

DETERMINING THE FACTORS OF CASH HOLDINGS – THE CASE OF ROMANIAN NON-FINANCIAL COMPANIES

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ABSTRACT

The significant increase in company cash holdings has drawn the attention of the academic world. As a result, there is now extensive academic literature which investigates the relationship between cash holdings and their impact on corporate performance and company values. The study focuses on the motives, determinants and theories of cash holdings. The main objective of the paper was to investigate the determinants of cash holdings for Romanian companies for the period 2006-2015. The findings suggest that, for non-financial companies, cash holdings are influenced by the state of the economy. In times of recession, cash could be a good way to ride out the storm without having to ask for extra funding. Thus, companies tend to use internally generated cash before seeking external financing.

In order to analyse the determinants of cash holdings, this study makes use of company level data for listed companies on the Bucharest Stock Exchange (BSE). The data was gathered from multiple sources; however the main source was the Amadeus database, which comprises data on almost 20 million companies in Europe. This database allows the user to search by multiple criteria (for instance: geographic, NACE codes, financial criteria, ownership, etc.). The data in the database is collected by the supplier of this database, Bureau van Dijk, therefore the data is reliable. Other data necessary for the study was gathered from the BSE website, the website of the Central Depository – an institution adjacent to the BSE - or was extracted from the individual financial reports available on the webpages of the companies.

KEY WORDS

Cash holdings, trade-off theory, pecking order theory, agency costs, assets.

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Introduction

Cash can be defined as an asset that a company holds, complementary to properties or financial assets, such as shares

or bonds. Cash is the most liquid asset on the balance sheet of any company and is the difference between cash inflows and

cash outflows. Companies need cash in order to run their day-to-day operations. If the cash outflows are larger than cash inflows, this will generate a cash deficiency, while the opposite situation will generate an excessive cash position.

A cash deficiency means serious problems and difficulties in settling short-term debts, forcing the company to request external funding. A surplus of cash is less perceptible as a problem. However, there are several valid reasons why a company should not hold on to excessive cash. For example, interest income obtained from holding cash in the current bank account is lower than the returns that could potentially be realised if the cash were invested in other intangible, tangible or financial assets. On the other hand, having a very large amount of cash available can produce some positive effects, such as the ability to respond promptly to investment opportunities and to sustain financial position by using cash as a buffer.

1. Theoretical background of cash holdings – theories and motives

Some companies prefer to hold a large proportion of their assets in cash, while other companies have a cash deficiency. Reasons for holding cash might be a lack of payment delays in operating activity, or the possibility to benefit from some favourable circumstances such as trade discounts and profitable investments. Other reasons could be the possibility of making contingency payments in the case of the emergence of additional production orders or the access to certain financing facilities granted by some banks. At the same time, cash is an unproductive item, which is why it must be well-managed. This supposes accelerating cash collections and slowing down cash payments (Mihai and

Radu, 2015). The simple possession and non-use of cash items is unprofitable, because it does not generate profit and profit cannot be sacrificed in order to maintain liquidity.

Taking a closer look at the academic literature on cash holdings, we can identify both macroeconomic environment factors and company-specific characteristics (Oláh et al. 2018) which can have an impact on a company's cash holdings. The state of the economy is an important factor, because in times of recession cash could be a good means to ride out the storm without having to ask for extra funding. This is why large companies tend to increase their cash holdings in periods of crisis (Yurdagul and Sánchez 2013).

According to the Wall Street Journal, from the end of 2007 to the end of 2009, the most important hi-tech companies such as Apple, Oracle, Google or Microsoft increased their cash levels by 48% to \$210 billion. The other 65 tech companies listed in the S&P 500 upped cash levels by only 13% in the same period, to \$118 billion. The percentage of cash being held by each of these companies is much larger than the 10% average being held by the 500 largest non-financial companies (Worthen 2010). These companies used cash for funding external and internal investments at a time when many other companies are facing challenging financial difficulties (Olah et al. 2017). First of all, cash provides flexibility for operating and strategic operations. According to Professor Erik Brynjolfson from MIT, "cash has become king to an even greater extent than in the past because of the credit crunch. A company with a lot of cash is in a disproportionately stronger position now than it would be in normal times" (Worthen, 2010).

The status of the economy has been the subject of research for authors such as Baum & co (2004), Rizwan (2012), Song

and Lee (2012), Pinkowitz et al. (2013), among others.

