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GRT **A CRITICAL ANALYSIS OF LITERATURE REVIEWS
ON ABSOLUTE LIQUID ASSETS MANAGEMENT
AND ITS IMPACT ON PERFORMANCE OF CORPORATES**

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Abstract:-Cash holding is an important aspect of corporate liquidity management. Cash is the most unproductive liquid assets and sometimes we call it dead asset. The more the cash balance maintained, less is available for investment and vice versa. As holding of cash brings both cost and benefits to a firm, there is a need for maintaining the cash at the optimal level. But how much cash a company should hold is influenced by several factors. In the light of above backdrop the present study seeks to review some selected literature on determinants of cash holdings of different corporates across the world. The objective of the study is to gather conceptual understanding of the corporate cash holdings, to know the determining factors of cash holdings already traced out by researchers and finally to find the research gap. The study covers a significant number of literatures having contribution towards the cash holding determinants. The findings may be useful for the financial managers, investors, and financial management consultants for taking various cash management decisions.

Keywords:Cash holdings, Determinants, Corporate liquidity, Agency problem, financial performance.

INTRODUCTION :

Cash is one of the important current assets crucial for the smooth operation of the day to activities of business enterprises. Cash holding is a measure of firm's ability to honor its obligations in time and it is the key input required to keep the business running on a continuous basis. In a frictionless Modigliani-Miller world, firm would not have incentives to hold substantial cash reserves.

It is because when firms need funds to invest or to meet cash shortage, they can raise the needed funds from the market at negligible transaction cost. But in the presence of information asymmetries, agency cost and cost of financial distress, the firm has to hold cash. But holding liquid assets in cash can be a double-edged sword for a firm. On the one hand cash holding leads to reduction in likelihood of financial distress, efficient investment in positive NPV projects, minimization of cost of raising external funds and minimizing cost of liquidating assets. On the other hand managers and directors have tendency to invest the cash holdings in Negative present Value project to extract private incentives and cash has opportunity cost. So there is a need for determining the exact level of cash holding that a firm should keep by striking a balance between cost and benefits of holding the cash.

RELEVANCE

Cash management especially cash holding components is of growing importance in present time for the corporate managers. Now-a-days many firms are sitting on the cash piles whereas many firms suffering from liquidity crises. This is because of inaccurate understanding of cash flow patterns of the firm, determinants of such cash flow and their implications on firm's level of cash holding. So this paper aims at highlighting the determinants of cash holdings already traced out by various authors, to know the implications of such factors and suggest few new factors which can be studied to know their impact on firm's level of cash holdings as further research.

OBJECTIVES

The objective of the study is:

- ❖ To analyze critically the determinants of cash holding already reviewed by research scholars.
- ❖ To analyze the implications of cash holding determinants on firm's performance.
- ❖ To suggest few possible factors having significant influence on firm's cash holding in the changing scenario of information technology.

RESEARCH & METHODOLOGY

This study is purely based on secondary data and of descriptive in nature. The review of literature covers selected scholarly work between 1969-2014 on non-financial companies comprising both service and manufacturing sectors. Financial companies and utility companies are excluded because their cash holding is regulated by statutory requirements of the respective Acts. Further non-quoted companies are excluded because of non-disclosure of their financial reports. Newly quoted companies that will result in missing data for the period being studied are also excluded.

THEORIES OF CASH HOLDINGS

❖ The Trade-off Theory

This theory of cash holdings states that the optimal cash level is a trade-off between the costs and the benefits associated with holding cash. This theory is also called as transaction cost theory because this theory is explained by the transaction motive to hold cash. Holding of cash has both cost and benefits. As per this theory the optimal level of cash holding is decided by balancing the marginal cost and marginal benefits of holding cash. Marginal benefits of holding cash are reducing likelihood of financial distress, optimal investment in positive NPV projects, avoiding cost of external financing or liquidating assets. The major cost of cash holdings to a firm is the opportunity cost of funds invested in liquid assets.

❖ The Pecking Order Theory

This theory of Myers and Majluf (1984) asserts that managers have more information about their firms than investors which is referred to as information asymmetry. According to this theory, raising funds by new equity issue is very costly because of information asymmetry. That is why firms finance their projects primarily with retained earnings, then with debt and finally with equities as a last resort to minimize the costs associated with external financing resulting from information asymmetries and signaling problems. This theory also called as financing hierarchy theory by Opler (1999).

