



Cash Holding and Firm Value: Evidence from Egypt

Asmaa Kamal Migawir

Teaching Assistant, Faculty of Commerce, Cairo University

Medhat Abdel-Rashed

Professor of Financial Accounting, Cairo University

Abstract: It is noteworthy that cash holding has a great value to firms sometimes but costly at others. It is expected that firms hold an optimal level of cash that improves shareholder's value. Hence, high level of cash holding can be attractive for investors, as firms have enough cash to finance investments and to pay dividends as well. Conversely, if firms keep significant amounts of cash, they will not be able to invest or develop their businesses. Accordingly, firm value is expected to decrease. In this study, our aim is to investigate whether cash holding is related to firm value for a sample of firms listed in the Egyptian Stock Exchange and indexed in EGX 100. The annual reports were collected for three consecutive years 2013-2015. The regression analysis is used in our paper to test the association between cash holdings level and firm value.

Keywords: Cash holding; firm value; Egypt

1. Introduction

There has been a noticeable change in the role of cash reserves in corporate financing and investment decisions. As prior literatures demonstrate that corporate cash holdings is considered a strategic part of the business capital structure (Keynes, 1936; Kalcheva and Lins, 2003; Gomes, 2012). Firms that have unusual conditions necessitate corporate cash savings and have to make a decision on their optimal cash holding level. In case a firm is financially unconstrained or in the perfect markets (with no information asymmetry, taxes, and agency and transaction costs), holding large amounts of cash will be inappropriate. Then, firms are not in need for holding cash, because there are no benefits or costs of allocating cash as a result of the easy access to capital markets to funding investment projects at negligible transaction costs.

In fact, cash is an asset that is exposed to a great degree to being wasted and eroded due to managerial decisions.

Management can easily access to cash and most of its use is discretionary. Companies are permitted by corporate cash holdings to make use of profitable investment opportunities and make crucial debt payments in case of cash flow shortfalls with no need to gain access to external capital markets. Nevertheless, higher corporate cash holdings may result in a drawback if managers exploit them for their own benefit at the expense of investors (Chung, 2015). It is apparent that the question of what motivates firms to maintain large levels of cash holdings, has become a focal point for both academics and practitioners (Boubaker, Derouiche and Nguyen, 2015; Harford et al., 2012)

Every organization has a main objective represents in value maximization. According to Antwi (2012), the firm value is the accomplishment of a firm and the confidence indicator of shareholders since the inception of the company to date. Consequently, the firm value is the level of success of companies



as realized by investors and is often related to stock prices. For the moment, cash holding is a financial decision used by firms to maximize its value. Cash holding is the amount of cash that the company holds to run its activities (Kalcheva, 2007; Ginglinger and Saddour, 2008). This information is useful to investors in order to make investment decisions. It is possible to withhold cash to cover the risk of declining exchange rates of goods, services, and foreign currencies.

According to the low levels of insider ownership, agency conflicts will decrease and the negative effect of cash holdings on firm value will decrease, if insiders align with outside stockholders as insider ownership increases. However, when insider ownership increases, insiders may build up cash for making inefficient investment decisions as their stakes rise, which may expand the divergence of interests between insiders and outside stockholders (Luo, 2005). The negative effect of cash holdings on firm value might fall at the highest levels of insider ownership, due to motivation alignment effect (Luo and Hachiya, 2005).

Based on the previous cross-country studies, companies evaluate the importance of maintaining cash holding. Pinkowitz and Williamson (2001) examined the difference between Japanese and US cash holdings through the monopoly benefits of Japanese banks that motivate firms to hold cash reserves; the average US firm held only 8.6% of total assets in the form of cash and cash equivalents, while the average cash holding in Japan was 18.7% of total assets. Dittmar et al. (2003) studied a sample of more than 11,000 firms from 45 countries, the median cash and cash equivalent ratios ranged from 0.3% in Kenya to 29.6% in Egypt. Chung et al. (2015) suggest than firms hold cash and

marketable securities averaging 22.5% of total assets in US publicly traded companies.