Baum et al (2004) studied the effects of macroeconomic volatility on non-financial companies' cash-holding behaviour. They demonstrated that an increase in macroeconomic volatility will cause the cross-sectional distribution of companies' cash-to-asset ratios to narrow. They tested this prediction on a panel of non-financial companies, covering the period 1957–2000, and find that, as macroeconomic uncertainty increases, companies behave more homogeneously. By contrast, when the macroeconomic environment is more stable, companies have more latitude to behave idiosyncratically, leading to a broadening of the cross-sectional dispersion of companies' cash-to-asset ratios (Baum et al. 2004).

When the macroeconomic environment is uncertain, companies' demand for cash increases, due to the fact that external financing becomes difficult to obtain (Rizwan 2012). A series of studies investigated the impact of financial crises on company cash holdings.

Song and Lee (2012) examined how the Asian financial crisis affects the long-term liquidity management policies of Asian companies by investigating their cash holdings before and after the crisis. They find that the median cash ratio remained stable in the early 1990s and suddenly increased after the crisis of 1997-98. Asian companies increased cash holdings by decreasing investment activities such as capital expenditures or M&As. The reason for this increase is that the Asian companies became more conservative in terms of their investing and cash-holding policies after experiencing macroeconomic shocks. The financial crisis has changed the cash-holding policies of the companies and has had a long-term effect (Song and Lee 2012; Ahmad et al. 2018).

A similar study was conducted for US companies by Pinkowitz et al. (2013). They investigated whether the cash holdings of American companies were unusually high after the financial crisis compared to before it, and whether the change in these cash holdings can be explained by poor investment opportunities, excessive regulation and tax reasons (Pinkowitz, et al. 2013). They find that American companies held more cash after the crisis than companies with similar characteristics in the late 1990s. They called cash holdings that could not be explained by cash holding patterns from the late 1990s "abnormal cash holdings". They showed that abnormal cash holdings increased, but for different reasons from the late 1990s to before the crisis, and from before the crisis to after the crisis.

Macroeconomic factors of cash holdings have been also studied by Curtis et al. (2014). Using a panel of American companies over the period 1960-2007, their preliminary paper documents several aspects of company cash holdings. They showed that cash holdings have been increasing considerably since the 1980s, after a period of decline. They also identified inflation as the main driver of changes in the time-series of cash holdings.

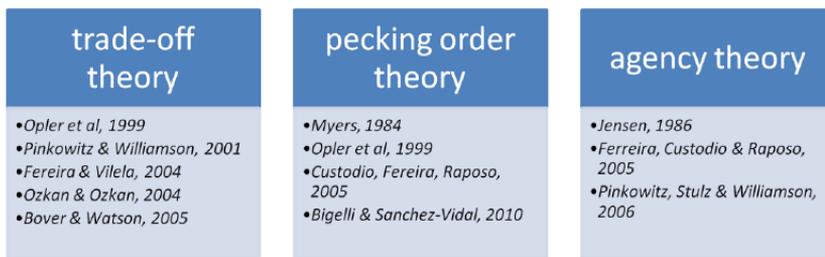
Cash holdings have been studied by many authors from different perspectives. Keynes (1936) suggested three major motives for cash holdings: the transaction motive, the precautionary motive and the speculative motive. The transaction motive means that companies hold an important part of their assets in the form of cash, in order to meet their transaction needs that would arise in the course of operating activity and regular business activities (Baum et al. 2004). In this case, the optimal amount of cash can be estimated by forecasting cash inflows and outflows and preparing cash budgets. The precautionary motive

requires a company to hold cash in order to meet unpredicted contingencies that may arise, while the speculative motive supposes that a company will accumulate cash to take advantage of any attractive investment opportunities that may arise, for example in the takeover market. The speculative motive is an attribute of financial companies. Non-financial companies do not hold cash for the purpose of speculation (Van Horne and Wachowicz 2008). Other authors have mentioned other motives for holding cash, for example the tax motive (Foley et al. 2007), the signalling motive (Harford et al. 2008) or the agency motive (Al-Amarneh 2013). The tax motive takes into account the perspective of multinational companies, which tend to hold large cash reserves in countries with lower taxes and therefore higher repatriation costs (Foley et al. 2007). The signalling motive considers the managerial perspective and information asymmetry between

managers and shareholders. The agency motive refers to the separation of management and ownership. There is a clear incentive for managers (agents) to hold cash for their own interest at the expense of shareholders (principle), hence there is an agency motive for holding cash (Opler et al. 1999).