❖ The Agency Theory

This theory of Jensen (1986) suggests that there may exist a conflict of interest among shareholders and management. These conflicts lead to agency problems which cause agency costs. The entrenched managers of firms with poor investment opportunities tend to retain cash rather than pay it out the reason of which can be attributable to two hypotheses: the free cash flow hypothesis and the risk-reduction hypothesis.

< The Free Cash Flow Hypothesis

The free cash flow hypothesis considers corporate cash holdings as free cash flows since they can be used by managers to promote their own interests at the expense of shareholders which give rise to agency costs of holding such cash.

< The Risk-Reduction Hypothesis

Under the risk-reduction hypothesis, cash holdings are considered as risk-free investments and therefore a risk-averse manager would increase cash holdings to reduce the firm's risk exposure by avoiding positive risky NPV investment opportunities.

THE MOTIVES TO CASH HOLDING

The incentive of firms to hold cash is influenced by certain motives. The motives can be classified in the following ways:

❖ Transaction (operation) Motive

This motive states that firms hold cash balances associated with routine payments and collections. Baumol

(1952) and Miller and Orr (1966) were the first to develop a model for optimal demand for cash based on transaction cost. This motive assumes that when a firm suffers from cash shortage to make payments it can liquidate assets to meet such cash shortfall. But liquidating assets to cash involves transaction costs. Thus by holding cash reserve the firm can lower its transaction cost by using its cash to make payments rather than liquidating assets. So the firm will hold more cash when it is likely to incur higher transaction cost to convert non-cash assets to cash and will hold less cash when the opportunity cost of cash is higher.

❖ **Precautionary Motive**

As business operates in risk and uncertainties, firms are expected to hoard cash as buffer to meet future contingencies and hedge cash shortfall. The amount of precautionary cash depends upon many factors as pointed out by various researchers such as predictability of future cash flows, ability of the firm to borrow funds at short notice, cost of external financing, return on assets, volatility of returns, return on assets, macroeconomic uncertainties, access to external funds etc.

❖ **Speculative Motive**

Firms holding cash take advantages of price fluctuations. It is associated with holding of cash for investing in profitable opportunities as and when they arise. When companies expect the rate of interest to increase in the future and in order to take advantage of this future increase in the rate of interest, they may like to keep money in the liquid form to be invested in securities when the rates of interest actually rise. In the opposite case when they feel that interest rates would decline, they will invest in the present. Keynes has called this as 'Speculative Motive.

❖ **Agency Motive**

This motive is associated with agency problem. When a firm with unattractive investment opportunities generates huge free cash inflows, the manager has to decide whether to retain the cash reserve or pay them out to shareholders. Because of the agency problem the entrenched managers would retain cash rather than increase payouts to shareholders to obtain some incentives. Dittmar, Mahrt-Smith and Servaes, (2003) found that firms in countries with greater agency problem hold more cash.

LITERATURE REVIEW

The researchers always put their effort to discover the realities through the observation, analysis and documentations of the events with the objective of contributing towards the growth of the existing knowledge base. To have a concrete idea about a certain phenomenon there is a need for going through the research work already done by various authors. So this section reviews the prior literature on determinants of cash holdings.

Nadiri (1969) pioneered a study on cash holdings by collecting data from US manufacturing sector from 1948 to 1964 to estimate a model relating to the desired level of real cash balances. The results showed that the demand for real cash balances is determined by output, the interest rate, the expected rate of change in general price level, and factor prices.

Campbell and Brendsel (1977) conducted an empirical study by collecting data from US manufacturing firms from 1953-1963 to examine the impact of compensating balance requirements on the cash holdings. Campbell and Brendsel, through Ordinary Least Square (OLS) regression analysis found that compensating balance requirements are not binding.

John (1993) studied the association between the liquidity of firms and the financial leverage and bankruptcy costs applying linear regressions on panel data of 223 US firms for the period from 1979 to 1981. The author found evidences that the liquidity ratios are positively related to the bankruptcy costs, but negatively related to the financial leverage, cash cycle and value of fixed assets are used as guarantee to the contracted debts.

Kim et al. (1998) analyzed 915 US firms for the period from 1975 to 1994 and found evidences more in favor of the trade-off view of corporate cash holdings than the financing hierarchy view. Their results indicated that the corporate cash holding varies positively with degree of cash flow volatility and growth opportunities and Cash Holding varies inversely with leverage, probability of bankruptcy and operating performance.

