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**Working capital management and liquidity reserves:
The context of risk retention¹**

Abstract

Working capital management belongs to most relevant company's decisions, as it influences both profitability and liquidity. In the liquidity context, the paper offers a broader view on the scope of working capital management decisions, by expanding its linkages with risk management. In particular, the paper develops a conceptual model of the analysis of company's liquidity reserves, which is relevant for establishing company's risk retention capabilities. In the empirical layer, the paper examines the sample of Polish listed companies with regard to the magnitude, relevance and time-suitability of liquidity reserves. The empirical verification is also directed on the identification of these areas of working capital management which are relevant for sourcing liquidity reserves. In this aspect, cluster analysis and factor analysis was implemented. The study found that the majority of the examined companies hold liquidity reserves. As the most relevant aspect of working capital management the maintenance of financial stability has emerged.

Keywords: working capital management, liquidity, liquidity reserves, risk, risk retention.

JEL Classification: G32, G33.

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Introduction

Working capital management is a vital function within corporate-finance decision making. It involves the management of the relationships between a company's short-term assets and short-term liabilities. Accordingly, the decisions within company's working capital management are interconnected with the level of its liquidity. Liquidity maintenance is substantial for a company, as it ascertains the continuity of operations. Illiquid companies are severely threatened by bankruptcy.

In the existing literature debate, the goals of working capital management remain virtually unlinked with the broader understanding of company's risk exposures. In general, risk occurrence leads to disruption of operations and rises financing needs. As a consequence, a company faces unexpected cash flow volatility. Accordingly, the first aim of the paper is to develop a conceptual model of working capital decisions as linked to risk management requirements. In particular, the concept of liquidity reserves is developed and attributed. Within this context, the paper contributes to the existing literature by providing a clear analytical perspective addressing the importance of the proper working capital management for the effective use of risk retention, by means of holding liquidity reserves. As noted, such approach is virtually absent in previous studies, remaining beyond the focus of corporate-finance related literature.

Additionally, the study provides an empirical analysis of liquidity reserves on a sample of Polish public companies. The purpose of the analysis is to identify these aspects of working capital management that were relevant to the magnitude of liquidity reserve and its attributes (relevance and time-suitability). The core research methods used were cluster and factor analysis.

The paper is organized as follows. The second section provides a literature review addressing the understanding of working capital management and its connections with the problem of liquidity and profitability risk. The third section develops the conceptual framework addressing the areas of working capital management and the understanding and functions of liquidity reserves. In the fourth section empirical analysis is provided, together with the explanation of the adopted methodology, the findings and discussion. The fifth section concludes the paper.

1. Literature review

Corporate finance related literature revises the problem of working capital management from its structure and volume point of view. At the beginning it should be clarified that there are two co-existing terms: gross working capital and net working capital. Gross working capital refers to the volume of current assets and

its structure. This approach remains beyond the scope of the paper. Net working capital refers to the problem of financing current assets. In particular, net working capital represents this part of company's current assets which is financed with long-term sources [Preve, Sarria-Allende 2010, p. 14; Sierpińska, Wędzki 2004, p. 73-79]. This paper addresses several aspects of working capital management comprehensively with the understanding of net working capital (both terms are used here interchangeably).

In the literature, there are suggestions on how to adjust working capital decisions to the nature of business, technology and manufacturing policy, demand, credit conditions and other factors [Patil 2008, p. 189-195]. Many of these studies link the problem of risk with working capital management. However, the problem of risk clearly appears in two contexts: the first addresses the context of liquidity risk, whereas the other – profitability risk.

The context of liquidity risk is most clear while revising the literature discussing alternative working capital management strategies: aggressive, moderate and conservative [Nunn 1981; Wienraub, Visscher 1998; Reddy, Kameswari 2004; Brigham, Houston 2011; Michalski 2014]. Working capital management decisions address here the problem of seasonal and permanent levels of current assets. The prime goal of working capital management is achieved by finding the balance between capital structure and assets structure, which is essential for maintaining liquidity in the long run [Opler et al. 1999; Chiou, Cheng 2006].

