

THE ECONOMIC RECESSION AND WORKING CAPITAL MANAGEMENT OF COMPANIES IN POLAND

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Abstract

Working capital is the most liquid and dynamic component of total assets. Working capital management, as the core content of short-term corporate finance, is vital to enterprises' survival and development. This article aims to highlight the impact of the economic recession in the economy at the enterprises' working capital and strategy of its management. It is suggested that working capital requirements and liquidity needs increase for firms when the economy is in poor economic conditions or is in recession. This article focuses on the analysis of the changes in working capital management and based on financial data of companies in Poland.

Keywords: *working capital management, recession, liquidity, Poland*

1.1. INTRODUCTION

Intensity of changes occurring in the environment of modern enterprises may represent a threat for firms that function according to the patterns developed over the last decades, but at the same time it creates chances for those entities that are actively looking for a place for themselves in the new reality. In this context, we can see a growing importance of an enterprise's strategy as an instrument which makes it easier for an enterprise to function in changing conditions. Looking from the perspective of the main goal of enterprises – maximization of the value for the owners – it must be said that financial aspects are playing an increasingly important role in designing, implementing and assessing strategies of an enterprise. Thus, an integral part of the overall strategy of an enterprise should be financial strategies, formulated in different areas of financial management, including management of working capital.

Management of working capital is not only about maintaining working capital, but about creating a new value by means of the mechanism of cash flow management covering all areas of an enterprise. Knowledge of working capital management shows activity and enterprise of managers who make choices taking into account interdependence of the components of this aggregate, as the current financial situation of an enterprise can be improved in the quickest and relatively easiest way by simultaneously acting on liabilities, receivables and reserves (Komorowski 2010, p. 33).

Effective management must be based on a solid knowledge which comprises, among other things, factors determining the current state and future development. A range of external and internal factors should be taken into account when managing working capital. One of the external determinants referring to working capital and general financial liquidity of an enterprise is certainly the economic situation. The aim of this paper is thus to determine the impact of the economic situation, in particular the crisis that followed after 2008, on the level of working capital in the Polish business sector and changes in the strategy for working capital management.

1.2. LITERATURE SURVEY ON WORKING CAPITAL MANAGEMENT AND ITS DETERMINANTS

Working capital management is a relevant subject to financial managers who dedicate significant amounts of time and effort seeking an ideal balance between risk and return, profitability and liquidity, in order to create value for the company (Appuhami 2008).

Several authors emphasize that the maintenance of working capital is intended to meet the current liabilities promptly to ensure technical solvency of the firm (Kumar et al. 2000). Working capital management is sometimes equated with liquidity management, however this term is more narrow and, depending on current needs of an enterprise, is mainly concerned with acquiring or disposing of monetary means, their equivalents or other current assets (Pluta 2005, p. 4).

Working capital is generally divided into two types. Gross working capital is the total amount of funds invested in the various components of current assets such as cash, inventory, marketable securities and account receivable. Net working capital is the difference between current assets and current liabilities. This type of working capital enables a firm to determine how much amount is left for operational requirement.

Sagan (1955, p. 122) indicate that while the basic working capital ratios are important to the financial analyst or to the creditor, they are of less importance to the manager. The financial manager's responsibility to provide funds as needed and to invest funds as available require that his operations be based on cash flows and the total current asset position rather than on any of the usual working capital tests. In turn, by Filbeck et al. (2007) cash flow is the lifeblood of firms, and efficient working capital management is the key to achieving healthy cash flow. Firms with weak working capital management strategies give up flexibility and potentially a competitive advantage. Hence, the utility to management of the working capital concept lies in analysing of working capital and in interpretation of the reasons for changes in each of its component parts (Park 1951, p. 299). The working capital management should aim at having balanced, optimal proportions of the working capital management components to achieve maximum profit and cash flow.

Basically, working capital management consists of two basic ingredients:

- an overview of working capital management as a whole, i.e., given the level of working capital (liquidity), the trade off between risk and profitability,
- an efficient management of the individual current assets, such as cash, receivables and inventory.

Harris (2005) stresses, that by understanding the role and drivers of working capital management and taking steps to reach the proper levels of working capital, companies can minimize risk, effectively prepare for uncertainty and improve overall performance. Working capital is an important tool for growth and profitability for corporations. An inadequate level of working capital could lead to shortages and problems in day-today operations.

