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The Determinants of Cash Holdings in Companies: Evidence from Georgian Listed Companies

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Abstract

Current paper's purpose is to examine the determinants factors and their relations with cash holdings. Companies` determinant characteristics are very crucial to determine cash holdings. The following factors are used to indicate significance on cash holdings: firm size, cash flow, bank debt, liquid assets, cash flow volatility and investment opportunity. Financial data of companies from 2005-2015 are used to analyze the relations cash holding with indicators in order to see whether there is a positive or negative relationship between cash holdings and company`s characteristics in Georgia.

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Keywords: bank, cash, cash flows, cash holdings

JEL: G31, G23, G35, G41

Introduction

Cash is the king in business for daily business activities and also key element for companies to operate, finance and invest for company's future cash flows. An entity cannot be continued its life without cash. Cash is essential component on every firm`s balance sheet and blood for the companies. There is increasing number of research and debates about to determine the cash holding in companies. As Keynes (1936) indicates that holdings cash has lower transaction costs and it may be a useful buffer. Trade-off model can be examined to determine optimal level of cash holdings. Because trade-off model equalizes the costs of holding cash with its opportunity cost.

Trade off theory and pecking order theory are main accepted two theories to explain the reasons of firms holding cash. In order to describe cash holdings, firstly investment and growth opportunities should be explored. Companies with excess cash can pay more dividends and invest more.

Cash is a liquid asset which companies can pay its bills on time and keep to decrease insolvency risk. Cash supplies liquidity to companies. Having excess cash does not indicate the company is profitable and has prosperity to continue its life, positive cash flows from investment activities and operating activities determine the company's prosperity. On the other hand, firms should have sufficient cash holding for day by day activities. Cash holding should be balanced between its cost opportunities. In absent of perfect capital market such as Georgian capital market, holding cash is necessary, in case of perfect capital market firms can easily get funds externally when needed. Cash holdings have advantages as well as disadvantages. Two motives are related to firms to have cash. One is transaction motive and other is precautionary motive. Precautionary motive emphasizes on asymmetric information, opportunity cost and agency costs.

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Transaction Motives

Transaction cost motive is based variable and fixed costs raised due to external capital. Chen and Chuang (2009) showed that transaction cost and opportunity cost motive companies hold cash firms. Their finding also emphases holding the cash is very positive instant due to its benefit provides.

Companies need to hold sufficient cash; therefore, they need to raise funds in capital market or liquidate their tangible asset to provide liquidity. Since there is an imperfect capital market, firms need to bear transaction costs but if firms hold cash, it can avoid these costs. This is the main advantages for firms to hold enough cash in their balance sheets. In the findings of paper of Opler et al. (1999), firms required to have cash to cover their payments in time and raise enough funds for investments. Custodio, Ferreira & Raposo, (2005) investigated computer software companies and found out that companies in this segment can get rid of smaller operating cash balance according to smaller transaction costs.

The Precautionary Motive

According to precautionary motive, firms needs to hold cash to meet unexpected conditions. As findings in the paper of Custodio, Ferreira and Raposos (2005), having sufficient cash provide easy fund raising for investment activities while external fund raising are too costly or not available. In the situation of economic instability and volatile economy, firms need to keep high level of cash to minimize solvency risk. In the time of recession, cost of money will be high and liquidating the asset is costlier and more difficult, so firms need to keep enough cash reserve.

According to Graham J (2000), firms can increase their value by levering up, from the perspective of normative it is very interesting result. But these findings are more common practice in finance. Pecking order and trade-off theories provide significance of view. Modigliani and Miller (1958) created the theory of business finance, now known as MM theory, which was not available such a capital structure theory. According to Modigliani and Miller, firms has a specific set of expected cash flows. Company choose an assured amount of debt and equity in financing their investment and assets.