Opler, Pinkowitz, Stulz and Williamson (1999) collected data from 1048 publically traded US firms between 1971 to 1994 to find the determinants and implications of corporate cash holdings. Through time-series and cross-section tests, they found that firms with strong growth opportunities and riskier cash flows and small firms hold relatively high ratios of cash to total non-cash assets. Firms that have the greatest access to the capital markets tend to hold lower ratios of cash to total non-cash assets. They also found that firms that do well tend to accumulate more cash.

Harford (1999) estimated a sample of all acquisition attempts made by US firms during the period of 1977 to 1993. Harold found that cash-rich firms are more likely to attempt acquisitions than other firms. Stock return evidence shows that acquisitions by cash-rich firms are value decreasing. Cash-rich bidders destroy 7 percent in value for every excess dollar of cash reserves held. Cash-rich firms are more likely to make diversifying acquisitions and their targets are less likely to attract other bidders. Consistent with the stock return evidence, mergers in which the bidder is cash-rich are followed by abnormal declines in operating performance. Overall, the evidence supports the agency costs of free cash flow explanation for acquisitions by cash-rich firms.

Pinkowitz and Williamson (2001) examined the effect of bank power on cash holding patterns of industrial firms for a sample of Japanese firms for the period 1974-1995, German firms for the period 1984-1994 and US firms for 1971-1994. The cross country analysis show that Japanese firms tend to hold more cash than their American or German counterparts do. While cash holding pattern was similar across German and US firms, the OLS regression analysis revealed that Japanese cash balances are significantly influenced by the monopoly power of the banks. This is consistent with the fact that high cash holdings mean higher rents extracted by the banks during the periods when they enjoy certain power in the corporate lending system.

Bruinshoofd and Kool (2002) presented a model in which the firms adopt passive cash holding policies in the short run, while actively seek cash holding targets in the long run, finding evidences from the analysis of 473 firms in the Netherlands for the period from 1986 to 1997.

Anderson (2002) studied firms in UK and Belgium and found evidences that the corporate cash holdings are positively related to the long-term debt financings for the precaution motive in UK.

Dittmaret al. (2003) collected a sample of more than 11,000 firms from 45 countries and found that corporations in countries where shareholders rights are not well protected hold up to twice as much cash as corporations in countries with good shareholder protection. They also found that when shareholder protection is poor, factors that generally drive the need for cash holdings, such as investment opportunities and asymmetric information, actually becomes less important. In addition, study found that firms hold larger cash balances when access to funds is easier. Dittmaret al. explain that agency problems are important determinants of corporate cash holdings.

Ozkan and Ozkan (2004) analyzed 1029 firms in UK for the period from 1984 to 1999, focusing on the agency costs of managerial discretion. Their results indicated that the capital participation by managers(owner-manager) make the UK firms hold higher cash.

Ferreira and Vilela (2004) used a sample of 6,387 firms' observation from 12 Economic and Monetary Union (EMU) countries for the period of 1987-2000 to investigate the determinants of corporate cash holdings. Their results suggest that cash holdings are positively affected by the investment opportunity set and cash flows and negatively affected by asset's liquidity, leverage and size. Bank debt and cash holdings are negatively related, which supports that a close relationship with banks allows the firm to hold less cash for precautionary reasons. In addition, firms in countries with superior investor protection and concentrated ownership hold less cash, supporting the role of managerial discretion agency costs in explaining cash levels. They also found that capital markets development has a negative impact on cash levels, contrary to the agency view.

D'Mello, Krishnaswami and J. Larkin (2005) analyzed the corporate cash holding decision of 149 USA firms listed on NYSE, Amex and Nasdaq that conduct a spin-off between 1985 and 2000 that resulted in 154 subsidiaries. The result demonstrated a negative relation between firm size and cash holdings implying that small firms incurring higher transaction cost while raising external funds or firms that have limited access to highly liquid internal assets such as non-cash working capital are allowed less cash at the spin-off. Further firms with higher sales growth are allowed more cash at the spin-off. This findings is consistent with the agency cost hypothesis that firms with poor growth potential, are likely to overinvest are allowed less cash. As small firms and firms with growth opportunities are subject to high level of information asymmetry are allowed more cash to reduce their need to raise external funds and thereby eliminating adverse selection cost. They also found that cash holding is positively related to R & D expense.