Nazir and Afza (2009) note that when the working capital requirements are not properly managed and are allocated more than required, it renders the management inefficient and reduces the benefits of short-term investments. On the other hand, if the working capital is too low, the company may miss a lot of profitable investment opportunities or suffer short-term liquidity crisis, leading to the degradation of company credit, as it cannot respond effectively to temporary capital requirements.

Archer et al. (1983) state that the basic principle in working capital management is minimization of the investment on current assets without affecting the smooth running of the organization. The rationale of this minimization principle is that this investment by itself does not generate profit, while the investment made on working capital has a cost (explicit or implicit).

According to Salawu (2007), there are two approaches to working capital management in literature: conservative and aggressive. The first approach to working capital occurs when the company finances some or all of its temporary current assets with long-term funds. This approach involves high liquidity, low profitability and low risk. An aggressive approach to WC occurs when the company finances some of its permanent current assets, along with all of its temporary current assets with short-term funds. This approach involves low liquidity, high risk and high profitability.

One of basic tools for examining the effectiveness of working capital management is cash conversion cycle (CCC), also known as net trade cycle (NTC). It measures how long a firm will be deprived of cash if it increases its investment in resources in order to expand customer sales. This indicator is calculated (in this article) using the following formula: (inventory + accounts receivable - accounts

payable) *365/sales (Richards and Laughlin, 1972; Hyun-Han and Soenen, 1998).

Several authors (Baños-Caballero, 2010; Petersen and Rajan 1997) point out that longer CCC may increase the firm's sales and, consequently, their profitability, because of greater investment in inventories and trade credit granted. In addition, companies may get important discount for early payments if they reduce their supplier financing. It is pointed out that a long CCC reduces business risk, i.e. larger inventories can prevent interruptions in the production process and loss of business because of the scarcity of products, can reduce supply costs and price fluctuations (Blinder and Maccini 1991). However, companies with higher growth options might have smaller CCC. According to Cuñat (2007), high growth firms tend to use more trade credit as a source of financing for their growth, because they have more difficulty in accessing other forms of finance.

One of most studied dependences in the literature is the impact of CCC on an enterprise's profitability. For example, in the studies conducted by Shin and Soenen (1998) or Deloof (2003) it was concluded that there is a negative relationship between profitability of a firm and cash conversion cycle. Thus, it is possible to increase firm profitability through more efficient working capital management.

The level of working capital in an enterprise, as well as effectiveness of its management are determined by a number of factors. The lack of understanding about its impact on profitability, the lack of clarity about its key factors, the lack of management ability to plan and control working capital components may lead to insolvency and bankruptcy. Smith (1973) suggested that many businesses have failed due to the inability of financial managers to plan and control current assets and current liabilities in their companies. This is confirmed in small and medium-sized enterprises in research conducted by Gorzeń-Mitka (2012). The study focused on an analysis of activities in the field of risk management including risk identification, analysis and response to risks (including financial area) in the organization.

In literature review, first we can note that many internal as well as external factors can influence corporate decisions relating to the optimal level of current assets and current liabilities (Vicente and Toshiro 2012). According to Jeng-Ren et al. (2006), factors affecting the management of working capital can be roughly divided into interior and exterior types. Some companies can only adjust operation strategy according to business indicator, an exterior factor indicating general economic performance.

In turn, Aravindan and Ramanathan (2013) specify factors determining the working capital requirements:

- nature of business,
- size of the business,
- production policy,
- length of production cycle,
- seasonal variations,
- working capital cycle,
- rate of stock turnover,
- credit policy,
- business cycle
- rate of growth of business,
- earning capacity and dividend policy,
- price level changes.

Poirters (2004) cites that three factors drive working capital performance, i.e., external, strategic and operational factors. External factors have to do with the state of the economy, the type of market the

firm operates in, legislative and regulatory issues. Strategic factors refer to corporate strategies that influence working capital investment. These include customer relations, supply chain management and more in general the product/market mix of the company. Finally, the operational factors are all the processes, systems and people that directly belong to the company.