From a theoretical viewpoint, there are four models that can clarify corporate cash holdings; which are: trade-off theory, pecking order theory, cash flow theory, and the agency theory. Firms are considerably motivated to hold cash by either the transaction cost motive or the precautionary motives. In addition, there are other purposes of holding cash contain the tax motive and the speculative motive (Kim et al., 2011; Azmat, 2014). **The main research questions** in this study **are**: why do firms hold cash? and how does cash holding affect firm value?

The paper proceeds as follows; section 2 provides a review of the literature and develops hypotheses. Section 3 outlines data and methodology. Section 4 presents empirical results. Finally, section 5 concludes and presents areas for future research.

2. Literature Review and Hypotheses Development

2/1. Theoretical Foundations

Cash holding is considered one of the main figures of each firm's balance sheet. Managing cash requires investment for cash equivalents and excess cash (Dittmar, 2007). Consistent with the Egyptian Accounting Standard (EAS) No.4 "Cash flow statements", Cash equivalents signify short-term, high-liquid investment that could be easily converted into cash, also there is low risk associated with change in its value. According to Zurigat et al. (2011), they stated that cash assets contain petty cash fund, cash holding in banks and cash equivalents, such as investments and financial instruments easily convertible to cash without loss in its original value. In relation to excess cash, it is the cash that



exceeds the operational and investment needs for the firm. As a result, cash holding is not limited to cash available for firms to do its daily business and payment of its short-term contractual liabilities, as all these concerns are essential to be continued. Therefore, cash holding acts for accumulated and excess cash and cash equivalents, which exceeds the operational and investment needs for the firm, and which is convertible to cash without loss in its original value.

There are **four theoretical models** to define firm characteristics affecting cash holdings decisions:

First of them, the **trade-off theory (TOT)** supposes that firms can identify their optimal level of cash holdings by weighting the marginal costs and marginal benefits related to holding cash. The benefits of cash holdings will be represented in the following: reducing the probability of financial distress, allowing the implementation of investment policy when financial constraints are accomplished, and minimizing the costs of raising external funds or liquidating existing assets. Hence, the main cost of holding cash is the opportunity cost of the capital invested in liquid assets (Harford et al. 2012).

Second, the **pecking order theory (POT)** of Myers (1984), assumes that to decrease asymmetric information costs and other funding costs, and to avoid high borrowing costs; firms will prefer to exploit internal resources in order to finance investments before seeking external funds in this order: first with retained earnings, then with safe debt and risky debt, and finally with equity if needed. In contrast with the trade-off theory's assertion of the presence of an optimal level of cash holdings, this theory proposes that firms have no target cash

levels, but cash is used as a buffer between retained earnings and investment needs.

Third, the **free cash flow (FCF)** theory of Jensen (1986) demonstrates that managers are motivated to build up cash to raise the amount of assets under their control also to gain discretionary power over the firm investment decision. Therefore, it is possible for excessive cash to create overinvestment problems, because it is used by managers to finance negative NPV projects (Thanatawee, 2011). This theory suggests that for effective operations of the firm, maintaining specific level of cash holding within the firm is important. Moreover, the level of cash holding of a firm is measured by its dividend payments policy, capital structure, cash flow management, investment decisions and working capital requirements of the firm.

Finally, the **agency theory**, of Jensen and Meckling (1976), indicates that due to the separation of management and ownership, there will be moral hazard, asymmetry of information and many problems. In the existence of managerial discretion, managers are motivated to hold significant amounts of cash, so that they can be more flexible to follow their own objectives. Management is permitted by cash to make investments that the capital market would not generally be ready to finance. Since self-serving managers are allowed by excess cash holdings to prevent the discipline of the capital markets, investing in cash raises the costs of outside financing and can have harmful effects on firm value (Drobetz, 2007).

2/2. Why Do Firms Hold Cash?

