



## Cash Brilliance: Exploring Pakistan's Business Landscape through the Lens of Competitors' Dynamics

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### Abstract

This study analyzed the impact of competitors' factors on firm cash holding policy. Information related to competitors' activities is necessary for most corporate strategies, but in most financial researches, factors related to competitors are not considered. This study aims at shedding light on the empirical effect of competitors' specific characteristics in firm's cash stockpiling decisions. For this purpose, the competitors' factors were explained by these eight specific explanatory variables that determine the competitors' specific characteristics such as (NWC, ROA, LEVER, SIZE, DEFA, CAPEX, MTB, and Z-SCORE) and firm cash holding as dependent variable. The target population of the study was Pakistan stock exchange listed manufacturing firms and the sample consists of 40 firms in the spinning textile sector for the 10 years data from 2009- 2018. The data was gathered from the financial statements of companies. Two main sites were used for collecting annual statements of companies the first was PSX (Pakistan Stock Exchange) and the second was companies' own website. The study used the panel regression model with random effects, after conforming the significance of Hausman Specification Test (1978). The finding of this study was that the company cash holding policy significantly affected by the competitors' factors. This study revealed that the company can make their cash holding decisions in the light of their competitors' behaviors. The results offer stimulating insights at the competitors' factors that compute the firm cash stockpiling decisions. The results might be beneficial for the financial manager, investor and also for the consultant.

**Keywords:** Cash Holding, Capital Expenditure Rate, Net Working Capital Ratio, Return on Asset, Financial Deficit, Market to Book Ratio, Leverage Ratio, Size, Z- Score

### 1. Introduction

Cash is indispensable component on each company's annual statement. Cash is considered the lifeblood of any company. Cash plays an important role in development of country. Keynesian economic theory states that the development of country depends on the both the state (government) and private sectors. In particular, Keynes aims at shedding light on the importance of cash. Cash is king. Cash provides an incentive for enterprises to finance themselves at cheap costs (Ozkan and Ozkan, 2004). This idea holds that there is an informational imbalance between businesses and outside investors, which raises the cost of outside financing, hence internal funding is favored (Myers and Majluf, 1984). Holding cash is a key issue in financial area, the top management of the company give great attention toward the cash stockpiling policies. Cash holding policy has a conflicting goal of liquidity and profitability (Smith, 1980).

Cash management is considered a difficult job for owners of the company or the upper management. Poor cash management creates lot problems for company; it can be harmful for any business. Problems occurred not just from the dearth of cash; excess cash holding can also affect the company negatively. Holding excess cash can undermine or decrease the value of the shareholders and create a problem of moral hazard (Blanchard et al, 1994; Mikkelson and Partch, 2003; Dittmar and Mahrt-Smith, 2007).

On the other hand, a decrease in cash holdings sends a bad message to the market about the state of the company, leading shareholders and investors to believe that there isn't enough cash on hand to cover immediate commitments. The asset that is most liquid for businesses but also the least lucrative is cash. It is regarded as a vital assurance for business in order to satisfy short-term funding needs of the company and pay off debt, tax payments, and other financial responsibilities. Cash management has always been a crucial factor in business decision-making. Determining the cash holding policy is one of the most important concerns (Myers, 1996).

According to economist John Maynard Keynes' research from 1936 on why businesses keep cash on hand, there are three primary reasons why businesses keep cash on hand: first, for transactional purposes, second, for preventive purposes, and third, for speculative purposes. In order to complete the transaction: Companies keep cash on hand to cover short-term daily expenses as well as to make daily purchases and transactions. For the sake of safety, a corporation keeps cash on hand to prevent or lessen any danger to market liquidity. As a result, the firm's cash reserves act as a buffer against market volatility. For speculative purposes, businesses store funds to prepare for unforeseen or unanticipated possibilities in the future. There are several variants on the causes, but these three are said to provide the strongest general justification for why cash is crucial to any company's liquidity.

Companies that hoard excess cash frequently face pressure from their shareholders, who believe that the management of these companies engages in pointless activities and lacks the opportunity to invest in worthwhile projects due to poor investment choices or bad takeovers (Harford, 1999). Cash reserves that managers have set up for their own purposes are

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permitted (Jensen, 1986). Minimizing the value of shareholders is crucial for the shareholder holding extra funds. The issue that affects shareholders of the company the most is the excess cash holding.