Elaborating on the subject of external factors of maintaining financial liquidity, Wojciechowska (2001) identifies the following elements:

- prices of sale of products or services delivered by an entity analyzed and prices of production factors,
- tax rates decreasing sales revenues,
- rates of wages and salaries, and cash benefits and benefits in kind connected with employment of non-family workers
- rates of taxes and charges classified as production costs and decreasing financial results of economic entities
- interest rates of bank credits and debt securities.

Today, the external factor determining the functioning of enterprises is technology. Maxwell et al. (1998) stresses, that technology also has played a central role in short-term financial management with its ability to seamlessly transfer various sums of money denominated in any desired currency to any country in the world. Advanced information and communication technologies in enterprises and banks servicing enterprises ensure growing influence on the ability to improve management of an enterprise and create competitive advantage (Okreglicka 2013).

Several authors emphasize that the working capital management practices are also related to the industry. The different industries are following different working capital requirements and within each sector they change over time (Nazir and Afza 2009; Filbeck and Krueger 2005). Broadly, Appuhami (2008) points that industry characteristics, firm-specific characteristics, and the financial environment are recognized as determining factors of working capital.

The human factor is another important consideration. According to Harris (2005), if management is focused purely on top-line growth, insufficient attention may be applied to cash flow management and forecasting.

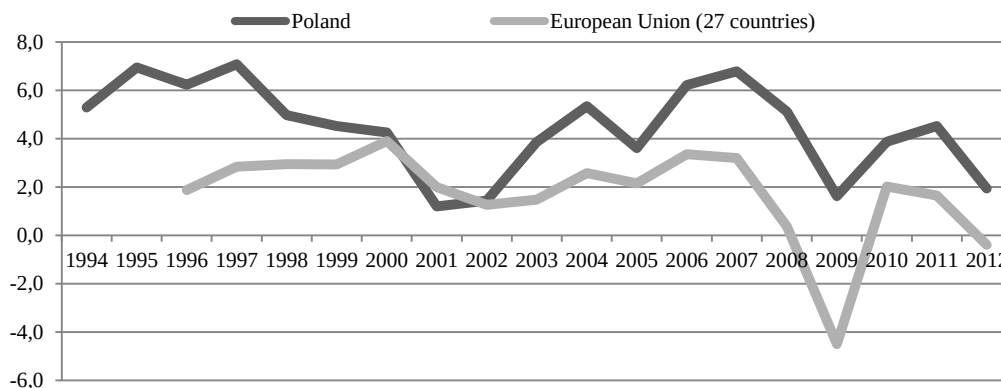
The balance-of-payment situation of an enterprise is also impacted by the economic situation and investment policy. The state's favorable investment policy encourages companies to invest, however investment expenditures often represent a significant financial burden for enterprises. This is usually accompanied by a longer period of freezing funds and waiting for the first financial benefits, which often has an adverse effect on current operations (Kusak 2006, p. 25). On the other hand, economic upturn is connected with more financial resources available to an enterprise, which makes management of current finances less restrictive.

1.3. MACROECONOMIC SITUATION IN POLAND AND CONDITION OF THE BUSINESS SECTOR

One of the main indicators of a country's macroeconomic situation is GDP (Gross Domestic Product). Annual changes in GDP allow us to compare the economic situation of a particular country with other countries in the region or the world. As Fig. 1 shows, the period of economic downturn in Poland was between 2000 and 2002 and, like in the entire European Union, after 2008, when we saw a clear deterioration in macroeconomic indicators as a result of the financial crisis which had originated in the USA. However, while in most EU countries the annual changes in GDP displayed negative values, in Poland GDP still grew, with the lowest value in that period being +1.6% in 2009. Thus, it is more appropriate to say that Poland experienced economic downturn rather than a real crisis. However,

given that over the last two decades GDP increases in Poland were at significantly higher levels than the EU average, such GDP growth, though positive, is not satisfactory.