These motives are the basis for three theories in the field of corporate finance which can explain which characteristic of the company has an influence on cash holdings, namely trade-off theory, pecking order theory and agency theory (Opler et al. 1999). Many papers (see Figure 1) have aimed to study the determinant factors of companies' cash levels within the theoretical background of these three alternative models. Some of these studies have been undertaken in developed economies, while other studies have been undertaken in countries with emerging economies.

Figure 1. Corporate finance theories which explain company cash holdings



Source: Own elaboration.

The term 'trade-off theory' refers to a family of related theories, in which a decision-maker running a firm evaluates the various costs and benefits of alternative leverage plans. The original version of trade-off theory grew out of the debate over the Modigliani–Miller theory (1958). Some authors made important contributions to the development of the theory (Jensen and Meckling 1976; Myers 1984). Under trade-off theory, in the case of cash

holdings, it was concluded that there is an optimal cash level which results from balancing the marginal benefits and marginal costs of cash holding. Cash-holdings generate costs and benefits and are very important in financing the growth opportunities of the company (Saddour 2006). The main cost is the opportunity cost of capital invested in cash instead of in other assets with a higher return. The main benefits of cash holdings are smaller transaction

costs (there is no need to sell assets for cash payments), a smaller risk of suffering financial distress and the possibility to develop investment projects that could not be carried out without these funds owing to the existence of financial constraints. This theory suggests that companies have two motives for holding cash: transaction cost and the precautionary motive. The transaction cost refers to the fact that companies hold cash because external funds are more costly than retaining existing cash (external financing involves financial costs associated with the amount of capital raised). The precautionary motive refers to the fact that companies may reduce their investments when they face cash deficiencies (Chen and Chuang 2009).

In contrast to trade-off theory, the pecking order theory of Myers and Majluf (1984) opines that there is no optimal level of cash, and cash merely acts as a safeguard between retained earnings and investment needs. In addition, because of information asymmetry, the cost of external financing is higher than the cost of internal financing. Therefore, companies tend to use internally generated cash before they seek external

financing. Consequently, this theory assumes a financing hierarchy is followed by companies in order to finance new investments: first internal funds, then debt, and finally equity. This order of preference is a way to minimise or avoid the cost of asymmetric information as well as other financing costs (Ferreira and Vilela 2004).

The third theory is agency theory (free cash flow theory) as espoused by Jensen (1986), which suggests that managers prefer to hold cash rather than paying dividends to shareholders because it increases the level of assets they control and their flexibility to pursue their own objectives. The agency relationship is a result of the separation between management and ownership of the company. There are certain advantages of this separation, including the ability of ownership to change without impacting operations, and the possibility of hiring experts to act as managers. However, because a company's cash-holding policy is a matter of managerial discretion, the level of cash holdings raises concerns when managers do not act in the best interests of shareholders (Ferreira et al. 2005).

Figure 2. Motives, theories and determinants of cash holdings



Source: Own elaboration.

2. Data description and summary statistics

Our sample covers Romanian companies that are listed on the Bucharest Stock Exchange (BSE). Financial companies were excluded because these companies have different disclosure regulations and their cash-holding policies are determined by the Central Bank of Romania.

We have selected medium-sized and large companies according to benchmarks from the Romanian national directive in the field of accounting (more than 4 million EUR of total assets, more than 8 million EUR in sales and more than 50 employees). The analysis covers a 10-year period from 2006 to 2015, and includes annual information taken from the financial reports at the end of each year. As a result, the entire sample consists of 810 company-year observations from 90 companies over the period specified. Small companies and micro-companies are the subject of this article, because information asymmetry is higher in their case and there are economies of scale for transaction costs. In the case of these companies there is no distinction between ownership and management. In most cases, the owner is also the manager. On the other hand, small companies and micro-companies usually rely on cash for transactions, which means that it is essential for such companies to hold a certain level of cash.

This section comprises the description of the dependent, independent and control variables used in this empirical study.

The dependent variable used in this study is represented by cash holdings. The measurement used for cash holdings is the cash ratio, determined as the ratio of cash and cash equivalents to total net assets.

Based on academic literature, several trends emerged, namely company char-

acteristics such as size, financial leverage, profitability, cash-flows, and the liquidity to assets ratio, which have been identified as determinant factors of cash holdings and used as independent variables in this paper. Subsequently, these company characteristics will be analysed:

Company size

Company size is usually measured as a natural logarithm of total assets. The impact of size on cash holdings is theoretically ambiguous. For example, the supporters of trade-off theory argue that a negative impact of company size on cash holdings is expected due to economies of scale (Faulkender 2002). On the other hand, larger companies are in a better position to accumulate cash as they are presumably more profitable (Ozkan and Ozkan 2004). The alternative hypothesis is that cash holdings are positively related to company size.