By evaluating managers' utilization of surplus funds, past research indirectly discovered the influence on shareholder value. If a corporation has extra cash, it retains it rather than giving it to its shareholders as dividends. (Blanchard, Lopez-de-Silanes, and Shleifer, 1994). The lower cash holding indicates that company has not in position to meet their short term obligations. And excess cash holding point towards that company has no opportunities to invest. So, to determine the optimum threshold is necessary by identifying factors affecting the cash holding.

## 2. Literature Review

### 2.1. Cash Holdings

Cash is most important element for the daily occurred operations of every company. Cash provides the facility of liquidity to the firm and payout the various types of short-term obligations. Company will not be able to survive without sufficient liquid assets if it cannot meet their short-term obligations, this situation will be forced to declare bankruptcy, sooner or later. Cash reserves for firms are essential; cash survive in the business like as oil in car, if we choose the best oil for the car engine we will get a best engine of the car, same as the companies need to identify best optimum level of cash holding. According to the earlier study, cash holdings defined as a cash, marketable securities and cash equivalents (Opler et al., 1999). The very first research on how companies handle their cash holdings dates back to the 1950s, when Baumol (1952) established a model for managing cash and physical asset inventories. According to Baumol's findings, retaining cash is crucial for reducing transaction costs.

When we are talking about the cash holdings of the firm, the first question arise in the mind that what are the reasons for a firm to hold the cash? There are different reasons to hold the cash. These reasons proving the cash holdings valuable to the firms and its shareholder. According to the Chen and Chung (2009) research, firms hold cash to reduce the transaction cost and secure itself from underinvestment due to shortage of money. Cash holdings reduced the financial distress, allow the investment opportunities and minimize the cost of external funds (Feria and Vilelia, 2004). On the other hand, the cost of holding cash is an opportunity cost of capital invested in liquid assets (Feria and Vilelia, 2004). If we say this phrase that "cash holding is life blood for every company" so that say this phrase is not wrong. Cash holding is crucial element for the company.

Keynes (1936) stated that there are three motives for holding money, the first is transaction demand, the second is precautionary demand, and the third is speculative demand. Keynes also explained how a higher interest rate would make people less inclined to have cash on hand. Three factors determine a person's preference for holding cash: the transaction motive, which reflects the demand for cash for personal transactions from both businesses and individuals, the precautionary motive, which is used to meet future investment needs, and the speculative motive, which reflects the need for liquidity to earn some interest. According to Basheer (2014), corporate governance determinants significantly affect the cash holding policy.

Companies keep extra cash inside of the firm rather than to distribute its shareholder (Blanchard, Lopez-de-Silanes, and Shleifer, 1994). However, except from the increasing payouts to the managers and target share repurchases from block holders these activities normally become the reason for the decrease in shareholder value. Thus, establishing an optimum level of the cash holding for the firms is more important, the reason is that cash holding makes the firms capable to pay its liabilities on specific time even in the economic downturns. So, to obtain the optimum level of cash holding it is important or compulsory to identify those factors that influence the cash holding policy.

### 2.2. Cash in a Frictionless World

Reserves of most liquid assets are irrelevant to the firm's value in a frictionless world. The frictionless world is defined as ideal capital market or perfect capital market. The holding of cash or cash equivalent is irrelevant in a perfect capital market, and any needed amount of cash can be invested in positive NPV projects, to balance the temporary cash needs obtained without obstacle at a reasonable price (Garcia-Teruel & MartinezSolano, 2008).

Most especially according to the Modigliani and Miller theorem (1958) the firms' total value is proposed independent of its capital structure, the unlevered and levered firms are equal. MM theorem considered a cornerstone in modern finance. In actual world the situation is totally different from the MM theorem. There is uncertainty exist in real world so to meet their unforeseen situation the companies hoard specific amount of cash. Without the fulfillment of their short-term need company cannot survive and declared as a bankrupt sooner or later.

In imperfect capital market the companies hoard cash 5% to 20% of their total assets, cash holding showing an increasing trend (Kim et al., 1998; Opler et al., 1999; Shin, 2012).

In the earlier studies those are related to the cash holding most of them assume that the capital structure and financial policy of companies chosen independently based on the companies' specific factors. Though the information related to the rival firms were totally neglected. So, the recent study found that behaviors of firms not only determine by the internal factors but also with the help of external factors. Information related to its competitors provides information about the strategy or policies. In the prior studies, it is stated that information related to competitors provide information in execution the decisions and policies (Evgeny Lyandres, 2006; Leary and Roberts, 2014).