There are several benefits gained by holding cash balances. First, for transactional motives, firms hold cash to achieve their operating activities, meet



their payment or current expenses, and to raise funds. The reason behind this motive is that if a firm does not have cash to satisfy its financial obligations or to finance positive net present value (NPV) projects, the company should either approach the financial markets or dispose noncash financial assets to raise the finance needed. The essential cash to meet these payments is the optimal demand for cash. In imperfect markets, a firm can increase its cash holdings to avoid transaction and underinvestment costs. (Yarram, 2012; Chirekaet al., 2017).

Second, for precautionary motives, firms hold cash to meet unexpected contingencies, also to protect themselves against the probable cash shortage, and thus reducing cash flow uncertainty. The strength of the precautionary motive relies on the risk of an unexpected contingency. Accordingly, if a firm is running in a highly volatile sector of activity, its precautionary cash holding will be more than that of firms that work in a less volatile environment. Consistent with the firm's characteristics, the costs of cash shortfalls or the costs of raising funds would vary. Firms for which these costs are higher, they might hold large cash reserves (Martínez-Sola, 2013; Lawson et al., 2016).

Third, for speculative motives, organizations may protect themselves by holding cash for the expected future profitable investment opportunities (Kim et al., 2011; Kariuki, Namusonge & Orwa, 2015). This motive relies on the assumption that increasing rates of interest levels support decreasing prices of securities and vice versa. Consequently, when interest levels are expected to decrease, a firm will invest its reserves in securities. This brings benefits to the firm because the prices of

the needed securities will raise consequently the expected rate of interest drop. Accordingly, unexpected investment opportunities can arise during the business operation. Sufficient cash holding permits the firm to take into account the benefit of these opportunities and grow in the future (Ozaki & Nashimura, 2003; Besley et al., 2005; Zhang, 2016). In China, the speculative motive of holding cash was also found to weaken, as the level of corporate governance improved upon. This is because -as the study of Yu, Lee, Yi and Fok (2015) explains- speculative activities are usually insignificant and often unethical activities.

Finally, for Tax motives, multinational organizations are encouraged by tax laws and regulations to hold more cash. For example; the United States imposes taxes on the income received from the foreign operations of local businesses, although they award tax credits for the foreign taxes paid on the foreign operations, but US organizations with overseas subsidiaries have a leaning toward holding the cash earned in the overseas subsidiaries to avoid taxes after repatriation along with double dividend taxation since both corporate earnings and shareholders' dividends are taxable. These overseas subsidiaries use their earnings for investing in positive projects with the rest of the earnings being held as cash reserves (Foley et al. 2007; Daher, 2010; Azmat, 2014).

2/2. Review of Empirical Studies

To answer the question: what is the influence of cash holding on firm value?, the prior studies can be classified into three streams of research. The first stream demonstrated that there was a positive association between cash holding and firm value. The second stream



pointed out that there was a negative association between cash holding and firm value. The third stream clarified that there was no significant association between cash holdings and firm value or there was nonlinear association between them.

Concerning the positive association between cash holding and firm value, Mikkelsen and Partch (2003) examine 89 publicly traded US firms that held more than 25% of their assets in cash and cash equivalents at the end of years 1986 through 1991. They find that firms with significant cash holdings have median operating performance that is greater than the performance of firms matched by size and industry, and greater than or comparable to the performance of firms matched by tendency to hold high cash reserves. Moreover, it is noticeable that high cash firms grow faster, undertake higher levels of investment, and have higher ratios of market-to-book value of assets. Similarly, Boyle and Guthrie (2003) indicate that holding a high level of cash is essential for potential investments. Pinkowitz and Williamson (2007) studied the market value of cash that the firms held. By using data during the period 1965-2004 of 12,888 US firms, they concluded that firms with riskier operating cash flow and good growth opportunities had their cash valued at premium than those with poor growth opportunities. Furthermore, firms with fixed investment programs and those that are near to financial distress, are valued lower by the investors. Huang and Zhang (2008) conducted an international study to examine the impacts of corporate transparency on value and level of corporate cash holdings, their sample countries include Pakistan. They noticed that a firm's holding of liquid assets decreases with the level of corporate

transparency, on the other hand cash resources are rewarded with higher market valuation when firm's transparency is increased. Later, Ha and Le Minh (2017) examine the effect of capital structure and cash holdings on the firm value. By using data from the financial statements of 105 firms listed on the Ho Chi Minh Stock Exchange (HOSE)¹ since 2009-2014, results demonstrate that cash holdings is positively associated with the firm value; short-term debt is negatively associated with the firm value; the impact of long-term debt on the firm value is not statistically significant; short and long-term debt are negatively associated with cash holdings.