Leverage

Leverage is a measure of financial risk and is considered to have an impact on company cash holdings. Leverage is regularly defined as the ratio of long-term debts to total assets. Under trade-off theory, a negative relation between cash holdings and leverage ratio is expected. A series of empirical studies confirmed the decline of cash levels when companies increase their financial leverage (Opler et al. 1999; Ozkan and Ozkan 2004).

Profitability

A profitable company will generate higher cash flows from operating activities. A strong cash flow reduces the need for cash reserves, which implies that profitability can be a substitute for cash holdings (Kim et al. 1998). We measured profitability as the product of pre-tax profit divided by operating revenue.

Cash flows

Under trade-off theory, cash flows are seen as a substitute for cash. Substantial cash flows reduce the need to hold cash, so a negative relationship between cash holdings and cash flows is expected (Shah 2011). Under pecking order theory, companies that have higher cash flows are expected to hold larger amounts of cash as a resource of internal funds. Thus, a positive relationship between cash holdings and cash flows is expected (Ozkan and Ozkan 2004; Ferreira et al. 2005).

Liquid assets ratio

The net working capital to assets ratio is often used as the proxy for liquid asset substitutes. Liquid assets include inventories, and accounts receivable less accounts payable. The trade-off theory predicts that companies with more liquid assets are expected to hold less cash. This negative relationship is supported by a series of empirical papers (Ogundipe et al. 2012).

The data collected is of the cross-sectional type (transversal series) but also of the panel type (combinations of series of transversal-type data with time series). The data collected was analysed using Eviews 7.0.

The model specification is built on the variables that are consistent with previous studies. The model and measurements of the independent and dependent variables are as follows:

In order to estimate the relationship between the cash ratio and the explanatory variables, static panel data techniques were used. Panel data analysis allows us to control for the unobserved heterogeneity that may be present in the cross-sectional units or time periods. The panel data techniques also make it possible to study the relationship between different variables dynamically, so that changes in the variables over different time periods are determined as they occur. Specifically, we use pooled, fixed effects and random effects models with their required assumptions and known limitations.

3. Empirical results and discussion

The descriptive statistics of the variables are reported in Table 1. The table shows the mean, median, minimum, maximum and standard deviation of the variables and provides a general overview of the characteristics of the data.

Table 1. Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Cash ratio	810	-0.05	0.59	0.0529	0.08209
Size	810	7.42	16.08	10.5563	1.47477
Liquidity ratio	810	0.04	32.55	1.6438	2.50020
Profit margin	804	-98.81	78.06	2.5205	15.42994
Cash flow ratio	803	-79.05	82.62	8.3444	14.68504
Leverage	533	0.00	4.89	0.3070	0.39436
Valid N (list wise)	528				

Source: Own elaboration.

Table 1 contains summary statistics of key variables for the full sample. The data comprises 528 valid company-year observations obtained for 90 companies for nine years from 2007 until 2015.

The mean cash holding of all companies analysed is -0.05, with the variation of the individual data set varying from the mean of 0.08. The distribution of cash also shows that it is positively skewed.

Table 2 shows the correlations between the variables taken into consideration. The correlation coefficients between variables are statistically significant, albeit small. This means that multi-collinearity is not an issue for the chosen variables.

Table 2. Pearson correlation

	cash/TA	lnTA	LIQR	PRMA	Lev	CF/OPREV
cash/TA	1					
Size	-0.063 (0.075)	1				
LIQR	0.357** (0.000)	0.112** (0.001)	1			
PRMA	0.230** (0.000)	0.131** (0.000)	0.350** (0.000)	1		
Leverage	-0.098* (0.024)	0.003 (0.945)	-0.091* (0.036)	-0.118** (0.007)	1	
CF/OPREV	0.150** (0.000)	0.263** (0.000)	0.379** (0.000)	0.895** (0.000)	-0.183** (0.000)	1

Source: Own elaboration.