However, there are studies that prioritize profitability over liquidity among the goals of working capital management [Smith (ed.) 1980; Pass, Pike 1987; Knauer, Wöhrmann 2013]. In this context, the goal of working capital management should be the shortening of cash conversion cycle as it allows to increase profits [Reider 2007; Ehrardh, Brigham 2008]. These recommendations are grounded on the view that the surplus of liquid assets does not contribute to the return on equity. Additionally, the surplus of liquidity may hide the obsolete inventory and uncollectible receivables [Loneux 2004; Damodaran 2012; Sanger 2014]. In this context, Hofmann coined a phrase 'working capital trap' [Hofmann et al. 2011, p. 4]. On the other hand, it was noticed that large inventory reduces the risk of loss of sales revenues due to stock-outs, whereas trade credit sales has a potential to boost sales revenues [Fazzari, Petersen 1993; Baños-Caballero, García-Teruel, Martínez-Solano 2010; García-Teruel, Martínez-Solano 2010].

It is worth noticing that the 2008+ financial crisis reoriented the goal of working capital management from profitability-driven to liquidity-driven. The crisis caused that companies had difficulties in obtaining short-term bank loans. In such terms companies noticed the importance of having larger cash balances as a hedge against liquidity risk [Le Guyader 2011]. Cash emerged as an important current

asset to hold in times of financial crisis as it performed as a cushion against liquidity shortages [Parr 2011]. In this context, some studies addressed the problem of the role of working capital management in holding company's independence with-in financial policy decisions. For example, Acharya, Almeida and Campello [2013] found empirical support that in times of higher economic volatility banks stiffened credit terms and company's cash reserves rose. Harford, Klasa and Maxwell [2014] proved that the value of cash reserves was higher for firms with higher refinancing risk.

In the contemporary financial literature there are also views that the efficacy of working capital management depends on the balance between profitability and liquidity [Abuzar, Eljelly 2004; Faulkender, Wang 2006; Filbeck, Kruger, Preece 2007; Appuhami 2008]. These and many other studies simply follow the most influential work of Smith [1973] who pointed on the need of developing a viable model, with the dual financial goals: profitability and liquidity. The working capital management focused on finding the optimal balance between the volume of current assets and liabilities, allows to increase profitability and at the same time maintain continual inflow of cash [Maness, Zietlow 2005, p. 97].

2. Conceptual framework

As it was discussed above, many studies assume the impact of working capital management on profitability-related risks, as well as on liquidity-related risks. However, it should be noticed that there are virtually no studies that link working capital management with a broader understanding of company's risk exposures. The conceptual framework developed in this section aims at contributing to the discussion, by extending the view on liquidity risk under the requirements of working capital management. The central issue is that due to the management of working capital a company shall not only meet the operating liquidity needs, but also any immediate liquidity needs. Operating liquidity needs refer to the typically planned cash balances in connection to normal (undisturbed) company's activity (and are defined by the demand on working capital). Immediate liquidity needs result from the occurrence of various kinds of risk. In this context, working capital management becomes an important element of risk management. It reflects company's attitudes within the use of risk retention, as the level of risk retention may be reflected by a company's formal and/or informal liquidity reserves. Risk retention is here understood as the risk financing method. If a company retains the risk, it agrees to finance the losses from its own funds [Vaughan, Vaughan 2003, p. 16; Rejda 2001, p.44; Culp 2006, p. 33].

There three critical assumptions of the conceptual framework developed in this study. The first assumption is that risk is perceived in accordance with the negative concept, as noted by [Jajuga (ed.) 2009, p. 13]. Under the negative concept of risk, risk occurrence leads to the negative financial outcomes reflected in the changes of company's cash flows. As a result, risk outcomes lead to reduction of company's liquidity reserves.

The second assumption of the conceptual framework is that company's liquidity reserves result from a conscious act. In other words, the liquidity reserves reflect the burden of planned (conscious) risk retention (as opposed to unplanned risk retention when risk is retained by default, as noted by [Vaughan, Vaughan 2003, p. 17].