Agency Motive

Damodaran (2005) mentioned that companies have to make decision to pay dividends to existing shareholders or hold the cash flow in the company to finance assets. Company retain the cash in the case of not best available investment opportunities. According to Opler et al. (1999), in the case of lack of good investment opportunities, excess cash holding by companies are due to transaction and precautionary motives. Dittmar, Mahrt-Smith, and Servae illustrated the finding of companies in countries where there is big agency problems and these companies hold high level of cash holdings. Their findings verify that the companies have high level of cash but also finish them so easily.

Trade-off Theory

Modigliani and Miller (1985) developed capital structure theory as known MM theory. According to their advanced irrelevance proposition of capital structure theory, whatever capital structure companies use is not related to companies' value in perfect market.

Trade-off theory can be used to indicate optimal amount of cash holding for companies.it is also called transaction model, it goes with transaction cost motive. As mentioned in transaction motive, having optimal amount of cash may help companies to avoid transaction costs. Because of asymmetry information in imperfect market where accessing to

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capital market or raising cost of cost of external funds, companies need to have enough level of cash holding in case of positive investment opportunities, reducing the financial distress and avoiding the rising cost of external funds.

To examine the indicator factors of cash holdings according to trade-off model, following determinant factors and their expected relation are clarified like in the findings of Ozkan and Ozkan (2004); Uyar and Kuzey (2014): firm size, leverage, investment opportunities, risk and agency costs.

Growth Opportunities

Companies has to security their financing in situation of growth opportunities. Because they may not have access to capital market or have high costs of external funds. Therefore, in order not to lose positive projects, holding enough cash is essential.

So, it is expected that there is positive relation between company`s cash level and its set of growth opportunities.

Firm Size

Raising outside funds is expensive and not easily available for small firms, therefore small firms hold more cash than their counterparts. Due to their higher level of diversification and lower chance of having financial distress, larger firms have lower level of cash and these factors reduce their cost of capital. According to factor mentioned above, it can be expected that larger firms hold lower level of cash holdings.

Leverage

It is expected that firms with highly leveraged, potential have high probability risk of bankruptcy. According to Ferreira and Vilela (2004), companies hold cash in order to reduce bankruptcy risk. Nevertheless, Baskin (1987) says that as companies build liquid assets, which may cause debt ratio to push up relatively. But according to findings in UK firms examined by Guney and Ozkan(2007), there is negative relationship between cash holdings and leverage.

Bank Debt

Bank debt and leverage and are similar. If companies have close relation with banks, they will probably high debt ratio as expected. Accordingly, firms with high debt ratio will keep less cash. Cash flow is a substitute of cash holdings and represents a ready source of liquidity. Ferreira and Vilela (2004) confirms the dividend payment can be reduced in order to raise funds at lower cost.

Pecking-order Theory

Managers in firms take important finance decision to increase the amount of necessary funds for financing operating and asset activities. There are three method to raise needed funds;1) retained earnings, 2) debt and 3) equity. Firstly, firms exhaust retained earnings due to lower cost, secondly use debt financing and finally use issuing new shares (equity financing). Retained earnings do not cause any kind of agency problem (adverse selection) but equity brings a series adverse selection problem. On the other hand, debt financing cause only a negligible adverse selection problem.

Equity is much riskier and costly than debt financing. Because of its risk and adverse selection problem, shareholders demand high rate of return on equity (new issue) than debt and retained earnings. In addition to that, retained earnings are better than debt in term of cost. Therefore, the firms can use retained earning first if possible.

Due to information asymmetry, Myers and Majluf (1984) illustrate that companies investment plans might be riskier and costly. Manager should use first internal source of funds and continue financial policies in order to avoid financial distress. So, pecking order theory suggests conduct of financing activities as first retained earnings, then debt and finally equity.

Goyal and Park (2002) studied information asymmetry and confirm that firms should choose to implement pecking order or trade off theories to avoid financial distress.

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As a result of information asymmetry which increase the cost of external finance, firms need to hold sufficient level of cash as advantage. As long as internally created cash flow surpasses the need for funds, then firms can stock excess cash. According to Myers & Majluf (1984), as a result issuing new securities, problem of information asymmetries may increase therefore firms should avoid to raise funds to issue new securities relatively.