The information related to rival firms plays an important role in firm's policies or decisions. That is a big factor to influence the firm's behavior. Companies cannot survive without knowing about their competitor's actions, reactions and strategies. So, it is necessary for firm to know about their rival firms.

### 2.3. Why Firms Imitate Each Other in Cash Holding Policy?

Imitation arises in a every business domain; it is a common form of behavior. Firms mimic each other from different perspective like as in the introduction of new products and processes, in the adaptation of managerial skills and the organizational forms and timing of investment. Firms imitate each other in superior information (Marvin B. Lieberman, 2004)

Business imitation theories are categorized into two broad categories. The first is “Competitive rivalry-based theories” (Portar five force model). The second is “Information-based theory. The competitive rivalry-based theories argue that mangers mimic the other firms to sustain rivalry position in market. Information between the rival firms plays an important role. Therefore, when company stockpiles their cash mimic the competitors to keep rivalry position or counteract the aggressive action from the competitors. Information based theory provide an explanation or view regarding to mimic the rival firms. Mangers mimic the rival firms in case of high ambiguity and uncertainty situation. In the situation of high ambiguity or uncertainty the information regarding the proceeding actor provides guidelines to an imitator (Conlisk, 1980). Managers give preference to imitation when he or she knows that the getting information from others is less costly than to do work themselves.

In the same industry companies must mimic each other in their actions, or decisions. Mostly treasurers make their own decision by mimic other decisions regarding specific phenomena (Graham and Harvey, 2001). Due to increase in volatility the mangers have not enough confidence to set the optimum level of cash, this creates a learning motive between managers (Leary and Roberts, 2014).

### 2.4. Theoretical Back Ground of the Study

Earlier researches on corporate cash holdings mostly discussed theories were the pecking order theory and trade off theory. The purpose to discuss these theories was that these theories explain the management decisions on the firm cash holding (Venkiteshwaran, 2011). Due to the presence of information asymmetry in order of financing, preference is adopted between funding source (Myersand Majluf, 1984). To overcome the financing cost of companies, firms prefer the internal finance to support the business. Cash plays an important or crucial role in financial slack of companies. Cash holding policies have a relationship with capital structure due to order of financing. When the company face the financial slack, the company prefer the internal cash.

Opler et al. (1999) stated the tradeoff theory. He argues that the preference of high level of holding cash in trade off model he supported high level of cash holding rather than the balanced in cash holding. In contrast with pecking order theory cash is considered the secondary element because business used the outside financing when the firms faced the shortage in internal financing.

Cash flow theory, according to Jensen (1986), indicated a significant amount of cash holding. However, there is controversy surrounding cash holding because larger firms with larger cash holdings may easily generate more funds, and their fixed assets as well may ultimately increase the firm's liquid investment. He also suggested that there are two different kinds of cash flows: operational cash flows and free cash flows. Operating cash flows are utilized to finance short-term debt commitments and short-term investment projects, whereas free cash flow is the remaining amount after financing these liabilities and investments. Therefore, managing the funds for investments would be helpful and simple for the big companies. Ozkan and Ozkan (2004) determinants for holding cash were analyzed using a sample size of 1029 companies from 1984 to 1999, which was gathered from the state of the United Kingdom. We came to the conclusion that a concentrated ownership structure is a key component of cash holding. He also looked at whether or not hoarding cash and a concentrated ownership structure operate in the same way. In his examination of the data, he discovered that, in contrast to banks, operational cash flows and development potential of businesses have a considerable positive link with leverage (capabilities of loan issuance capacity) and liquidity. According to Ferreira and Basheer Muhammad (2008), the link between cash holding and loan liquidity is inverse, but the relationship between cash holding and investment or development opportunities is progressive. Additionally, they looked at the negative association between retaining cash and capital expenditures.