Nguyen (2005) collected a sample of 9,168 firms' observations from Tokyo Stock Exchange for the period of 1992 to 2003. He investigated the hypothesis that cash balances have a precautionary motive and serve to hedge the volatility of operating earnings. Through regression analysis, Nguyen found that cash holdings are positively associated with firm level risk, but negatively related to industry risk. He also found that cash holdings decrease with the firm's size and debt ratio, and increase with its profitability, growth prospects, and dividend payout ratio. Nguyen investigated the precautionary motive for holding cash by undertaking various classification schemes under which cash shortages have different cost implications. His results showed that keiretsu affiliated firms hold less cash and are less risk

sensitive.

Saddour (2006) investigated the determinants of the cash holdings by collecting data from 297 French firms over the period 1998-2002, using the trade-off theory and the pecking order theory. His study was upon mature and growth firms and whether the variables differentiate among firms or not. Through regression analysis, author found that French firms increase their cash level when their activities are risky and the levels of their cash flow are high, and reduce it when they are highly leveraged. Growth companies hold higher cash levels than mature companies. For growth companies, there is a negative relationship between cash and the following firm's characteristics: size, level of liquid assets and short term debt. The cash level of mature companies increase with their size, their investment level, and the payout to their shareholders in the form of dividends or stock repurchases, and decreases with their trade credit and their expenses on research and development.

Drobetz and Gruninger (2006) investigated the determinants of cash holdings for a comprehensive sample of 156 Swiss non-financial firms between 1995 and 2004. Through regression analysis, they found that that asset tangibility and firm size are both negatively related to corporate cash holdings. Dividend payments and operating cash flows are positively related to cash reserves but they could not detect a significant relation between growth opportunities and cash holdings. In addition, Drobetz and Gruninger found a positive relationship between i) CEO duality and corporate cash holdings, and ii) a non-significant relationship between board size and corporate cash holdings. That is, CEO duality leads to significantly higher cash holdings and larger board size has no impact on the corporate cash holdings.

In New Zealand, Hofmann (2006) examined the determinants of corporate cash holdings of nonfinancial firms. His findings suggest that the main determinants of corporate cash holdings in New Zealand firms' growth opportunities, the variability of its cash flows, leverage, dividend payments, and the availability of liquid asset substitute. While growth opportunities and the variability of cash flows are positively related to cash holdings, large dividend payments and liquid asset substitutes indicate lower cash holdings.

Foley, Hartzell, Titman and Twite (2007) made a study on U.S based multinationals between 1982 to 2004 and came out with the conclusion that U.S. multinational firms hold cash in their foreign subsidiaries because of the tax costs associated with repatriating foreign income. Consistent with this hypothesis, firms that face higher repatriation tax burdens hold higher levels of cash and hold this cash in foreign affiliates that trigger high tax costs when repatriating earnings.

Afza and Adnan (2007) focused on determining the level of corporate cash holdings of non-financial Pakistani firms, across different firm sizes and different industries. They used dataset for the period of 1998 to 2005 for the firm size, growth opportunities, cash flow, net working capital, leverage, cash flow uncertainty, and dividend payments. Afza and Adnan found negative relationships between ii) market-to-book ratio, net working capital, leverage, dividends, and cash holdings, and ii) positive relationships between i) firm size, cash flow, and cash holdings. Their findings show that firm size, cash flow, cash flow uncertainty, net working capital, and leverage significantly affect the cash holdings of non-financial firms in Pakistan.

Hardin III et al. (2009) used a sample of 1,114 firm-year observations for 194 equity real estate investment trusts (REITs) from USA over the 1998 to 2006 period. Through OLS regression analysis, they found that REIT cash holdings are inversely related to funds from operations, leverage and internal advertisement, and are directly related to the cost of external finance and growth opportunities. Cash holdings are also negatively associated with credit line access and use. The results imply that REIT managers elect to hold little cash to reduce the agency problems of cash flow thereby increasing transparency and reducing the future cost of external capital.

Isshaq, Bokpin and Onumah, (2009) examined the interaction between corporate governance, ownership structure, cash holdings, and firm value on the Ghana Stock Exchange. Board size is found to be positively and significantly related to share price among the corporate governance variables. However, a significant relationship between inside ownership and share price is not found. The results also indicate that additional units of cash holdings do not have a statistically significant influence on share price. Finally, leverage and income volatility are found to be significant determinants of share price.

Ran Duchin (2010) studied the relation between corporate liquidity and diversification. The sample for the study covered 17 years period from 1990-2006 and consists of 50,905 firm year observations on 9,357 firms. Findings of the study suggested that diversified firms are well positioned to smooth investment opportunities and cash flows because both the opportunities and outcomes of their division are not perfectly correlated. As a consequence, diversified firms will hold less cash for precautionary motive and increasing so as cross divisional correlation

decrease. Further existence of internal capital market when there is diversity in investment opportunities among various divisions, leads to efficient flow of funds to more productive divisions which induce the divisions to hold less cash thereby reaping the benefits of diversification in the form of saving on cost of holding cash and mitigating agency conflict.