To examine the determinant factors of cash holdings according to pecking-order theory model, following determinant factors and their expected relation are expected; firm size, leverage, cash flows, investment opportunities

Firm Size

According to Ferreira and Vilela (2004), large firms are expected to have more cash than smaller firms with controlling for investment.

Leverage

On the findings of Ferreira & Vilela`s paper, if companies projects needed capital are more than retained earnings, company will need to finance rest with debt. Therefore, they confirm that cash holding decreases when funds for investment are more than retained earnings and increase inverse. So, there is a negative relation between them. But, Opler et claims as firm generate more internal funds which is less costly, their spending will increase more than their receipt of cash, finally increase debt. Consequently, they cut cash holding and raise debt. As a result of this, there is negative relation between them.

Bank Debt

Because of precautionary reasons, there is a negative relationship between cash holding and bank debt. According to Ferreira and Vilela, companies which are using bank financing will not have asymmetric and agency problems, due to their bank rating and evaluation, as a result these banks financed companies will not have problem to access to capital market. So, they fall cash holdings as a precautionary motive. Ozkan and Ozkan (2004) investigated companies in UK and found out that highly bank financed companies have lower cash holding. In addition, they also illustrate bank loan is more efficient that public loan because it decreases agency problems and information asymmetry.

Cash Flow

As soon as financing hierarchy theory are applied, cash flow of a company has positive relationship with cash holdings. Firms wish to use internally created capitals. Findings of Ferreira & Vilela show that firms need to invest ever more, if they expect more of cash flows and growth of operating activities. In that instance firms raise cash holding, so companies favor to provide more cash by internally rather than external source of funds. As the result, it can be concluded that there is positive relationship between cash holdings and cash flow.

Investment Opportunities

Ozkan and Ozkan (2004) marks that there is a positive relationship between investment opportunities and cash holdings. They support this finding as follows: firm accept investment chances, as the cash flow from these investments received, the value of firm will grow accordingly. As a result of it, firms increase cash holdings. But if firms are having deficiencies in cash holdings, they may forgo the investments opportunities.

Hypotheses

I tried to apply following hypotheses in this paper according to literature discussed above:

H1: there is a negative relationship between cash holdings and leverage.

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H2: Based on the pecking order theory, there is positive relation between cash holding and profitability.

H3: Taking into the consideration the arguments provided by trade-off theory. There is a negative relationship between cash holdings and liquidity.

H4: Relationship between size and cash holding may be a positive and negative as well depending on information asymmetry and financial distress.

H5: There is a negative relation expected between the tangibility and cash.

H6: There may be a negative relationship between growth opportunities and cash.

H7: There is a negative relationship expected between dent and cash holdings**.**

Data Description

Companies which hold cash can undertake profitable investments projects easily and not to raise outside funds at high transaction cost.

The sample is Georgian joint stock companies. Due to the lack of the public information, it was impossible to collect the data more than from 45 companies. In this paper, we examine how these companies accumulate cash and which factors determines holding cash.

The financial data is from Georgian Stock exchange (www.gse.ge). This we site is a comprehensive database providing financial and accounting information from JSCs which are examined in my study. The database provides financial statements and balance sheets of 152 JSCs. Approx. twenty of them are financial institutions (banks, microfinance organizations, etc.) which are not included in our sample as well as the part of the other companies with financial analysis less than three years. So, our database consists of 45 companies and analyses 343 financial reports.

Excluded companies from the analysis are:

a) Companies with missing financial information
b) Companies providing less than three years of data

The number of observations differs per year showing steady grow to recent years.

For the empirical investigation a fixed sample of listed companies from Georgia of 2005 – 2015 are used, that are obtained from the annual reports of these companies from Georgian Stock Exchange (www.gse.ge) which is in total 45 companies. This gives a 343 firm-year observation (N x T observation). Companies from financial sector including banks, investment funds, insurance companies, and real estate are excluded, because they have different structure and carry cash to meet capital requirements rather than for the reasons of cash holding.