Islam (2012) calculated the factors that affect cash holding in manufacturing enterprises. He was given a sample size of 297 French companies between 1998 and 2002 to determine their cash holding. He addressed two alternative ideas in his research—the trade-off model theory and the pecking order theory—and based his calculations on the findings that leverage is inversely related to storing cash. While growing businesses that engage in risky activities stockpile additional cash His study established a link between keeping cash and firm size, business growth, investment prospects, and dividend payment ratio. The sample size for Ogundipe's (2012) study was made up of 203 non-financial companies that were included in the Karachi Stock Exchange's 100 Index of Pakistani Companies from 1998 to 2010. Their analysis included the following variables, such as business size, growth variables, free operational cash flows, working capital, dividend payout ratio, and leverage, which helped them determine the factors influencing cash holding. They concluded that there is an adverse association between cash holdings and potential for expansion and business size. The capacity to issue debt, work capital, and free operational cash flow all negatively affect cash holding.

Changlim Joo et al (2016) tested the data of non-financial firms listed in Korea Composite Stock Price Index (KOSPI) to investigate the effects of peer group on firm cash holding policy and they found that peer group is a significant factor to determine the level of cash.

The following prescribed hypothesis, generated with reference to earlier studies (Changlim Joo, *et al*, 2016), conducted the study aimed the analysis of peer group effect on firm cash holding policy. So, the hypothesis of this research is based on the above prescribed reference.

**H<sub>1</sub>** There is impact of competitors’ factors on firms’ cash holding policy.

**H<sub>2</sub>** There is impact of competitors’ average cash holding on firms’ cash holding policy.

**H<sub>3</sub>** There is impact of firm specific characteristics on firms’ cash holding policy.

### 3. Research Methodology

#### 3.1. Study Design

The study examines “the impact of competitors’ factors in firm cash holding policy” in Pakistan Spinning textile sector with latest data from the years 2009-2018. To get the desired results of the study the researcher used the Penal data regression model. Penal data regression model is applied to on data which is collected from the financial statement analysis of companies. These financial statements are obtained from PSX (Pakistan Stock Exchange) site and the companies’ websites. And also, it used the Business Recorded website to obtain the price of share.

#### 3.2. Data Source and Collection

To obtain the desired results the researcher used the secondary data. The data is derived from the financial statement analysis of the companies. The spinning textile sector consists of total 85 firms and the study sample are the 40 firms. Only those firms chose for the study as a sample who has balanced data, no missing statements. These 40 firms’ data extracted from the financial statement of companies for the 10 years from 2009-2018.

#### 3.3. Explanation of Variables

This study objective is to examine “the competitor’s factors effect in firm cash holding policy”. As well as the average cash holding of competitors and the firm specific factors in firm cash holding policy. So, the determinants of competitors’ factors measured by these eight variables. The dependent variable is cash holding and the independent variables are Capital expenditure rate, Net working capital ratio, Return on asset, Rate of financial deficit, Market to book ratio, Leverage ratio, Size, Z- Score.

#### 3.4. Variables Table

	Variables	Measurement	Proxy
Dependent Variable	Cash holding	= cash + cash equivalent \total assets  ( Opler et al ,1999).	CH
	Capital expenditure rate	= change in fixed asset +depreciation/ total assets (Joh and Kim, 2013; Leary and Roberts, 2014).	CAPEX
	Return on assets	=Operating income/Total assets (Venkiteshwaran, 2011; Joh and Kim, 2013).	ROA
	Net working capital ratio	Net working ratio= current assets –current liabilities/ total assets (Ozkan and Ozkan, 2004; Chiou et al. 2006; D’Mello et al., 2008)	NWC
	Financial deficit	Financial deficit = operating income-(cash dividend+ net investment+ increase in net working + (change in debt/current asset) Then, =financial deficit /total assets (Frank and Goyal, 2003; Byoun, 2008).	DEFE
Independent Variable	Market to book ratio	= (Total liabilities+ Market value of equity)/ book value of assets (Ozkan and Ozkan, 2004; Jung and Kim, 2008; Joh and Kim, 2013; Leary and Roberts, 2014)	MTB
	Leverage	= total debt / (total debt +market value of equity) (Leary and Roberts, 2014).	LEVER
	Size of the firm	=natural logarithm of total assets (Ozkan and Ozkan, 2004; D’Mello et al., 2008; Jung and Kim, 2008; Joh and Kim, 2013)	SIZE
	Z-SCORE	= 0.104 *(net working capital/ total assets) + 1.010 *(retained earnings/ total assets) +0.106 *(earnings before interest and taxes/ total assets) + 0.003 *(market value of equity book value / total liabilities) + 0.169*(sales/ total assets).  (e.g., Begley et al., 1996; Kim et al., 1998).	Z-SCORE