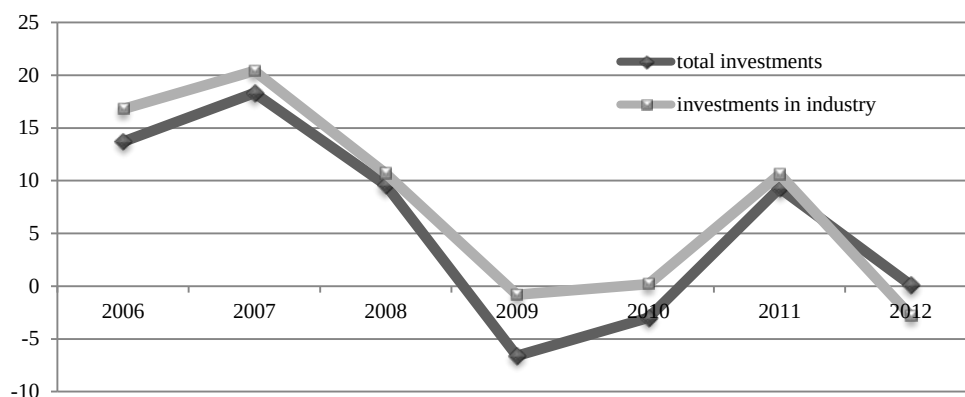
Figure 1. GDP, volume – annual growth rates in percentage in Poland and EU



Source: OECD

Another value which represents one of the elements impacting the economic situation are investment, in particular investments made by enterprises. Decrease in the overall level of investments is a direct sign of forthcoming economic recession. Analysis of investments in the Polish economy in recent years (Fig. 2) shows visible declines in the years 2009-2010 and in 2012. This clearly indicated a relatively unfavorable economic situation. At the same time the forecast of the Ministry of Economy in Poland for 2013 does not indicate any improvement either in the dynamics of investment growth or in GDP. Thus, after a slight improvement in 2011 we can talk about the second wave of crisis, though of relatively weak strength.

Figure 2. Investments, volume – annual growth rates in percentage in Poland

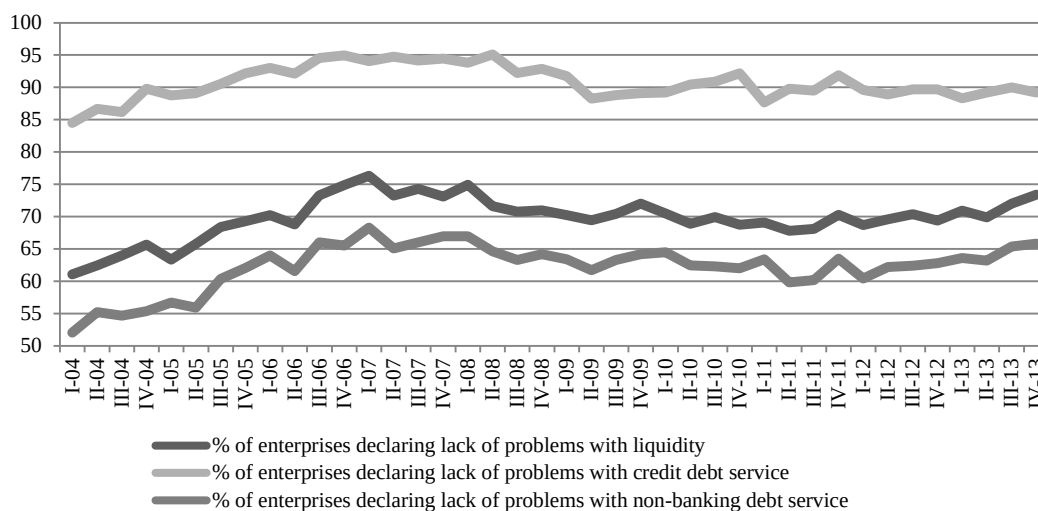


Source: Central Statistical Office in Poland

Maintaining financial liquidity is a priority task of every entrepreneur. Enterprises in Poland clearly indicate problems of lack of liquidity. As data from Fig. 3 shows, liquidity problems grow in periods of economic decline. During a crisis, the percentage of enterprises that suffer from lack of working capital increases even by around 10%. Entrepreneurs relatively best service bank debt – over 90% of Polish enterprises do not indicate problems with settling credit installments. It is much worse with the servicing of non-banking debt, in particular goods and services delivery debt. Only 60-65% of

enterprises are able to settle such debt without difficulty. Among the reasons for such a situation are not only economic factors, but also legal ones, and even an economic practice of deliberately suspending payments as enterprises are not concerned about possible restrictions applied by the creditor.