Accordingly, from a perspective of this stream of literature, holding cash increases the firms value by increasing the number of value-creating investment projects done by the firm and decreasing the cost of funding.

Conversely, concerning to the negative association between cash holding and firm value; Earlier, Myers and Rajan (1998) conclude that, it is possible to convert liquid assets into private benefits at lower cost than other assets; so the management can easily spend cash holdings that is not necessary for investments or operations. Therefore, Opler et al. (1999) confirm that managers preferred the control that comes with holding cash rather than paying dividends to stockholders. Luo & Hachiya, (2005) investigated the effect of cash holdings on firm value, emphasising on Japanese non-financial firms listed on the Tokyo Stock Exchange. They got a sample of 15,832 firm-year observations

¹ Ho Chi Minh City Stock Exchange (HOSE or HSX), located in Ho Chi Minh City, is the largest stock exchange in Vietnam



over the period of 1989–2002. The results point out that insiders² to contribute their friendly relationships (close connections) with stable stockholders, hold more cash. Firms hold less cash if they have higher degrees of financial institution ownership, but some of them are over-borrowing under the power of main banks. The results concluded that foreign stockholders prefer profitable firms to invest as these firms have higher levels of cash. Accordingly, they stated that cash holdings resulted in agency problems and affected negatively the firm value.

In addition, Faulkender and Wang (2006) examined the cross sectional variations in cash holdings' value because of the changes occurred in the corporate financial policy. Through investigating the variation in excess stock returns over the sample of firm-years from US based publicly traded firms over the period (from 1972 to 2001), the results indicated the decline of marginal value of cash with larger cash holdings, higher leverage, better access to capital markets, and as firms select greater cash distribution via dividends rather than repurchases. Zahedi (2015) demonstrated that the aim of the study is to discover the relationship between ownership concentration, cash holding and firm value by using financial

statement information of firms listed on Tehran Stock Exchange (TSE) from 2004 to 2013. The results clarify the decline of firm value as ownership concentration increases when company's cash holding mounts. Generally, the level of cash holdings that is found with the level of ownership concentration can decrease firm value.

Moreover, there is additional evidence (Dittmar et al., 2003; Chen, 2008) indicates that excessive cash holdings in firms with less investment opportunities decreases firm value because excessive cash may motivate managers effectively to overinvest, and Lins and Kalcheva (2004) stated that paying dividends, hence decreases cash holdings and the agency cost of overinvestment. Pinkowitz et al. (2006), argued that the relationship between cash holdings and firm value is significantly weaker in countries with poor investor protection than in different countries.

Consequently, from a perspective of this stream, free cash flow and opportunity cost are responsible for higher cash levels and may result in a reduction in firm value.

Finally, a set of literatures demonstrated that there is nonlinear association between cash holding and firm value³, or there is no significant relationship between each other. From a perspective of nonlinear association between cash holding and firm value, Dittmar and Mahrt-Smith (2007) verified the data of US publicly traded firms empirically for the period of 1990-2003 to examine the influence of corporate governance on firm value by comparing

² Insider is a term describing a director or senior officer of a company, as well as any person or entity that beneficially owns more than 10% of a company's voting shares. For purposes of insider trading, the definition is expanded to include anyone who trades a company's shares based on material nonpublic knowledge. Insiders have to comply with strict disclosure requirements with regard to the sale or purchase of the shares of their company.

³ The association between cash holding and firm value is sometimes positive and is negative at other times.



the value and use of cash holdings in poorly and well-governed firms. They stated that the market value of the firms' holding excess cash reserves are decreased by up to one-half when they are poorly governed; for instance one dollar of cash is valued less in poorly governed firm, namely 42 cents to 88 cents, whereas good governance actually doubles this value. Furthermore, they found that poorly governed firms invest their excess cash reserves in assets with low accounting returns (Martínez-Sola et al., 2013).