I used following variables, TANGIBILITY, CAPEX, CFRATIO, FINDEBT, FSIZE, MTOB, LEVERAGE, CSUBS and VOLATILITY are collected. These variables are calculated as pre-tax profit, fixed assets, book value of stock tangible fixed assets, total assets, depreciation, market value of stock, total debs (liability), sales, current assets, current liabilities, total liability. In appendix 1 all the collected data are shown.

A difficulty of collecting the data is that from some companies the annual reports cannot be found or not sufficient. There are some reports where provided information is incomplete (i.e. research and development cost). In this case, they are shown as missing data. The reports are in GEL.

In the following paragraphs, dependent and independent variables are measured to identify the influence of cash whether they are negatively or positively characterized. Current paper uses determinant factors as independent variables identifying cash holdings of a company are firm size, leverage, liquid assets, cash flow, cash flow instability.

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I excluded financial institutions because they have different characteristics and their decision and activities are influenced by and regulation according specific rules.

Variable Construction

Here I indicated the independent and dependent variables are described and constructed. Cash holding variables are calculated as cash and cash equivalents over total assets. Cash ratio measures liquidity of a company. In this research cash ratio is used to identify how much assets are in cash. It is important to find out changes in cash holdings. Moreover, to identify factors that influences cash holdings.

Table 1 shows variable names and their explanation with abbreviations. These variables are taken from previous studies. My dataset is unbalanced. Some companies have more years of observations than others. On average, the number of each year observations per company is about 5-6 years.

Our cash holding variable is calculated as cash and cash equivalents over total assets. Table 2 reports the mean and standard deviation of cash holdings. Figure 1 indicates average cash holding level of firms in the sample over the years. Starting from 2005 to 2008 cash levels fluctuated. It is at the peak level during crises in the period of 2007-2008.When Georgia and World have experienced financial crises started by financial and banking sector in USA. There might be several reasons to explain why companies increase cash reserves sharply in my sample years. The reason of sharp increase in cash reserves, firstly due rejecting to provide fund to companies who needs by banks, and secondly interest rate imposed by financial institutions became high to cover the improved risk in the business. That makes borrowing from financial institutions costly. Subsequently, firms determined to retain more cash reserves for unforeseen conditions. Then after, Georgian companies are decreasing their cash level too quickly.

Figure 2 presents the relationship between changes in cash holding of companies and GDP growth rate in Georgia from 2006 to 2014. Changes in cash holding and economic growth are moving together, in 2007 and 2008 cash differences raised dramatically as economic growth is also getting bigger. As companies are getting bigger or expending, GDP will be sure to extent as well. But we do not have causality result of these indicators. Whether GDP caused Cash holding level of firms, or Cash holding level of firm adjusted to changes in economic growth.

The descriptive statistics are illustrated in the Table 2. Cash reserves show on average 10.7% of total assets. This cash level is supporting that of other countries (e.g., Ozkan and Ozkan, 2004), Turkey with 9.10% (Uyar and Kuzey,2014), and Spain with 8.8 % (Garcia-Teruel and Martines-Solano, 2004).

Table 1. Definition of Variables Used in the Analysis

Variables	Definition
CASH	Cash and cash equivalents divided by total assets
CFRATIO	The ratio of pre-tax profit to total assets
CAPEX	Capital expenditures (change in fixed asset plus depreciation divided by total assets.
CSUBS	Net working capital less cash divided by total assets
TANGIBILITY	Tangible fixed assets divided by total assets
FINDEBT	Current liability divided by total debt
FSIZE	The natural logarithm of assets
MTOB	Market to Book ratio for growth calculations
LEVERAGE	Total debt divided by total assets