The results estimated for the regression technique and random effects technique model for panel-type data are shown in Table 3. Estimations for the fixed effects

Table 3. Regression results – fixed effects of time

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.110697	0.025677	4.311213	0.0000
SIZE	-0.005966	0.002482	-2.403947	0.0166
LEV	-0.015093	0.009942	-1.518051	0.1296
PRMA	0.001635	0.000454	3.603298	0.0003
LIQR	0.008581	0.001429	6.002714	0.0000
CF_OPREV	-0.001540	0.000520	-2.959041	0.0032
Effects Specification				
Period fixed (dummy variables)				
R-squared	0.126062	Mean dependent var		0.046858
Adjusted R-squared	0.109158	S.D. dependent var		0.078968
S.E. of regression	0.074533	Akaike info criterion		-2.334534
Sum squared resid	2.872027	Schwarz criterion		-2.245595
Log likelihood	627.3171	Hannan-Quinn criter.		-2.299716
F-statistic	7.457530	Durbin-Watson stat		0.560230
Prob(F-statistic)	0.000000			

Source: Own elaboration.

The fixed effects of time periods suggest an increase in cash ratio starting with 2014. In previous years, 2008, 2009, and 2010 negatively influenced the cash ratio of companies in the sample. This means that cash holdings decreased during the crisis and subsequently increased in the post-crisis period.

We can also observe a negative statistically significant impact of company size on cash ratio. This seems to support trade-off theory, which argues that a negative impact of company size on cash holdings is expected due to economies of scale. Smaller companies have limited access to external financing sources, which could

lead to the option of a higher volume of cash holdings.

The cash flow ratio and financial leverage also have significant negative impacts on cash ratio. The negative impact of the cash flow ratio is consistent with the idea that consistent cash flows reduce the need to hold cash, so a negative relationship between cash holdings and cash flows is normally expected (Shah 2011). The negative impact of financial leverage is explained by the opportunity cost. Cash holdings are lower for companies with a higher leverage ratio, due to the higher opportunity cost.

We may also observe a significant positive effect of the liquidity ratio on the cash ratio and profitability. The liquidity ratio was determined as the respective proportions of current assets and current liabilities. This result contradicts the theory which suggests that companies with more liquid assets are expected to hold less cash. Romanian companies with higher net working capital hold significantly higher cash holdings. If we consider positive and increasing working capital as a sign of financial strength, this means that healthy companies tend to accumulate increasing cash holdings.

Table 4. Regression results – period random effects

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.112485	0.025659	4.383868	0.0000
LNTA	-0.006185	0.002479	-2.494541	0.0129
LEV	-0.015305	0.009941	-1.539475	0.1243
PRMA	0.001607	0.000452	3.552815	0.0004
LIQR	0.008520	0.001429	5.964198	0.0000
CF_OPREV	-0.001451	0.000518	-2.801492	0.0053
Effects Specification				
Period random			0.000000	0.0000
Idiosyncratic random			0.074533	1.0000
Weighted Statistics				
R-squared	0.118531	Mean dependent var		0.046858
Adjusted R-squared	0.110088	S.D. dependent var		0.078968
S.E. of regression	0.074494	Sum squared resid		2.896777
F-statistic	14.03865	Durbin-Watson stat		0.564408
Prob (F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.118531	Mean dependent var		0.046858
Sum squared resid	2.896777	Durbin-Watson stat		0.564408

Source: Own elaboration.

Table 5. Regression results cross section random effects

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.087640	0.044564	1.966623	0.0498
LNTA	-0.003513	0.004200	-0.836320	0.4034
LEV	-0.015189	0.013623	-1.114979	0.2654
PRMA	0.001386	0.000425	3.264786	0.0012
LIQR	0.004541	0.001436	3.162618	0.0017
CF_OPREV	-0.001126	0.000518	-2.174742	0.0301
Effects Specification				
Cross-section random	0.054063	0.5209		
Idiosyncratic random	0.051850	0.4791		
Weighted Statistics				

R-squared	0.050817	Mean dependent var	0.017118
Adjusted R-squared	0.041726	S.D. dependent var	0.053116
S.E. of regression	0.052033	Sum squared resid	1.413298
F-statistic	5.589370	Durbin-Watson stat	1.138809
Prob(F-statistic)	0.000050		
Unweighted Statistics			
R-squared	0.101952	Mean dependent var	0.046858
Sum squared resid	2.951261	Durbin-Watson stat	0.545352

Source: Own elaboration.

In the case of the estimation by means of the cross section random effects technique, there is a common, average value of the intercept ($\alpha = 0.11$). Each company's individual differences are reflected in the error term ω it. The random individual effects of all companies included in the sample are shown in Annexure 1. Thus, if we start from the presumption that the differences between companies have a certain impact upon cash ratio, as a dependent variable, then the use of the random effects technique is appropriate.