Figure 3. Problems with liquidity in Polish enterprises in percentage



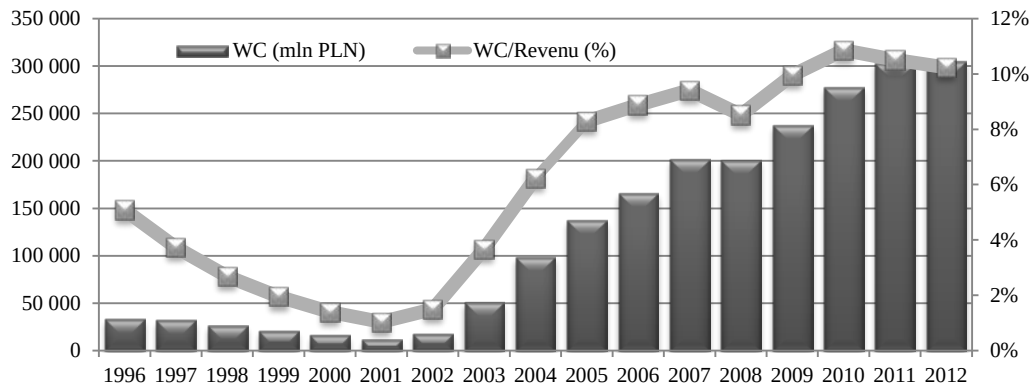
Source: The National Bank of Poland

Although the values characterising the economic situation are very complex, determined by various factors, and it's hard to find and fully confirm a permanent statistical dependence between them and the values characterising a specific situation in the business sector, analysis of statistical data covering a number of years certainly shows some general regularities.

1.4. CHANGES IN WORKING CAPITAL AND FINANCIAL LIQUIDITY OF ENTERPRISES IN A CHANGEABLE ECONOMIC SITUATION

There is a long-term growth in the level of working capital of Polish enterprises. Significant increments are visible especially after 2002 (Fig. 4). Analysis of the dynamics of working capital changes shows a slowdown in the early phase of the economic decline. However, the WC/revenues ratio which indicates effectiveness of working capital management shows that it improves (decrease of the indicator) slightly in unfavourable periods, which means that in difficult conditions entrepreneurs pay more attention to effective management of current operations.

Figure 4. Working capital (WC), volume – annual total growth in mln PLN in enterprises in Poland and WC/Revenue ratio in percentage

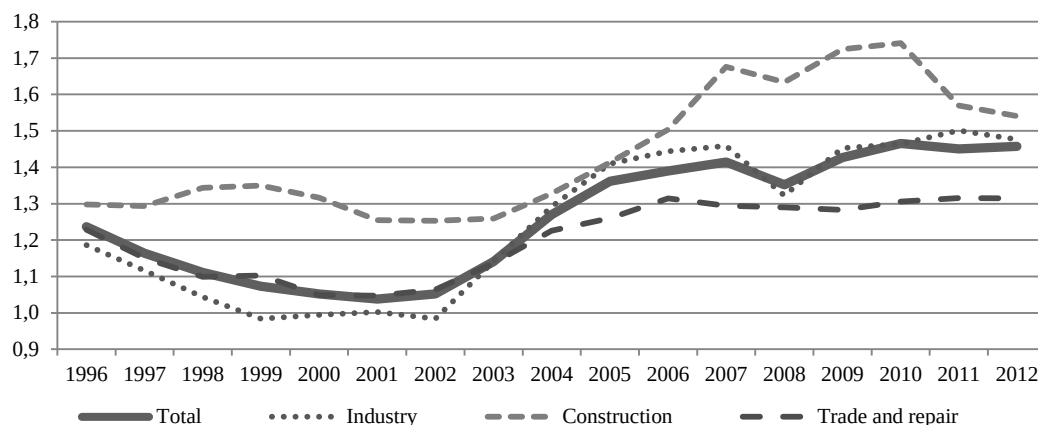


Source: Central Statistical Office in Poland

Current liquidity ratio is a basic measurement indicating current solvency of enterprises. It is assumed that its minimal limit value should be 1.5. From this perspective, we can say that the business sector in Poland is characterized by too low liquidity (Fig. 5). However, the long-term trend shows gradual increase in liquidity in the business sector, although clear differences are visible in the individual sectors of the economy. We can also see slightly deteriorating levels of current ratio in the periods of worse economic situation.