Chen and Mahajan (2010) investigated corporate liquidity (cash holdings) in 15 European Union (EU) countries and 31 non-EU countries from 1994 to 2004. Their findings are three-fold. First, the introduction of the euro and the establishment of the Economic and Monetary Union (EMU) have reduced corporate liquidity in EU. Second, cash and debt are more substitutable in EU than non-EU countries in the transition to the monetary union. Lastly, corporate governance variables such as closely held shares, anti-director rights and creditor rights are important determinants of corporate liquidity and should be ignored in international corporate liquidity studies.

Daher (2010) studied the factors affecting the cash holdings by taking data sample of 4,23,505 firm-year observations comprising 640 public and 60,105 private firms over the period 1985- 2005. Through regression model he concluded that on an average the cash ratio of public firm is higher than private firm. He focused on the relationship between cash holding and different features of firm. Significant negative relation was found between cash and different variables like net working capital, firm size, leverage, capital expenditures and cash flows. But no relationship between cash holdings and investment opportunities was found. Further he documented a negative relationship between ownership concentration and cash holdings indicating a positive association between agency problems and cash holdings which is the reason why public firms hold more cash than private firms.

Liu and Mauer (2011) examined how CEO compensation incentives influence cash holdings from two perspectives: pay-for-performance incentives and risk-taking incentives. They studied a sample of U.S. firms from 1992 to 2006 and found that CEO risk-taking incentives are positively related to cash holdings. This result is inconsistent with the literature in general where cash is considered a low-risk investment.

Shah (2011) collected a panel data from 280 firms listed on Karachi stock exchange over a period of 1996 to 2008. The static regression models demonstrated that cash-to-total-assets ratio increases with growth opportunities, size of the firm, dividend ratio and decreases with debt maturity and conversion cycle.

Marin and Niehaus (2011) focused on examining the joint determination of corporate decisions to hold cash and to hedge risk, with a focus on the sensitivities of cash holdings and hedging to cash flow by collecting a sample of 318 manufacturing firm consisting of 841 observations over the period of 1997 to 2004. The result confirmed the existing evidence that firm that are likely to be financially constrained exhibit a positive sensitivity of cash holding to cash flow. On the other hand, firm that is financially unconstrained do not consistently save cash when cash flows are higher. They also found a positive sensitivity of hedging to cash flow for constrained and unconstrained firm as well.

Kim et al. (2011) examined a panel data set obtained from 125 publicly traded US restaurant firms between 1997 and 2008 and found that restaurant firms with greater investment opportunities tend to hold more cash. At the same time, large restaurant firms, firms holding liquid assets other than cash, firms with higher capital expenditures, and firms paying dividends were found to hold less cash. They described that both precautionary and transaction motives play important roles in explaining the determinants of cash holdings for restaurant firms.

Subramaniam, T. Tang, Yue and Zhou (2011) analyzed whether the organizational structure of firms (i.e., whether a firm is diversified or focused) affects their cash holdings. Using Compustat firm level and segment-level data of 7,147 diversified firm years and 52,277 focused firm year from 1988 to 2006, they found that diversified firms hold significantly less cash than their focused counterparts. Using time-series, cross-sectional, and additional robustness tests they are able to attribute the lower cash holdings among diversified firms to complementary growth opportunities across the different segments of these firms and the availability of active internal capital markets. They also found that the other theories that rely on the potentially effective use of asset sales of non-core segments of diversified firms to generate cash, and the increased agency/influence costs in diversified firms do not offer an economically significant explanation for the lower cash holdings among diversified firms.

Gill and Shah (2012) examined a data set obtained from 166 Canadian firms listed on Toronto stock exchange for a period of 3 years from 2008-2010 which resulted into 498 total observations. They documented a significant positive relationship between cash flow, leverage, board size, CEO duality and cash holding where as significant negative relation exist between market-to-book-value, net working capital, firm size but no significant relationship between dividend, industry dummy and cash holdings.

