, IF, Growth, OSC, Size, Lev, b. Dependent Variable: Cash