The third assumption is that all company's liquidity reserves are reflected in balance-sheet items which make them measurable and thus fully identifiable (e.g. cash and cash equivalents). However, a company may also use additional liquidity reserves which are sourced primarily by the access to other sources of cash inflows, e.g. a priori contacted credit lines². These additional liquidity reserves are beyond the proposed conceptual framework, as they remain hidden from the balance-sheet perspective and thus are immeasurable.

Under the above outlined assumptions, the magnitude of company's liquidity reserves (LR_m) is defined in the model as the surplus of company's net working capital (NWC) over the company's demand on net working capital ($DNWC$):

$$LR_m = NWC - DNWC \quad (1)$$

Net working capital (NWC) represents the volume of company's fixed capital (long-term sources of funding) involved in financing current assets. Accordingly, from the balance sheet perspective, there are two alternative formulas of NWC computation³:

$$NWC = CA - CL \quad (2)$$

$$NWC = FC - FA \quad (3)$$

where CA means company's current assets, CL means company's current liabilities, FC means company's fixed capital (the sum of equity and long-term debt finance) and FA means company's fixed assets.

Positive NWC is essential for maintaining financial liquidity in a company.

A company may establish its demand on net working capital ($DNWC$) by focusing on the burden of cash that needs to be invested in inventories (I) and re-

² The problem was addressed in [Wieczorek-Kosmala et al. 2013, pp. 48-59].

³ Formula (2) reflects assets approach, whereas formula (3) reflects capital approach to NWC computation [Sierpińska, Wędzki 2004, p. 80].

ceivables (R) to maintain continuity of operating activities. It reflects the need for ‘operating cash’ and these needs may be partially reduced by purchasing on credit, which is expressed by the volume of accounts payable (P). By computing conversion periods of inventories (I_{CP}), receivables (R_{CP}), and payables (P_{CP}), a company may establish the duration of its cash conversion cycle (CCC) (according to the classical, simplified model by [Emery, Finnerty, Stowe 2004, p. 683]⁴:

$$CCC = I_{CP} + R_{CP} - P_{CP} \quad (4)$$

and

$$I_{CP} = (I/S) \times 365 \quad (5)$$

$$R_{CP} = (R/S) \times 365 \quad (6)$$

$$P_{CP} = (P/S) \times 365 \quad (7)$$

where S means sales revenues.

Cash conversion cycle reflects the number of days for which a company needs funding for its operating activities other than accounts payable. Accordingly, cash conversion cycle allows to compute for how many days a company needs funding from long-term sources. The demand on net working capital in value is computable with the following formula:

$$DNWC = (S \times CCC)/365 \quad (8)$$

It should be noticed that the magnitude of company’s liquidity reserve (LR_m), which is associated with the surplus of company’s net working capital over the demand on net working capital (formula 1), equals to the company’s cash and cash equivalents exceeding the operating needs. From risk management point of view this cash excess may be used as a source of risk retention, which is in the case of the positive liquidity reserve ($LR_m > 0$). In the adverse situation (the negative liquidity reserve⁵) risk management requires a focus on the implementation of risk transfer mechanisms, as an alternative to risk retention.

The first attribute of liquidity reserve is its **relevance**. The relevance of liquidity reserve (LR_r) should be assessed by measuring its magnitude relative to total assets (A):

$$LR_r = LR_m/A \quad (9)$$

⁴ In the literature, however, more developed models of cash conversion cycle exist. The models adjust the denominators in conversion fractions by using other categories than sales revenues. See for e.g. Sierpińska, Wędzki [2004, p. 155] and Brigham, Houston [2011, p. 522]. Nuances and details of conversion periods computation are well discussed by Ortín-Ángel and Prior [2004].

⁵ In such case the negative liquidity reserve indicates that a company does not possess enough liquidity to serve its operating needs.