### 3.5. Methods of Data Analysis

The data are analyzed using the punitive data analysis in order to draw forth the beneficial conclusions. The penal data regression model is used to explore the effect of competitors' factors in firm cash holding policy. Furthermore, to measure the competitors factors used the cash holding, Capital expenditure rate, Net working capital ratio, return on asset, Rate of financial deficit, Market to book ratio, Leverage ratio, Size, Z- Score as an independent variable. The dependent variable is cash holding. The regression model is used to develop the hypothesis in relation to explore the effect of competitors' factors in firm cash holding policy.

### 3.6. Model Specification

As the earlier studies, related to cash holding used the linear regression techniques to quantify their results. So, the following regression model is used in this study to check the impact of competitors' factors in firm cash holding policy.

#### 3.6.1. Econometric Model

The general form of econometric model penal data with the subscript of "it" Multiple regression models are used in this study

$$Y_{it} = \alpha + \beta_1 \bar{Y}_{it} + \beta_2 X_{it} + \beta_3 X_{it} + \mu_{it}$$

## 4. Results and Discussion

### 4.1. Descriptive Statistics

TABLE 4.1 consist the summary of descriptive statistics of all those variables those are used in this research to quantify the results. In this table the attributes includes mean value the data, standard deviation, minimum and maximum value of the dependent variable and the independents variable average cash holding, competitors factors average (Capital expenditure rate, Net working capital ratio, Return on asset, Rate of financial deficit, Market to book ratio, Leverage ratio, Size, Z- Score) and firm specific factors (Capital expenditure rate, Net working capital ratio, Return on asset, Rate of financial deficit, Market to book ratio, Leverage ratio, Size, Z- Score).

The target population of the study is manufacturing firms of Pakistan listed in Pakistan Stock Exchange. The researcher selects the Manufacturing Textile sector to identify the results. The sample of the study consists of 40 firms from Spinning Textile Sector.

In this study the secondary data is used. This is the panel study analysis. The data collected from the financial statement analysis of companies. The data comprised time period 2009 to 2018. Multiple regression model assumptions checked to gain the empirical results.

**Table 4.1: Summary of Descriptive Statistics**

Variables	Obs.	Mean	Max.	Minimum	Std.
AVG_CH	400	0.017403	0.026991	0.009798	0.003056
AVG_CAPEX	400	0.064990	0.185908	-1.149274	0.188418
AVG_DEFICIT	400	-0.027604	0.199092	-0.150274	0.079474
AVG_LEVE	400	0.908116	2.133111	0.540660	0.197714
AVG_MTB	400	17500.10	61932.61	1.108512	8579.054
AVG_NWC	400	-0.133582	-0.030451	-0.301372	0.066857
AVG_ROA	400	-0.468768	5.543846	-5.815128	2.601950
AVG_SIZE	400	6.453701	6.652277	6.226064	0.084232
AVG_Z_SCOR	400	86.85099	669.0822	0.231351	87.76342
CH	400	0.017172	0.265972	1.89E-05	0.032243
CAPEX	400	0.058619	1.588313	-24.84417	1.277665
DEFA	400	-0.031322	1.723040	-2.892804	0.495010
LEVER	400	0.864991	31.99951	-2.466297	1.689820
MTB	400	17499.89	1206802.	-6.458531	117481.9
NWC	400	-0.124167	0.484353	-1.825725	0.322872
ROA	400	-0.215925	86.53000	-92.86000	11.80173
SIZE	400	6.099910	7.547500	3.605300	0.633694
Z_SCORE	400	86.83916	13041.15	-0.112815	746.1174

In the Descriptive statistics table 4.1, the first column consists of the variables name and the second column consists of number of overall observations. The third column showed the average value of the data, the last column of standard deviation demonstrate on which degree data is dispersed from its average value of the data.

### 4.2. Correlation Analysis

**Table4.2: Correlation Matrix**

	CAPEX	DEFA	LEVER	MTB	NWC	ROA	SIZE
CAPEX	1						
DEFA	0.297804	1					
LEVER	-0.0014	-0.00818	1				

	CAPEX	DEFA	LEVER	MTB	NWC	ROA	SIZE
MTB	0.002579	0.06681	0.004309	1			
NWC	0.15844	-0.29214	0.035026	-0.07774	1		
ROA	-0.00627	0.127973	0.010584	-0.07024	0.304965	1	
SIZE	0.211392	0.122021	-0.01103	0.123723	0.434255	0.163726	1
Z_SCORE	-0.00175	-0.04104	-0.00598	-0.01737	0.081958	0.068326	0.050774

Continued.....