From a viewpoint of, there is no significant relationship between cash holding and firm value, Isshaq (2009) studied the interaction between corporate governance, ownership structure, cash holdings, and firm value on the Ghana Stock Exchange (GSE). The results point out that additional units of cash holdings with no statistically significant effect on share price⁴. Shareholders, may be do not value additional cedi⁵ (dollar) that managers accumulated on the GSE, returning additional cash to shareholders or investing it in financially viable project is more desired to storing it on the balance sheet.

There is a growing stream of literature empirically evaluates the association between cash holdings and firm value. Moreover, numerous papers examined the influences of cash holdings on firm value using sample of firms from developed countries (Dittmar et al., 2003; Mikkelsen and Partch, 2003; Luo &

Hachiya, 2005; Faulkender and Wang, 2006; Williamson, 2007; Chen, 2008). Only very few papers measured the impact of cash holdings on firm value using sample of firms from developing countries (Huang and Zhang, 2008; Isshaq et al., 2009; Zahedi, 2015; Ha and Le Minh, 2017).

According to reviewing earlier literature, to the best of our knowledge, there has been no paper until now studying the association between cash holding and firm value in an Egyptian context. Consequently, this study examines the following hypothesis:

H₁: There is no relationship between cash holding and firm value.

3. Data and methodology

3.1. Identifying variables

3.1.1. Dependent Variable

The dependent variable in the study is FV_{it} , which is firm value for firm i at year t . The value of firms is an achievement of the founding of the organization is reflected in stock prices to raise investors' positive perception of the Firm. Tobin's Q is a proxy for firm value, which is measured as the ratio of the market value of firm (market value of equity plus book value of total debt) to book value of firm (total assets). Tobin's Q ratio is considered to provide a good indicator of firm value as it includes elements of debt and equity of the company.

3.1.2. Independent Variables

The independent variable of interest is $CASH_{it}$, which measures the ratio of cash and marketable securities to total assets for firm i in year t .

3.1.3. Control variables

In this study, we use three control variables to proxy for firm size, leverage, and asset growth.

3.2. Model specification

⁴ Firm value is influenced by risk attributes of the firm in conditions of both income and leverage. However, the effect of cash holdings is less certain (clear). Maybe, it is because the evidence of on the reasons why firms accumulate cash is less conclusive.

⁵ Cedi is a unit of currency used in Ghana.



In order to test the association between cash holding and firm value, we formulate the following model:

$$FV_{it} = \alpha + \beta_1 CASH_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 GROW_{it} + \epsilon_{it}$$

Where:

FV_{it} = Tobin's Q (market value of equity plus value of total debt to book value of assets).

$CASH_{it}$ = Cash and cash equivalents/total assets.

$SIZE_{it}$ = natural len of total assets.

LEV_{it} = the ratio of total debt (short- and long-term debt) to total assets.

$GROW_{it}$ = rate of assets growth (current year's total assets minus last year's total assets. divided by last year's total assets.

3.3. Sample and Data

The sample includes firms listed on the Egyptian Stock Exchange and indexed in EGX 100. Data were collected during the period of 2013-2015, through two main sources: the published financial statements and the stock prices for the sample firms. Seven banks and fourteen

financial institutions were excluded from the sample because financial institutions (banks, insurance companies, and brokerage firms) have unique financial nature and capital structure. Hence, the final sample size becomes (79) firms.

4. Results

4.1. Descriptive Statistics

The basic descriptive statistics of the variables are presented in Table 1. For each variable, Table 1 shows mean, standard deviation, minimum and maximum value. On average, companies in our sample have fv of 2.7% and cash 8% over the entire time period from 2013 to 2015. The standard deviation of FV is 42%, minimum and maximum values are -2% and 1%, respectively. The mean of cash is 8%; this means that the sample companies maintain cash holding more than 8%. Averages of size (size), LEV and GROW are approximately 20.64, 43% and 69% respectively.