The higher is the share of liquidity reserve in company's total assets, the greater is company's ability to retain risk. By utilizing the cash conversion approach, we may additionally express liquidity reserve in terms of its **time-suitability** (LR_t), which is here perceived as its second attribute:

$$LR_t = [(NWC/S) \times 365] - CCC \quad (10)$$

Time-suitability of liquidity reserve indicates for how many days a company may use cash excess in the case of delay in operating cycle caused by risk occurrence.

The above presented conceptual framework allows to highlight the desired courses of actions a company should undertake within working capital management in order to boost liquidity reserves. Thereby, it reflects actions that are essential within risk management treated in a holistic manner⁶.

It is of particular importance for companies which treat risk retention as a valid element of risk financing strategies. In general, these courses of actions are clearly divisible to two broad categories:

- balance sheet oriented, with a focus on the management of items relevant for the height of the volume of net working capital,
- efficiency oriented, with a focus on the management of items relevant for the height of the demand on net working capital.

It should be noticed that the balance sheet oriented actions reflect decisions within shaping company's assets and capital structure and adjusting capital structure to assets structure. Here, a main focus should be on maintaining financial balance which is consistent with financing long-term assets (fixed assets) with long-term funds (fixed capital). This recommendation is expressed by financial solvency ratio (FS), computed as follows:

$$FS = FA/FC \quad (11)$$

and the condition that $FS \geq 1$, which is accompanied by $NWC \geq 0$. From such point of view, working capital management is related to long-term decision-making within the changes of company's fixed assets, equity and long-term debt. These long-term decisions are accompanied by the changes of current assets and current liabilities. Accordingly, it influences company's assets structure and capital structure. Additionally, a company may control the adjustment of capital structure to assets structure by computing the synthetic ratio of financial stability ($S(FS)$):

⁶ Holistic (integrated) approach to managing risk links typical risk management activities with all areas of company's decisions and with the achievement of the main corporate objective. See e.g. Chapman [2006, p. 8] and Lam [2003, p. 8].

$$S(FS) = C(S)/A(S) \quad (12)$$

where $C(S)$ is capital structure ratio (relation of equity (E) to debt (D)) and $A(S)$ is assets structure ratio (relation of fixed assets (FA) to current assets (CA)).

The higher the ratio, the better company's financial stability.

The efficiency oriented actions reflect decisions related to the duration of company's cash conversion cycle, and thus the height of the demand on net working capital. The increase of sales may shorten the demand on net working capital, as well as the reduction of inventories and receivables conversion periods (by more efficient management of these current assets)⁷. The increase of accounts payable also reduces the demand on net working capital. However, this course of action leads to the increase of current liabilities and may negatively influence company's financial solvency, thus requires a caution.

3. Empirical evidence – the case of Polish listed companies

3.1. Research design and methods

Within the above outlined conceptual framework, the empirical evidence was designed within two research layers. The **first layer** was directed on recognizing the magnitude of liquidity reserve in sampled Polish companies, together with addressing its two attributes: relevance and time-suitability. As it may provide an insight to the possible scale of the use of risk retention, two compelling research questions were asked:

Q1.: *How many Polish companies possess liquidity reserves and what is the magnitude of these reserves?*

Q2.: *What is the relevance (LR_r) and time-suitability (LR_t) of liquidity reserves in companies which distinguish with positive liquidity reserves ($LR_m > 0$)?*

The **second layer** was projected to identify these aspects of net working capital management which are relevant to the magnitude (LR_m), relevance (LR_r) and time-suitability (LR_t) of liquidity reserves. These aspects were tentatively clustered into two groups (corresponding with the conceptual framework of the model outlined in section 2):

- the balance sheet oriented variables, which are under consideration while managing net working capital (NWC): A , CA , D , D_{lt} , E , FS , $S(FS)$, $A(S)$, $C(S)$, D/E , D/A ,

⁷ The problem is widely discussed in corporate finance literature, e.g. Sanger [2014, p. 82-151], Brigham, Houston [2011, p. 512-610].