Song and Lee (2012) used a sample of 32,174 firm years representing 5,059 East Asian firms (Hong Kong, Indonesia, Malaysia, the Philippines, Singapore, South Korea, Taiwan, and Thailand) over the period 1990–2006 that were affected most by the crisis during 1997-1998 to investigate the long-term effect of the Asian financial crisis on corporate cash holdings in 8 East Asian countries. They concluded that East Asian firms almost double their median cash holdings over 10 years after the crisis and documented a negative relation between investments and cash ratio specifically in post crisis period. This is consistent with the precautionary motive of cash holding that the firms adopt more conservative investment policies after the crisis which leads to increase in cash balances. Specifically, the firms' increased sensitivity to cash flow volatility is one of the main factors explaining the higher level of their cash holdings in the post crisis period.

Meggison and Wei (2012) studied the determinants of cash holdings and the value of cash in China's share-issue privatized firms from 1993-2007. Through regression analysis, they found that smaller, more profitable and high growth firms hold more cash. Debt and net working capital are negatively related to cash holdings, while cash holdings decline as state ownership increases.

Islam (2012) made a study to identify the variables that influence the cash holding decision by firms. The data set contained five years (2006-2010) panel data of 54 manufacturing firms of Bangladesh listed on Dhaka stock exchange. The study showed that, Net working capital; Tobin's Q and Volatility of cash flow do not have significant relationship with Cash hold by the firms. Current asset, Operating income, cash flow, Size, Short term Debt, Total Debt, Intangible asset, Leverage ratio, net cash and tangibility ratio have significant relationship with cash hold by the manufacturing firms.

Ogundipe, Ogundipe and Ajao (2012) constructed a sample of 54 Nigerian nonfinancial firms listed on Nigerian Stock Exchange for a period of 15 year from 1995-2010 to study the empirical relationship between cash holding and firm characteristics. By applying co-relation and OLS regression model, the study concluded that there is a significant positive impact of cash flow, leverage, returns on assets, investment, market-to-book value and firm size on level of cash and there is a significant negative impact of net working capital on cash level.

Akguc and Choi (2013) constructed a sample of 4, 27,724 firm-year observations and 76,587 unique firms in 33 countries comprising of 3, 87,168 private firm-year observations and 40,556 public firm-year observations during 2002-2011 to examine the differences in cash holdings between publicly and privately held firms. They found that European public firms on average hold more cash as a percentage of total assets than private firms. They showed that during the recent European financial crisis, firms in European Monetary Union countries on average hold more cash, whereas firms in non-Euro countries hold less. Furthermore, they found that public firms on average hold much more cash than private firms in Euro-zone countries than non-Euro countries, indicating higher precautionary demand for cash against Euro-zone contagion and policy coordination risk which outweighs a lower transaction demand for cash. They also found that, firms in countries with better shareholder protection hold less cash. Finally, both public and private firms show significant cash flow sensitivity to cash holdings.

Gao, Harford and Li (2013) conducted a research using a sample of 75,594 public and private U.S. firms year observations over the period 1995–2011, the result documented that private firms hold about half as much cash as public firms do. This is despite the fact that they arguably have less access to external financing and would be expected to have a stronger precautionary motive due to financing frictions. After controlling for standard factors affecting cash reserves, they found that the effect of agency costs from being public, leads public firms to hold cash reserves higher than those of similar private firms. Next, they examined how excess cash influences firm investment and performance of these two groups of firms. As compared to private firms, public firms tend to spend excess cash by investing in ways that reduce firm operating performance. These results suggested that agency problems make public firm managers spend excess cash in a less efficient way. They also found consistent evidence for well-versus poorly governed public firms. By increasing investment, poorly governed public firms have a higher speed of adjustment away from excess cash than do well-governed public firms.

Anjum and Malik (2013) undertook a study to determine and measure how and to what extent size of the firm, net working capital, leverage, cash conversion cycle and sales growth affect cash holding of corporate by collecting a sample of 395 non-financial companies of Pakistan covering a period of 6 years from 2005 to 2011 listed on Karachi stock exchange. The result demonstrated that there is significant relationship between cash holding and selected variables except sales growth. The results of the study also confirmed the earlier findings that levels of cash are less in firms having high ownership concentration structure and because of this less agency problems arise. The negative association between cash holdings and firm size may be due to the economies of scale.

Ali and Yousaf (2013) composed a sample of 876 public limited companies listed in German market to investigate the determinants of cash holdings of non-financial firms. The study covers data over a period of 11 years from 2000 to 2010. The result documented that cash holding is negatively co-related to size of firm (LTA), retained earnings, working capital and leverage and cash holding is positively related to cash flow, dividend payout, EBIT, capital expenditure and MTBV (growth opportunities). But there is a negative insignificant relationship between cash holding and percentage of insider ownership.