	CH	AVG_CH	AVG_CAPEX	AVG_DEFICIT	AVG_LEVERAGE	AVG_MTB	AVG_NWC	AVG_ROA	AVG_SIZE	AVG_Z_SCORE
CH	1									
AVG_CH	0.175	1								
AVG_CAPEX	0.032	0.417	1							
AVG_DEFICIT	0.053	0.128	0.168543	1						
AVG_LEVERAGE	0.009	0.086	0.026596	-0.36811	1					
AVG_MTB	0.037	0.306	0.022956	-0.27672	0.20588	1				
AVG_NWC	0.039	0.225	-0.20675	-0.80526	0.41442	0.0417	1			
AVG_ROA	0.013	0.134	-0.42153	-0.20356	0.14039	0.2397	0.6288	1		
AVG_SIZE	0.008	0.155	-0.02568	-0.24483	0.17338	0.1426	0.1468	0.0508	1	
AVG_Z_SCORE	0.013	0.235	0.084748	-0.19479	-	0.4947	0.1797	0.3081	0.2352	1

The above table 4.2 shows the relationship between the variables, the dependent variable and independent variable. In this table the researcher check the relationship of avg cash holding and competitors' factors and firms' specific factors with cash holding. The coefficient value -0.17528 indicates that the cash holding and the avg cash holding of competitors has negative correlation. It indicates cash holding decreases average cash holding in spinning sectors of Pakistan for the period of the study. The cash holding is also associated with the average capital expenditure rate, avg deficit, avg lever and avg mtb, these variables coefficients values are respectively as --0.0321, 0.053315, -0.009797, 0.037308. This value indicates that they are positively correlated with the cash holding as well as negatively correlated with cash holding. 'Avg Capex' and 'Avg Leverage' shows the negative correlation with cash holding whereas the avg deficit and 'Avg MTB' shows the negative correlation with the cash holding. The coefficient value of the 'Avg NWC' is 0.03968 shows the positive correlation with the cash holding. It indicates that increase in cash holding associate with increase in net working capital. The average 'ROA' coefficient value shows that positive correlation with cash holding. The value respectively is 0.01382. It indicates increase in return on asset positively change the cash holding. The coefficient value of the avg size is 0.00825 also indicate the positive correlation with cash holding. And also the avg z core value 0.013713 has a positive correlation with cash holding. It indicates that increase in cash holding positively influence by the 'Avg Z score' credit rating model. The firm specific factors relationship with cash holding in this step is discussed. The capex value and DEFA, 'MTB' lever respectively values are -0.11057, -0.2539, -0.01398, -0.01879. These indicate the negative correlation with cash holding policy of the company.

The values of nwc, roa, size, z-score are respectively 0.077445, 0.086638, 0.170727 and 0.020025. It indicates the positive association with cash holding, which expresses that increase in cash holding positively affected by these variables.

#### 4.3. Panel Data Regression Analysis

In this study the researcher used the panel data study to check the results of effects of competitors' factors in firm cash holding policy. Pooled OLS out come not accepted because it treats all the cross section as a same, but in actual world it does not happen. So, the Random and Fixed effect is used for appropriation of results. The Hausman test is used to which

model is appropriate for the study, the Random or the fixed. The p value above from the .5% in Hausman Test indicates that the Random effect model is best for the study. by using the Random effect model the researcher interested in analyzing the effect of competitors factors on firm cash holding policy. The following table indicates that the effect of competitors and avg cash holding of competitors and the firm specific factors in firm cash holding policy. Cash holding policy decisions can be made by different scenario. The following table include the this equation results such as “ $Y_{it} = \alpha + \beta_1 \bar{Y}_{it} + \beta_2 X_{it} + \beta_3 X_{it} + \mu_{it}$ ” Y notation is the dependent variable of corporate CHL and  $\bar{Y}$  notation is the average CHL of the peer group. The peer firm average is calculated as the mean of all firms in the same main product industry group excluding the value of the i th firm. X and X represents peer group and firm-specific characteristic variables respectively these are CAPEX, NWC, ROA, DEFA, MTB, LEVER, Size and Z score.