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- the efficiency oriented variables, which are under consideration while establishing the demand on net working capital (*DNWC*): *S*, *CCC*, *I_{CP}*, *R_{CP}*, *P_{CP}*.

Within the second research layer, further compelling research questions were asked:

Q3.: *Which aspects of net working capital management were more relevant in Polish companies from liquidity reserve point of view – balance sheet oriented or efficiency oriented?*

Q4.: *Using the results of the analysis for Polish companies, can it be clearly stated which aspects and routes of net working capital management are of particular importance for sourcing liquidity reserves?*

In order to answer the asked research questions the empirical evidence was conducted with the use of the data provided in EMIS database within balance sheet and profit and loss account items for all companies listed on Warsaw Stock Exchange. Finally, out of 837 included in EMIS database for 2013, a sample of 493 companies was selected and all of these companies fulfilled all of the three criteria specified below:

- all data were provided both for 2012 and 2013.
- there were no lacking data within assets and capital structure, as well as no obvious mistakes related to assets and capital structure,
- companies were operating in non-financial sector⁸.

3.2. Results and discussion

The magnitude of liquidity reserve and its attributes

With regard to the data for 2013, the majority of the examined companies distinguished with a positive liquidity reserve. Out of 493 companies, the liquidity reserves were held by 423 companies, which constitutes c.a. 86% of the examined companies.

The companies with positive liquidity reserves ($N = 423$) were subject of a deeper examination regarding the magnitude of liquidity reserve and its attributes: relevance and time-suitability. The descriptive statistics are provided in Table 1.

⁸ In particular, for the purpose of this study the companies in which the sole area of activities was financial activity (insurance, banking and widely understood financial services) were excluded from the sample.

Table 1. Characteristics of liquidity reserves of Polish listed companies in 2013 (for companies with positive liquidity reserves)

Specification	LR_m (in thous. zł)	LR_r	LR_t (in days)
\bar{x}	79715,01	16,542%	112,13
x_{min}	0,50	0,004%	0,34
x_{max}	7185211,50	88,318%	3380,76
<i>median</i>	8397,50	11,587%	37,22
$S(x)$	436457,64	15,672%	323,88

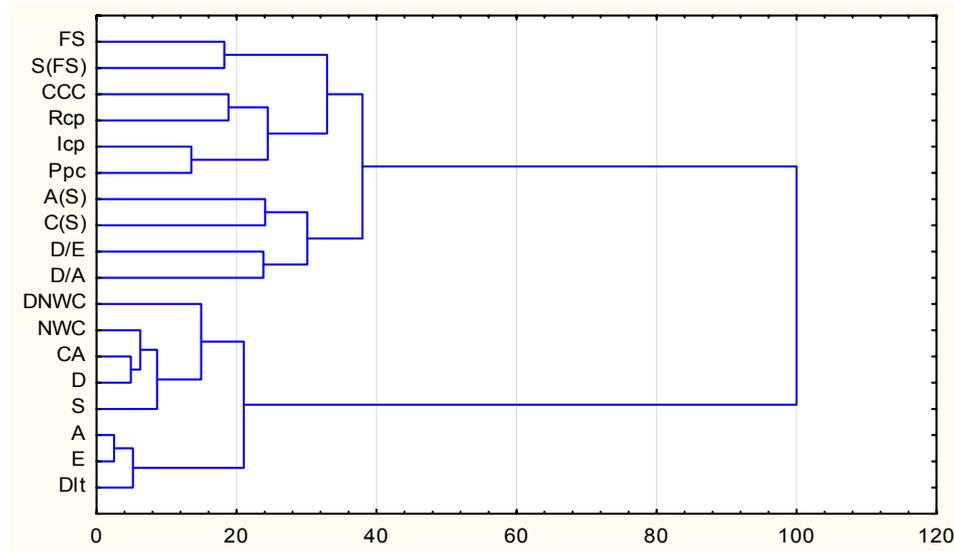
On average, Polish companies hold relatively high liquidity reserves (of c.a. 80 thousands of zł). The average share of these reserves in total assets (LR_r) is of c.a. 16,5%, and the average time-suitability (LR_t) is of c.a. 112 days. However, it should be noticed that the examined sample of Polish companies is not homogenous, as the coefficients of variation are very high (5,4752 for LR_m , 0,9474 for LR_r , and 2,8883 for LR_t). It signals that any generalizations should be driven with caution.