Mugumisi and Mwanza (2014) conducted a study to establish the determinants of corporate cash holding in Zimbabwe. The study was based on secondary data over the period 2009-2012 obtained from annual reports of 29 non-financial firms listed on Zimbabwe stock exchange. By employing panel data methodology they found that Net Working Capital, Return on Assets, Growth opportunities, Dividend and Debt maturity structure are the major determinants of cash holding. The study also claimed that significant positive relation exist between dividend, return on assets, cash flow to assets and corporate cash holding whereas the relation of cash holding with sales growth, debt maturity structure, capital expenditure and net working capital is significantly negative.

Tehrani, Darabi and Izy (2014), collected a sample of 581 firm-year observations representing 200 non-financial firms listed on Tehran Stock Exchange over a period of 2007 – 2012 to study the association between stock liquidity and cash holdings. He used four proxies as a measure of stock liquidity namely value of transaction (VT), no of transactions (NT), Turnover rate (TR) and Trading probability (TP). The result claimed a positive relationship between VT, NT and TR and cash holdings but found no relation between TP and cash holdings.

1 ANALYSIS AND FINDINGS

From the review of various literatures on corporate cash holding we found the following determinants and their implications as follows-

1. Firm size: - Large firms are subject to low information asymmetry than small firms. So large firms face lower transaction costs in accessing external sources of finance. The hypothesis that cash holdings are negatively related to the size of a firm. This hypothesis is supported by Opler, Pinkowitz, Stulz and Williamson (1999), Ferreira and Vilela (2004), D'Mello, Krishnaswami and J. Larkin (2005), Nguyen (2005), Megginson and Wei (2012), Gill and Shah (2012), Daher (2010), Anjum and Malik (2013) & Ali and Yousaf (2013). On the other hand a positive relationship between cash holdings and firm size is expected on the ground that large firms are in a better position to accumulate cash as they are presumed to be more profitable than small one. This finding is supported by Ogundipe, Ogundipe and Ajao (2012) & Attullah Shah (2011).

2. Leverage: - Leverage can act as a proxy for firm's ability to issue debt which suggests that highly leveraged firms have greater ability to issue debt. So a negative relation is expected between leverage and the level of cash holdings. This explanation is supported by Ferreira and Vilela (2004), Saddour (2006), Afza and Adnan (2007), Hardin III et al. (2009), Anjum and Malik (2013) & Daher (2010). On the other hand Leverage increases the possibility of financial distress. In that case, a firm with higher level of leverage should maintain relatively higher level of liquid assets. So a positive relation between leverage and cash holdings is expected. This is supported by Gill and Shah (2011) and Ogundipe, Ogundipe and Ajao (2012).

3. Growth Opportunities: - When there is information asymmetry between manager and investor external financing will be costlier. Growing firms are more prone to information asymmetry problem. Growing firms may find the external financing too costly and forego projects with positive net present values. To get rid of this situation, growing firms will hold excess liquid assets. On the basis of this assumption a positive relationship is expected between growth opportunities and cash holdings. This is supported by Kim et al. (1998), Opler, Pinkowitz, Stulz and Williamson (1999), Ferreira and Vilela (2004), D'Mello, Krishnaswami and J. Larkin (2005), Nguyen (2005), Saddour (2006), Hardin III et al. (2009), Shah (2011), Kim et al. (2011), Megginson and Wei (2012), Ogundipe, Ogundipe and Ajao (2012), Ali and Yousaf (2013) & Mugumisi and Mwanza (2014). But the empirical result of Gill and Shah (2011) & Afza and Adnan (2007) found a negative association between growth opportunities and cash holdings.

4. Dividend Payment: - Dividend paying firms have to maintain larger cash balances for paying dividends. So a positive association between dividend payment and cash holdings is expected. This hypothesis is well reflected in the findings of Nguyen (2005), Drobotz and Gruninger (2006), Shah (2011), Ali and Yousaf (2013) & Mugumisi and Mwanza (2014). In contradiction to above hypothesis, when a dividend paying firm suffers from cash shortfall, that can be made good by missing dividend payment. In this sense one would expect a negative correlation between dividend payment and cash holdings. This negative association is claimed by Hofmann (2006), Afza and Adnan (2007) & Kim et al. (2011).