Table 1. Descriptive Statistics for Variables

Variable	Mean	Maximum	Minimum	Std. Dev.
FV	0.0279872	1.012929	-2.044245	0.4288685
CASH	0.0828989	1	-0.0106583	0.1170629
SIZE (log)	20.64745	25.25313	16.99218	1.850781
LEV	0.4315616	4.764727	0	0.5385661
GROW	0.691879	100.3941	-0.990072	6.63645

Correlation matrix between independent variables is presented in Table 2. As seen in Table 2 all the correlation coefficient values are less than 0.9; suggesting that there is no problem of multicollinearity.

Table 2. Correlations between Independent Variables

Variables	FV	CASH	SIZE	LEV	GROW
FV	1.000				
CASH	-0.1523 (0.001) ***	1.000			
SIZE (log)	-0.2731 (0.049)	0.377 (0.003)	1.000		



	**	***			
LEV	0.4077 (0.024) **	0.390 (0.002) ***	0.774 (0.000) ***	1.000	
GROW	0.2291-	-0.271 (0.036) **	-0.221 (0.090) *	-0.225 (0.084) *	1.000

Note: *, ** and *** indicate significance level of 1%, 5% and 10% respectively. In order to test the association between cash holding and firm value, we formulate the following model:

$$FV_{it} = \alpha + \beta_1 CASH_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 GROW_{it} + \epsilon_{it}$$

Table 3. Regression Analysis Result for Firm value (FV)

. regress FV CASH SIZE LEV GROW						
Source	SS	df	MS	Number of obs	= 235	
Model	12.7220867	4	3.18052167	F(4, 230)	= 24.13	
Residual	30.3171129	230	.131813534	Prob > F	= 0.0000	
				R-squared	= 0.2956	
				Adj R-squared	= 0.2833	
Total	43.0391996	234	.183928204	Root MSE	= .36306	

FV	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
CASH	.7817132	.2370073	3.30	0.001	.3147302	1.248696
SIZE	-.0541558	.0129747	-4.17	0.000	-.0797203	-.0285914
LEV	.3289005	.0444248	7.40	0.000	.241369	.416432
GROW	-.0098256	.0036313	-2.71	0.007	-.0169805	-.0026706
_cons	.9483918	.2708884	3.50	0.001	.4146516	1.482132

The regression Analysis result (Table 3) shows R-squared statistics of the model is 28.33%. The result indicates that the change in the independent variable explains 28.33% of the change in the dependent variable. That is CASH, SIZE, LEV and GROWTH explains 28.33% of FV. The remaining 71.76% of change was explained by other factors which are not included in the model.

Based on the result of Table (3) the coefficient of Cash holding and leverage against Firm value were positive 0.7817132 and 0.3289005, This indicates that there was a positive relationship between the aforementioned two independent variables and FV and

statistically significant for CASH and LEV at 1% level

On the other hand, SIZE and GROW had a negative relationship with FV - 0.0541558 and -0.098256 respectively. This indicates that there was an inverse relationship between the aforementioned two independent variables and FV and statistically significant for SIZE and GROW at 1% level.

5. Conclusion and Areas for Future Research

The most liquid and the least profitable asset for firms is cash. The main merits of holding cash are the following :(1) confirming that the needs of production and management activities



are satisfied, (2) reducing financial risk, and (3) permitting firms to do profitable investments projects without increasing outside funds at high transaction costs. Furthermore, it permits firms to decrease their cash flow uncertainty. Additionally, firms that pay dividends may need to decrease or lower their dividends when they face a cash shortage. Accordingly, holding optimal amounts of cash helps firms to avoid such situations.

Cash holdings becomes valuable to shareholders in the existence of these benefits. As a result, a positive association is expected between cash holding and firm market value measured by its Tobin's Q. Conversely, cash holdings is costly because of the low return of cash. Furthermore, excessive cash holdings will decrease the firm's investment income and even cause self-interest management behavior and major shareholders. The association between cash holding and firm value in Egypt is investigated by this study. The study tests the association for a sample of firms listed in the Egyptian Stock Exchange and indexed in EGX 100. The annual reports were collected for three consecutive years 2013-2015. The regression analysis is used by the paper to investigate the association between cash holdings level and firm value.