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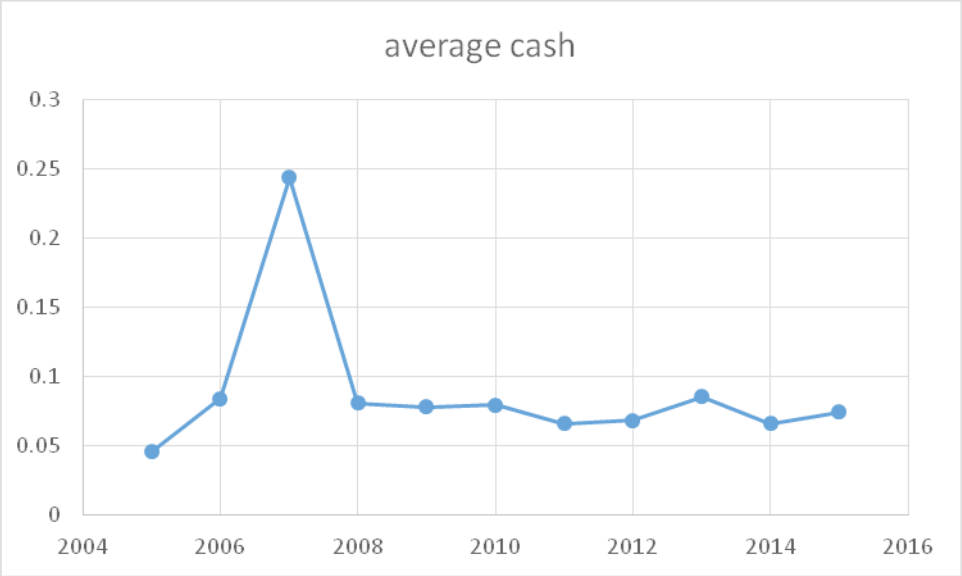
VOLATILITY	The SD of cash flow divided by total assets.

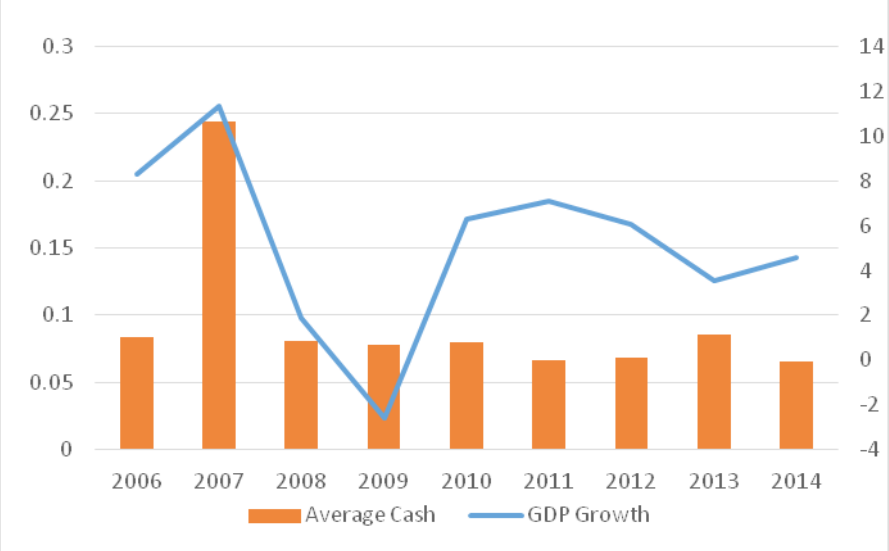
Cash flows of Georgian companies in these periods are high, on average 18.6 %. It is quite high comparatively in other studies. Current liability ratio is 79 % of total liabilities on average. Total liability over total assets is 18.72 %. It is very low compared to other researches. These findings can be explained as Georgian companies are not borrowing much to finance for long-term investments.

Figure 1. Average Cash Holding Level over 2004-2016



Sources: Author's own calculation

Figure 2. Change in Cash Holding and GDP



Sources: Author's own calculation

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52 % of total assets are tangible fixed assets on average. Part of net working capital in total assets contributes 12 % of total assets.