5. Sales Growth: - A firm with sales growth needs to maintain huge inventory in stock to meet the increased sales. Increased sales growth increases the firm's opportunities to invest in different operations of the firm. On the basis of

this assumption a negative relationship between sales growth and cash holdings revealed by Mugumisi and Mwanza (2014).

6. Degree of Cash Flow Volatility: - Firms with volatile cash flows can suffer from cash shortage at any point of time. Cash shortage brings many costs to firm like costs of bankruptcy, foregoing profitable investment opportunities etc. Extra cash holdings are required to be maintained as a buffer to cope up with such cash shortfall. So a positive correlation is assumed between cash holdings and degree cash flow volatility by Kim et al. (1998), Nguyen (2005) & Hofmann (2006).

7. Cash Conversion Cycle: - Short cash conversion cycle enhances a firm's ability to replenish its cash balance quickly. So a firm with short cash conversion cycle will not run out of cash. On the basis of this explanation a negative relation is revealed by Attullah Shah (2011).

8. Profitability: - A profitable firm will have comparatively strong cash flows from operating activities. A strong cash flow reduces the need for hoarding cash reserves which implies that profitability can be a substitute to cash holdings (Kim et al., 1998). A competing hypothesis is that profitable firms are supposed to have more cash balance. Nguyen (2005), Megginson and Wei (2012) & Ali and Yousof (2013).

9. Diversification of Firm: - Diversified firms found to keep less cash holdings than focused firm because of complementary growth, potential assets sale and existence of internal capital market. This findings supported by Subramaniam, T. Tang, Yue and Zhou (2011) and Ran Duchin (2010).

10. Ownership Pattern (public firm vs. private firm): - Public firm hold more cash than private firm due to stronger precautionary motive and agency costs from being public. This result is demonstrated by Daher (2010), Akguc and Choi (2013) & Gao, Harford and Li (2013).

11. Repatriation Tax: - Firms that face higher repatriation tax burdens hold higher levels of cash and hold this cash in foreign affiliates that trigger high tax costs when repatriating earnings. (Foley, Hartzell, Titman and Twite, 2007).

12. CEO Duality: - Cash holding of firm increases when CEO acts as the chairman of the board due to agency problem. Because cash holding allows managers to invest in projects that best suit their own interests. So CEO Duality is positively related to cash holdings. These findings are demonstrated by Gill and Shah (2011) & Drobetz and Gruninger (2006).

13. Board Size: - Larger the boards size higher the cash holdings is claimed by Isshaq Bokpin and Onumah (2009) & Gill and Shah (2011) in line with CEO duality argument.

14. Credit Line Access/ Access to Capital Market: - The ability of a firm to raise capital easily and at lower cost reduces the incentives of holding cash. So negative relationship is revealed between cash holdings and access to capital market by Opler, Pinkowitz, Stulz and Williamson (1999) & Hardin III et al. (2009).

15. Owner Manager: - Firms with capital participation by managers tends to hold more cash as documented by Ozkan and Ozkan (2004).

16. Protection of Shareholders Right: - Firms with better shareholders protection right hold less cash due to reduced agency problem as revealed by Dittmar et al. (2003) & Akguc and Choi (2013).

17. CEO risk: - CEO risk taking incentives are positively related to cash holdings. (Liu and Mauer, 2011). But this result is consistent with the literature in general where cash is considered a low-risk investment.

18. Cost of External Finance: - when cost of capital borrowed from external sources is higher than opportunity cost of holding cash, the firm prefers to pile up cash to meet investment need. (Hardin III et al., 2009).

19. Industry Level Risk: - Nguyen (2005) revealed that Cash holding is negatively associated with industry-wide earnings risk basing upon the argument that firms determine their cash balances by considering their risk relative to industry peers.

20. Capital expenditures: - Firms which have high capital spending hold less cash because capital expenditure drains out a firm's cash. So negative relationship between cash holdings and capital expenditure is demonstrated by John (1993), Mai Daher (2010) & Mugumisi and Mwanza (2014).

21. Other factors such as capital market development, output, the interest rate, the expected rate of change in general price level, debt maturity structure; factor prices, stock liquidity etc. also have influence on the level of cash holdings of corporate.

SUGGESTIONS AND CONCLUSION

The study concludes that the level at which a company should maintain its cash balance is a function of several factors as enumerated by different authors at different point of time. There is still room for further studies, using variables beyond those studied previously and their influence on cash-holding levels. Other variables like spending in corporate social responsibility, use of E-Commerce, recession, use of technology, international linkage, market size etc. can be taken for further studies.

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