#### 4.4. Results of Random Effect Model for Cash Holding

Independent variable	Coefficient	Std Err	T	P value
C	-0.855921	0.300851	-2.844996	0.0047
AVG_CH	-3.268147	0.624323	-5.234702	0.0000
AVG_CAPEX	0.014707	0.007926	-1.855602	0.0644
AVG_DEFICIT	-0.154206	0.091233	-1.690253	0.0919
AVG_LEVE	-0.016207	0.011475	-1.412320	0.1588
AVG_MTB	8.78E-07	3.48E-07	2.524153	0.0120
AVG_NWC	0.349094	0.126438	-2.760982	0.0061
AVG_ROA	0.004263	0.001432	2.976985	0.0031
AVG_SIZE	0.148189	0.046581	3.181324	0.0016
AVG_Z_SCOR	-9.11E-05	3.83E-05	-2.375717	0.0181
CAPEX	0.000672	0.000912	-0.736670	0.4618
DEFA	-0.018667	0.005277	-3.537365	0.0005
LEVER	-0.000323	0.000638	-0.505651	0.6134
MTB	1.55E-08	2.44E-08	-0.635969	0.5252
NWC	0.024007	0.007146	-3.359368	0.0009
ROA	0.000424	0.000109	3.882792	0.0001
SIZE	0.011460	0.005963	-1.921872	0.0555
Z_SCORE	-6.89E-07	2.16E-06	-0.319147	0.7498
Number of observations				400
Number of groups				40
Prob>F				0.000000
Hausman test			Prob>Chi2=0.3426	
R-SEQUIRE				0.686075

Significant at 5%

Dependent variable: cash holding

#### 4.5. Discussion of Results for Random Affects Model

This table consists of total number of observations 400. The Random affect model has been used to quantify the desired results. In the table of 4.3 regression analysis of the cash holding policy show F (13.38606), P= 0.000000. The calculated value of P= 0.000000 express the overall significant results of regression model. This means that 17 explanatory variables explain the cash holding. These variables statistically predict the dependent variable. Furthermore, the results of R square indicated that 0.686075 or 68 % variations in cash holding policy is explained by these 17 explanatory variables. In the other way we say that 68 % change in cash holding is explained by these variables.

The results overall indicates that cash holding significantly affected by the average cash holding and competitors' factors and also firms specific factors.

#### 4.6. Summary and Conclusion

Most company plans require knowledge of rivals' actions, yet in most financial research, competitors' aspects are not taken into account. The objective of this study is to shed light on the empirical impact of rivals' unique traits on company cash hoarding decisions. For this purpose, the competitors, factors were explained by these eight specific explanatory variables that determine the competitors' specific characteristics such as (CAPEX, NWC, ROA, LEVER, SIZE, DEFA, MTB, and Z SCORE) and firm cash holding as dependent variable.

This paper analysis the needs of information related to competitors and explain how the competitors' factors information affects the company cash holding decisions. The empirical result shows three implications. Firstly, information related to competitors' factors is significant factor to determine the optimum level of cash holding of companies. Secondly, the average value of competitors' cash holding has a strong impact on firm cash holding. Thirdly, the firms' specific factors also have significant impact on the cash holding policy of the company. Finally, overall, the results of this study indicate that above mentioned three aspects of determinants related to competitors and firm own characteristics have strongly impact on the firm cash holding policy.

#### 4.7. Limitations and Further Study

This study reflects only the manufacturing industry included in PSX (Pakistan Stock Exchange). The imitating behavior for the cash holding setting is a common activity. So the same type of results also found in other sectors like as service industry. This study could be extensive to other countries and sectors.

Cash management is considered a difficult job for owners of the company or the upper management. Poor cash management creates lot problems for company; it can be harmful for any business. Problems occurred not just from the dearth of cash; excess cash holding can also affect the company negatively. The main source of a company's ability to survive is cash and cash equivalent assets. Therefore, information about failed companies might be used to plan specifically for cash management. Without reliable data, valuing unlisted companies is more difficult. The effects of imitating behavior in the forecast of CHL on firm continued existence, however, could be shown by a comparison between the survival and bankrupt group of companies if enough data about the bankrupts' companies are required to the extension of the study period.

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