According to the estimations shown in Table 3 and 4, the coefficient of size and leverage are not statistically significant.

In the case of estimation using the period random effects technique, there is a common, average value of the intercept ($\alpha = 0.08$). Differences each year are reflected in the error term ω it. The random individual effects of periods (years) included in the sample are shown in Annexure 2. Thus, if we start from the presumption that the differences between different periods of time have a certain impact upon cash ratio as a dependent variable, then the use of the random effects technique is appropriate.

According to the estimations shown in Table 3 and 4, the coefficients of size and leverage are not statistically significant.

Conclusions

The review carried out in this paper has concentrated on the main issues in the academic literature regarding company cash holdings. We also tested the impact

of some recognised factors on cash holdings for non-financial Romanian listed companies. The subject of company cash holdings has been studied by many researchers. Numerous empirical studies and theoretical papers have examined various facets of cash holdings. Two quasi-permanent questions have arisen from these studies, namely "why do companies hold cash?" and "what factors determine a company's optimal cash holdings?" Academic researchers seek the nature of the relationships between cash holdings and the company's specific characteristics in both developed economies and developing countries.

However, this review has highlighted three major issues regarding company cash holdings: namely, the theories, motives and determinants of cash holdings.

Company cash-holding policies can be explained by economic and behavioural theory. Economic theory includes trade-off theory and financial hierarchy theory, and behavioural theory is basically agency theory.

The trade-off theory of cash holdings suggests that companies have two motives for holding cash: transaction cost and the precautionary motive. The financial hierarchy theory of cash holdings suggests that there is no optimal level of cash holdings, and because of information asymmetry, the cost of external financing for investment projects is higher than the cost of internal financing. Thus, companies tend to use internally generated cash be-

fore they seek external financing. According to the agency literature, a higher level of cash holdings provides managers with greater powers of decision-making (Mihai and Radu 2015).

The literature on cash holdings also pays considerable attention to the motives and determinants for holding cash. Specific company characteristics that have been found to influence cash holdings include company size, leverage, cash flows, cash flow volatility, dividend payments, etc. The impact of company characteristics on cash holdings is ambiguous.

The paper also aimed to explore the determinants of cash holdings for Romanian companies in order to find out the elements or factors which account for such cash holdings. There were five independent variables identified as a result of the literature review, which in all but one case have been found to be correlated with the dependent variable, namely cash holdings. These variables are size, leverage, profitability, cash flows and the liquid assets ratio.

In the case of Romanian companies, company size is negatively related to cash holdings. A possible explanation is economies of scale and scope. Thus, medium-sized and large companies generally hold less cash.

Another dependent variable, negatively related to cash holdings, is financial leverage. This means Romanian companies tend to reduce their financial leverage if they have extra cash. This may be explained by the fact that debts have higher costs for the company than the opportunity costs of cash. At the same time, Romanian companies with consistent cash flows seem to hold less cash.

On the other hand, the findings of the paper suggest that Romanian companies with higher net working capital hold much higher cash holdings. If we consider posi-

tive and increasing working capital as a sign of financial strength, then we can say that the higher the level of financial strength is, the higher cash holdings are. Coming out of the crisis, cash holdings have increased, mainly due to increased profitability.

As previously discussed, the findings of the paper are consistent with trade-off theory and precautionary motives, but there are still some limitations apparent in our research.

The main contribution of this study comes from the fact that is the first study conducted in Romania regarding cash holdings, but the implications of this paper may be applicable to owners, managers, banks and the general market. Academic implications can be found in the confirmation of existing theories and literature on recent data from the Romanian market. This provides additional literature in the Romanian setting which can open the window to opportunities for future research into cash holdings of companies.

A limitation of this paper may be the exclusion of small companies from the sample, due to the lack of available data. On the other hand, according to Romanian accounting regulations, small companies (micro-companies) submit highly simplified financial reports. As a consequence, the absence of the requirement to stipulate certain specific data in the financial accounts among all companies can be seen as a limitation. The period of time which is applicable to this study can also be seen as a limiting factor of the research.

The study has opened the door to certain research directions which have not yet been sufficiently explored, at least in the specialised literature from Romania: a comparative study regarding the cash holdings of small and large companies respectively, or a study regarding the impact of corporate governance regulation upon the cash

holdings of Romanian companies. These directions will nevertheless constitute the subject of future research. Future research can address extending the period of time in order to prolong research and perhaps include the changes in cash holdings over time, to see if a trend exists. This could also include data from the pre-crisis and post-crisis years to provide insight into company cash management around those periods.

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