Table 2. Descriptive Statistic

	Mean	Median	Std. Dev.	Observations
CASH	0.107099	0.016704	0.372274	314
CFRATIO	0.186096	0.059236	0.696731	314
CAPEX	-0.029435	0.032018	0.966854	314
CSUBS	0.121148	0.186366	0.823655	314
TANGIBILITY	0.520308	0.528392	0.563742	314
FINDEBT	0.791254	1	0.95225	314
SIZE	14.30117	13.90844	1.713546	314
MTOB	0.754038	0.480437	8.530204	314
LEVERAGE	0.187221	0.095153	0.273412	314
VOLATILITY	1.413186	0.138438	7.03275	314

Methodological Model

Purpose of current research's goal is to examine the factors that impact cash holding at micro level. Companies hold cash for reducing transaction costs and keep liquidity better. As of result Opler., et all., 1999, firms newly rise the part of cash holding comparable to assets intensely. So, I used two euations to evaluate cash holdings as below:

$$CASH_{it} = \beta\, CASH_{it-1} + \beta_2\, CFRATIO_{it} + \beta_3\, CAPEX_{it} + \beta_4\, CSUBS_{it} + \beta_5\, TANGIBILITY_{it} + \beta_6\, FINDEBT_{it} + \beta_7\, FSIZE_{it} + \beta_8\, MTOB_{it} + \beta_9\, LEVERAGE_{it} + \beta_{10}\, VOLATILITY_{it} + \alpha_t + \mu_{it} \quad (1)$$

$$CASH_{it} = \beta_0 + \beta_1\, CFRATIO_{it} + \beta_2\, CAPEX_{it} + \beta_3\, CSUBS_{it} + \beta_4\, TANGIBILITY_{it} + \beta_5\, FINDEBT_{it} + \beta_6\, FSIZE_{it} + \beta_7\, MTOB_{it} + \beta_8\, LEVERAGE_{it} + \beta_9\, VOLATILITY_{it} + \mu_{it} \quad (2)$$

Cash is dependent variable. The explanation of dependent and independent variables is indicated in Table 1. Ordinary Least Squares (OLS) is used to estimate models. I applied Hausman test to choose fixed and random effects models. The test result recommends to use the random-effects method to all model. Hence, random effect is main regression. But I also show the results of fixed-effects.

In addition, I run pooled OLS regressions. Firstly, I show which firm indicator variables affect cash holding according to expectations. I also run white test to examine the explanatory variables normally distributed or not. Test result indicate variables are homoscedasticity, so there is no heteroscedasticity problem.

In order to see multicollinerty problem between my explanatory variables, I run the Pearson Correlation analysis. Table 3 reports correlation analysing, and shows that the cash holding has established a positive and significant relation at 5 significance level, and negative significant association with market value to book value at 5 percent significance level.

As seen in the Table 3, association between explanatory variable of capital expenditure has positive and significant relation with volatility and negative and significant association with size. Another significant and positive association is

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between leverage and tangibility variable. But none of correlation is strong enough to indicate multicollinearity problems. Majority of correlation among explanatory variables are below 10 percent. Therefore, I can say that there is no any problematic correlation among my variables.

Empirical Results

Table 4 reports pooled OLS estimations and result significant coefficient on cash level. R square is larger in model 1 than in model 2, they are 45 % and 31%, respectively. In model 1, variation in cash holding can be described as 45 % by variation in independent. In model, that can be explained 31 % by the variables excluding a previous year cash holding.

As the findings in Table 4 shows that cash has a significant and positive coefficient with one lagged difference. Previous year's cash holding was a significant positive at the current year's cash holding. Therefore, conclusion can be driven as firms in Georgia use some target level of cash holdings.

According to expectation in theory, CFRATIO has a significant and positive influence on cash reserves in firms at 0.01 % level in model 1 and 0.05 % in model 2. Firms with high cash flow from their future investment projects and operating actives anticipate to hold more cash holding not to lose profitable investment opportunities. In the theory pecking order theory, firms employ first internal sources of capital rather external capital. Hence, hypothesis H2 is expected.

Table 5 and 6 illustrate the estimation result of my panel regression models. The model tries to answer if firm specific and time dummy variable has influence affect differently on firm's cash holdings. I present the findings from both fixed effects and random effects regressions for each of firm characteristics. Hausman test is employed to examine the fixed effect and random effect to be consistent. The null hypothesis is that random and fixed effect estimators do not differ. Result of test shows fixed effect is consistent in model 3 in the Table 5.