Earlier research demonstrated a disadvantage of cash holdings stating that it is used by entrenched managers in ways that destroy value (for example, DittmarMarth-Smith, 2006; Kalcheva, 2004, Pinkowitz et al. 2006). On the other hand, there are studies stated that cash reserves can benefit shareholders by permitting firms to undertake efficient growth projects (for example, Opler et al., 1999; Huang and Zhang, 2008; Ha and Le Minh ,2017). The results in this study considerably add to the above stream of

research by investigating the association between cash holding and firm value in an emerging market setting.

In general, Egyptian firms hold much larger cash reserves than firms in most other countries⁶. It was noticeable that the median cash proportion of Egyptian non-financial publicly listed firms varied in the range between 10 % and 15% over the period from 2014 to 2016. The mean value is relatively low if it is compared with the values reported in other studies, Opler et al. (1999) stated a mean value of 17% for their sample of US listed firms; Bigelli and Sanchez-Vidal (2012) found an average cash holdings to total assets proportion of 10% for Italian publicly traded firms; Ozkan and Ozkan (2004) stated a mean value of 9.9% for UK listed firms. Nevertheless, other studies found lower values for this ratio compared to our value (for example, Dittmar et al. (2003) stated a value of 5.3% for Pakistani firms or Martínez-Sola et al. (2013) found a mean cash to total assets of 7.9% for a panel of US industrial firms).

To observe how firm value is influenced when Egyptian firms hold cash, future research should contain more factors associated with all or any motives of cash holding. Moreover, it is recommended for further research using and adding along with accruals quality ratios as an indicator to measure the earning management variable and select the ratio of cash holding others as a tool to measure variables of cash holding in order to be more effective in the disclosure of the impact on firm value.

References

⁶ The expressions; cash, cash holding, cash reserves and liquidity are synonymously used for the sum of liquid assets, including cash, cash equivalents, and marketable securities.



- Antwi, S., Mills, E. F. E. A & Zhao, X. (2012). Capital Structure and Firm Value: Empirical Evidence from Ghana. *International Journal of Business and Social Science*, 3 (22), 103-111.
- Azmat, Q. U. A. (2014). Firm value and optimal cash level: Evidence from Pakistan. *International Journal of Emerging Markets*, 9(4), 488-504.
- Bigelli, M., & Sánchez-Vidal, J. (2012). Cash holdings in private firms. *Journal of Banking & Finance*, 36(1), 26-35.
- Boubaker, S., Derouiche, I., & Nguyen, D. K. (2015). Does the board of directors affect cash holdings? A study of French listed firms. *Journal of Management & Governance*, 19(2), 341-370.
- Besley, S., & Brigham, E.F. (2005). *Essential of Managerial Finance* (13th Edition). Thomson, South-Western
- Chen, Y. (2008). Corporate governance and cash holdings: listed new economy versus old economy firms, *Corporate Governance*, Vol. 16 No. 5, 430-42.
- Chireka, T., & Fakoya, M. B. (2017). The determinants of corporate cash holding levels: Evidence from selected south africa retail firms.
- Chung, K. H., Kim, J. C., Kim, Y. S., & Zhang, H. (2015). Information asymmetry and corporate cash holdings. *Journal of Business Finance & Accounting*, 42(9-10), 1341-1377.
- Dittmar, A., Mahrt-Smith, J., & Servaes, H. (2003). International corporate governance and corporate cash holdings. *Journal of Financial and Quantitative analysis*, 38(1), 111-133.
- Ferreira, M.A. and Vilela, A. (2004) Why Do Firms Hold Cash? Evidence from EMUCountries, *European Financial Management*, 10, 295-319.
- Ginglinger, E & Saddour, K. (2008). Cash Holdings, Corporate Governance and Financial Constraints. <http://ssrn.com.abstract=1188843>
- Gomes, M. D. S. (2012). The financial determinants of corporate cash holdings: evidence from growing firms. Dissertation (Universidade da Beira Interior).
- Ha, N. M. (2017). Impact of Capital Structure and Cash Holdings on Firm Value: Case of Firms Listed on the Ho Chi Minh Stock Exchange. *International Journal of Economics and Financial Issues*, 7(1).24-30.
- Harford, J., Mansi, S. A., & Maxwell, W. F. (2012). Corporate governance and firm cash holdings in the US. In *Corporate governance* (pp. 107-138). Springer Berlin Heidelberg.
- Isshaq, Z., Bokpin, G. A., & Mensah Onumah, J. (2009). Corporate governance, ownership structure, cash holdings, and firm value on the Ghana Stock Exchange. *The Journal of Risk Finance*, 10(5), 488-499.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.
- Kalcheva, I & Lins, K. V.(2007). International Evidence on Cash Holdings and Expected Managerial Agency Problems. *Review of Financial Studies*. 20 (4): 1087-1112.
- Kariuki, S. N., Namusonge, G. S., and Orwa, G. O. (2015). Determinants of corporate cash holdings: manufacturing firms in Kenya. *International Journal of Advanced Research in Management and Social Sciences*, 4(6), 15-33.
- Kim C, Mauer D, Sherman A (1998) The determinants of corporate liquidity: theory and evidence. *J Financ Quant Anal* 33(3):335-359.
- Kim, J., Kim, H., & Woods, D. (2011). Determinants of corporate cashholding levels: An empirical examination of the restaurant industry. *International*