Identification of the aspects of net working capital management relevant for liquidity reserves

In order to identify the aspects of net working capital relevant for liquidity reserves, the analytical variables provided within conceptual framework (section 2) were tentatively clustered into two groups: balance sheet oriented and efficiency oriented. Pearson Correlation coefficients (annex 1) indicated that there is strong linear relationship between the magnitude of liquidity reserve (LR_m) and the volume of net working capital (NWC) and the elements that are included in its computation (assets (A), current assets (CA), equity (E), debt (D) and long-term debt (D_{lt})). However, the relation between LR_m and $DNWC$ is weak, which may indicate that in the examined sample of companies the impact of the efficiency oriented variables was relatively weaker as compared to the impact of balance sheet oriented variables. It should be also noticed, that there is no linear relation between LR_m and the variables reflecting core decisive areas of corporate finance within shaping assets structure ($A(S)$), capital structure ($C(S)$, D/E and D/A) or adjusting capital structure to assets structure (FS and $S(FS)$).

These findings raised a question about the legitimacy of the tentatively adopted clustering of the variables. Thus, in further analysis the cluster analysis was implemented as an exploratory data analysis convenient for identifying homogenous groups of objects, called clusters. The objects (observations) in a given cluster are similar (share many characteristics) and at the same time are very dissimilar to objects not belonging to that cluster [Romsesburg 2004, p. 10; Tan, Steinbach, Kumar 2006, p. 490; Mooi, Sarstedt 2011, p. 237]. The tree diagram (dendrogram) for all standardized variables is presented in Figure 1.

Figure 1. Tree diagram (dendrogram) for all variables, with Ward method and Euclidean distances



100*Dist/Dist.max

There are four clearly identifiable branches of variables, homogenous within a given branch and dissimilar to variables in other branches. Accordingly, the four clusters of data exist:

- Cluster 1: variables *FS*, *S(FS)* – financial-stability relevant,
- Cluster 2: variables *CCC*, *Rcp*, *Icp*, *Ppc* – conversion-cycle relevant,
- Cluster 3: variables *A(S)*, *C(S)*, *D/E*, *D/A* – assets & capital structure relevant,
- Cluster 4: variables *DNWC*, *NWC*, *CA*, *D*, *S*, *A*, *E*, *Dlt* – basic financial items relevant.

As the results of cluster analysis allowed to assume that there are four hidden factors (cluster 1, cluster 2, cluster 4 and cluster 4, as noted above), the factor analysis was additionally implemented. Factor analysis helps to identify the set of independent factors, which allow to reduce the number of variables. Table 2 presents coefficients of determination for the identified factors and the variables. Coefficients of determination indicate the scale in which a given variable constitutes a given factor. The analysis of determination coefficient confirmed that the four factors should be included in further analysis. These factors correspond with the previously identified clusters of variables:

- 1) financial stability factor,
- 2) conversion cycle factor,
- 3) assets & capital structure factor,
- 4) basic financial items factor.