There is a negative association between cash and size of companies. This relation is supported by the expectation of hypothesis and previous research such as Opler et al. 1999 in USA; Deloof 2001 in Belgium. H4 is supported by the results. The findings can be explained as larger the firm, cheaper the external funds. Larger firms are expected to ha less change of solvency and financial distress compared to counterparts due to their diversifications. As the results shows firms in Georgia plan to hold low level of cash. I got similar result where I included previous years' cash into panel regression (see Table 6).

Leverage (H1) results is different than expected hypothesis there is no significant relation leverage and cash in all models. Therefore, leverage variable does not explain cash holding levels for Georgian firms. Hypothesis H1 is rejected.

I also examined if tangible assets have any significant effect on cash holding. The variables of TANGIBILITY in model 3 as random effect model shows a significantly negative association with cash. It has significantly negative relation with cash in the model 4 when fixed-effect is preferable methods (here I included previous years 'cash in the panel regression). The result is supporting the expected theory that tangible assets are collateralized assets provide more possibility for firms to raise more debts whenever it is needed. Thus, firms in this category hold less cash reserve. Hypothesis for TANGIBILITY is accepted. H5.

I also examined growth opportunities and found a negative and significant association in all models. Growth opportunities hypothesis is rejected as contradict to expectation. It can be explained as growing firms may not hold sufficient cash

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flows that they can collect due to their capital investment into new projects. Therefore, cash holding has negative relationship between cash and growth opportunities. H6.

Finding of firm characteristic for FINDEBT indicate no any significant relation with cash holding. Because due to data contained in Georgian firms, I could not use bank debt as separate in the numerator. Instead, Current liability divided by total liability is used. Hypothesis H7 is rejected.

As seen from result of model, CAPEX has no determinant factors on cash holding of Georgian firms. This finding does not support previous findings where firms with more capital expenditures intent to hold less cash reserve. As a final determinant factor in my research, CSUBS (net working capital divided by total assets), findings of relation between CSUBS and cash holding has a positive association. Result doesn't agree with expectation. The result can be interpreted as higher the level working capital assets, the less cash the firm holds. If a company needs cash to pay short-term liabilities and operating expenses, firm can convert liquid assets to cash less costly than any other kinds of assets. Hence, Hypothesis CSUBS (net working capital/TA) is rejected.

Table 3. Pearson Correlation

		1	2	3	4	5	6	7	8	9
1	CASH	1	0.001	0.078	0.009	0.081	-0.175	-0.071	-0.090	0.026
2	CAPEX	0.001	1	0.233	-0.0029	0.0152	0.025	0.0356	0.026	-0.1187
3	CFRATIO	0.074*	0.23	1	0.0430	-0.0277	0.015	-0.13*	0.0630	-0.025
4	FINDEBT	0.0097	-0.002	0.0430	1	-0.0378	0.0004	-0.0166	0.048	-0.040
5	LEVERAGE	0.081	0.015	-0.027	-0.037	1	-0.006	-0.074	-0.171	-0.070
6	MTOB	-0.175*	0.025	0.015	0.0004	-0.0062	1	-0.004	0.0106	-0.012
7	SIZE	-0.071	0.035*	-0.1336	-0.0166	-0.0741	-0.0044	1	-0.095	-0.157
8	TANGIBILITY	-0.09	0.02	0.06	0.0481	-0.17*	0.0106	-0.09	1	0.0112
9	VOLATILITY	0.026	-0.118*	-0.025	-0.0409	-0.070	-0.0129	-0.15**	0.01	1

Note: ** correlation is significant at the 0.001. * Correlation is significant at the 0.05 level

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Table 4. Multivariate Regression Results