- Journal of Hospitality Management, 30(3), 568-574.
- Kalcheva, I. and Lins, K.V. (2003) International Evidence on Cash Holdings and Expected Managerial Agency Problems. Working Paper, ssrn.
 - Lawson, B. P., & Wang, D. (2016). The earnings quality information content of dividend policies and audit pricing. Contemporary Accounting Research, 33(4), 1685-1719.
 - Luo, Q., & Hachiya, T. (2005). Corporate governance, cash holdings, and firm value: evidence from Japan. Review of Pacific Basin Financial Markets and Policies, 8(04), 613-636.
 - Lins, K. and Kalcheva, I. (2004), "International evidence on cash holdings and expected managerial agency problems", working paper, University of Utah, Salt Lake City, UT, 1-45.
 - Mikkelsen, W. H., & Partch, M. M. (2003). Do persistent large cash reserves hinder performance?. Journal of Financial and Quantitative Analysis, 38(2), 275-294.
 - Martínez-Sola, C., García-Teruel, P. J., & Martínez-Solano, P. (2013). Corporate cash holding and firm value. Applied Economics, 45(2), 161-170.
 - Ozkan, A., & Ozkan, N. (2004). Corporate cash holdings: An empirical investigation of UK companies. Journal of Banking & Finance, 28, 2103-2134.
 - Pinkowitz, L., Stulz, R. and Williamson, R. (2006), "Does the contribution of corporate cash holdings and dividends to firm value depend on governance? A cross-country analysis", Journal of Finance, 61(6), 2725-51.
 - Thanatawee, Y. (2011). Lifecycle theory and free cash flow hypothesis: Evidence from dividend policy in Thailand. International Journal of Financial Research, 2(2), 52-60.
 - Yarram, S. (2012), "Corporate Governance, Cash holdings and Value of a Firm: Evidence from Australian Firms", Information Management and Business Review, 4(12), 606-614.
 - Yu, Y., Lee, Y. T., & Fok, R. C. (2015). Speculative Motive for Holding Cash and High-Interest Entrusted Loans.
 - Zahedi, J., Talebi, E., & Aval, S. L.(2015). Ownership Concentration, Cash Holding and Firm Value. International Journal of Management, Accounting and Economics, 2(8), 902-912.
 - Zhang, Q. (2016). Corporate governance, institutional investors and firm performance: A comparative study of South Africa and China (Doctoral dissertation, Stellenbosch: Stellenbosch University).
 - Zurigat, Ziad & Gharaibeh, Mohammed, 2011. Financial Liberalization and Investment sensitivity to the cash flow. European Journal of Economics. 42, 76-89.