Table 2. Determination coefficients

Variable/Factor	Factor 1	Factor 2	Factor 3	Factor 4
<i>FS</i>	0,01%	0,01%	55,22%	2,56%
<i>S(FS)</i>	0,04%	0,18%	69,89%	3,64%
<i>A(S)</i>	0,06%	0,00%	12,95%	19,12%
<i>C(S)</i>	0,01%	0,04%	0,07%	37,54%
<i>D/E</i>	0,01%	0,01%	0,00%	16,70%
<i>D/A</i>	0,02%	0,88%	7,62%	51,36%
<i>CCC</i>	0,01%	36,44%	33,85%	3,23%
<i>I_{cp}</i>	0,01%	70,59%	1,41%	0,17%
<i>R_{cp}</i>	0,24%	35,28%	6,66%	1,37%
<i>P_{cp}</i>	0,05%	84,24%	1,54%	0,93%
<i>DNWC</i>	59,24%	0,01%	2,21%	0,11%
<i>NWC</i>	96,05%	0,00%	0,32%	0,01%
<i>S</i>	84,30%	0,13%	0,01%	0,25%
<i>A</i>	94,27%	0,01%	0,17%	0,09%
<i>CA</i>	96,95%	0,01%	0,01%	0,10%
<i>E</i>	88,35%	0,01%	0,18%	0,31%
<i>D</i>	96,64%	0,01%	0,15%	0,02%
<i>D_{it}</i>	85,82%	0,00%	0,24%	0,07%

Table 3 presents a matrix of correlation coefficients between the three dependent variables (LR_m , LR_r and LR_t) and the identified factors. It was found that:

- the magnitude of liquidity reserve (LR_m) is strongly positively correlated to financial stability factor,
- the relevance of liquidity reserve (LR_r) is weakly positively correlated with assets & capital structure factor,
- the time-suitability of liquidity reserve (LR_t) is moderately negatively correlated with cash conversion factor.

Table 3. Matrix of correlations between factors and dependent variables

	Factor 1	Factor 2	Factor 3	Factor 4	LR_m	LR_r	LR_t
Factor 1	1,0000	0,0000	0,0000	0,0000	0,7970	-0,0873	-0,0320
Factor 2	0,0000	1,0000	0,0000	0,0000	0,0064	-0,0170	0,4210
Factor 3	0,0000	0,0000	1,0000	0,0000	-0,0530	0,3300	0,1035
Factor 4	0,0000	0,0000	0,0000	1,0000	-0,0707	-0,0150	-0,1835
LR_m	0,7970	0,0064	-0,0530	-0,0707	1,0000	-0,0239	-0,0170
LR_r	-0,0873	-0,0170	0,3300	-0,0150	-0,0239	1,0000	0,4345
LR_t	-0,0320	0,4210	0,1035	-0,1835	-0,0170	0,4345	1,0000

The conducted analysis lead to two interesting findings addressing the examined sample of companies. First, in these companies financial stability was relevant to the magnitude of liquidity reserves (as the correlation coefficient was strong). Second, in these companies the changes of assets and capital structure were influential on the relevance of liquidity reserves.

Conclusions

In many of the existing literature studies, the link between working capital management and liquidity maintenance is essential. In general, the higher the volume of working capital, the lower liquidity risk. Management of working capital addresses also the problem of the demand on net working capital which is crucial while establishing the needs for 'operating cash' in a company. This study expands these findings by including the problem of company's ability to finance the negative outcomes of risk. The proposed conceptual framework develops the concept of liquidity reserves which is useful in verifying whether a company holds cash exceeding its operating needs.

Such analysis should be applied within risk management decisions as it supports the choices of risk management tools. In particular, it helps to identify whether a company is able to use risk retention effectively. In this context, a particularly important measure included in the model is the relevance of liquidity reserves. If this relevance is low, a company technically does not possess risk retention capabilities.

The empirical study based on a sample of Polish listed companies found that the majority of the examined companies hold liquidity reserves. However, the companies significantly vary within the magnitude, relevance and time suitability of liquidity reserves, which leads to the conclusion that the decisive issues in this context are highly individual. The cluster and factor analysis was implemented to identify these aspects of working capital management which were relevant for the magnitude, relevance and time-suitability of liquidity reserves. It was found that in the examined sample of companies financial stability parameters were relevant for the magnitude of liquidity reserves, whereas the changes of assets and capital structure were influential on the relevance of liquidity reserves.

The conceptual framework proposed in this study offers a start-point for a more developed and advanced analyses which may include various analytical aspects. In general, it gives an idea on the directions of further studies addressing the relevance of chosen aspects of corporate financial management to proper implementation of risk management. In this context, this study reflects contemporary understanding of integrated risk management approach.

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