	(model 1)	(model 2)
	CASH-Pooled OLS	CASH-Pooled OLS
lagCASH	0.127***	
	(5.00)	
CAPEX	-0.0102	-0.0479
	(-0.49)	(-1.16)
CSUBS	0.0599**	0.0767
	(3.03)	(1.89)
TANGIBILITY	-0.0244*	-0.0359
	(-2.25)	(-1.48)
FINDEBT	0.00497	0.00187
	(0.80)	(0.13)
SIZE	-0.00481	-0.0187*
	(-1.24)	(-2.41)
MTOB	-0.00161*	-0.00184
	(-2.40)	(-1.20)
LEVERAGE	0.0295	-0.0167
	(0.99)	(-0.27)
VOLATILITY	0.000638	0.00158
	(0.71)	(0.84)
CFRATIO	0.142***	0.121*
	(5.84)	(2.40)
_cons	0.106	0.346**
	(1.81)	(2.96)
N	265	314
R2	0.456	0.314

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

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Table 5. Panel Regression Results (model 3)

	CASH Fixed-effect	CASH Random effect
lagCASH		
CAPEX	0.327	-0.0432
	(1.00)	(-1.07)
CSUBS	1.377**	0.0752
	(3.24)	(1.74)
TANGIBILITY	-0.514*	-0.0316
	(-2.54)	(-1.30)
SIZE	-0.330**	-0.0245**
	(-2.95)	(-2.74)
FINDEBT	0.0252	0.00239
	(0.21)	(0.17)
MTOB	-0.0257*	-0.00177
	(-2.33)	(-1.21)
LEVERAGE	0.616	-0.0135
	(0.97)	(-0.21)
VOLATILITY	-0.000952	0.00152
	(-0.04)	(0.73)
CFRATIO	0.177	0.0766
	(0.42)	(1.51)
_cons	0.474	0.430**
	(0.29)	(3.22)
N	302	314
R2	0.17	0.25
Hausman	14.51	

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6. Panel Regression Results (model 4)

	CASH Fixed -effect	CASH Random-effect
lagCASH	0.0283	0.0679**
	(1.28)	(3.03)
CAPEX	-0.00175	0.0000336
	(-0.10)	(0.00)
CSUBS	0.0413	0.0560**
	(1.92)	(2.86)
TANGIBILITY	-0.0132	-0.0192*
	(-1.38)	(-1.99)
SIZE	-0.0204**	-0.00968*
	(-3.01)	(-2.07)
FINDEBT	0.00966	0.00920
	(1.63)	(1.65)
MTOB	-0.00169**	-0.00169**
	(-3.25)	(-3.07)
LEVERAGE	0.0160	0.0288
	(0.43)	(0.91)
VOLATILITY	-0.000286	0.00106
	(-0.16)	(1.01)
CFRATIO	0.0640**	0.0855***
	(2.89)	(3.86)
_cons	0.345***	0.178*
	(3.41)	(2.54)
N	265	265
R2	0.25	0.48
Hausman		40.22

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

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Conclusion

I examine the holdings of cash and cash equivalents of 50 Georgian firms over 2006-2014 years. Main findings can be stated that on average Georgian firms have similar cash level compared to other countries. The result of models also observes some significant effects from firm specific variables on cash reserves in Georgian firms, supporting some hypothesis from theory generated in my research. According to finding a significant and negative association between asset tangibility and the cash ratio shows that firms with tangible assets are able to liquidate these assets in cash shortfall and minimize the opportunity costs of liquidity. It consists with the transaction cost motive; companies encounter a trade-off between the costs and benefit of excess cash holding. The implications of this work are essential and important for transition countries like Georgia. In order to boost economic growth in country, companies need financial resources to provide fund for this investment. That is why it is important and crucial to understand which specific firm characteristics are detrimental in cash holdings of companies. Finding may help also manager of firms to decide cash level of firms and considers the factors that influence cash holding in the firms. Investor might utilize information given in these theses to judge better their investments as well. For later studies, other controlled variables can be included in coming research such as ownership indicator, corporate governance index and dividend policies of firms. In addition, more years and company's information can be added to data set, if firms more broadly open to public and disclose financial statements.

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