Growing current liquidity and gradually increasing share of fixed capital in financing current assets (from 2% in 2001 to 17% in 2012) shows that Polish enterprises are gradually resigning from a highly aggressive strategy of managing net working capital, which largely results from objective causes, such as: small amount of working capital and non-accessibility of long-term financing. The current strategy of WC management can be basically described as almost moderate.

Figure 5. Current ratio in enterprises in Poland

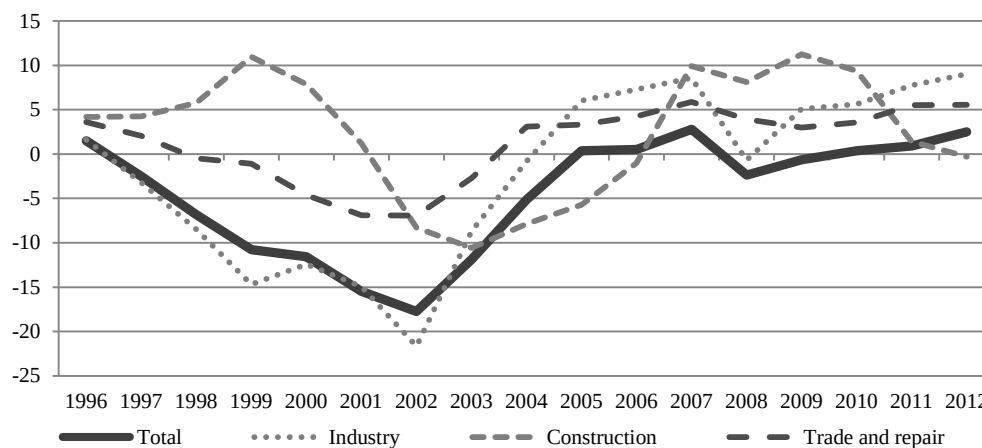


Source: Central Statistical Office in Poland

Another element in the area of working capital that needs to be analyzed is cash conversion cycle (CCC). Its value provides information about for how many days an enterprise must finance current assets using external funds other than short-term liabilities. Thus, a low level of CCC is advantageous for a company which does not incur additional costs of financing current operations. The average CCC for the business sector in Poland shows that in recent years CCC has displayed low positive values (maximally 2.8 in 2007), whereas before 2005 CCC had been displaying high negative values for a

number of years (Fig. 6). This also is a negative phenomenon, showing difficulties in the access to long-term financing, which certainly has a negative impact on the level of turnover. Additionally, such capital structure suggests ineffective long-term management, as cash liquidity is at a too high level, which generates alternative costs.

Figure 6. Cash conversion cycle of enterprises in Poland



Source: Central Statistical Office in Poland

Although macroeconomic aggregates are complex and it is difficult to determine whether statistical dependences between them and a specific macroeconomic value have a permanent character, the paper attempts to indicate areas of strong correlation.

Based on Pearson's linear correlation coefficient, a strong positive dependence was observed between the level of working capital and GDP values in current prices (Table 1). The examination period covers the years 1996-2012. Correlation appears in the majority of the economic sectors examined, with no statistically relevant dependence found in 2 sectors (hotels and restaurants; real estate, renting and business activities). Similar distribution of dependences was observed when comparing the level of working capital and investment expenditure. Here too, there is a strong positive dependence in four sectors, but in the remaining two the dependence is weak.

Table 1. Working capital in Polish enterprises and macroeconomic values - Pearson correlation – annual value - 1996-2012

	Total	Industry	Construction	Trade and repair	Transport, storage and communication	Hotels and restaurants	Real estate, renting and business activities
	Working capital						
GDP current prices	0,95	0,93	0,93	0,95	0,69	0,21	0,27
Total investments	0,91	0,88	0,95	0,91	0,68	0,25	0,29
	Working capital/revenue						
GDP current prices	0,84	0,81	0,92	0,77	0,58	0,14	0,62
Total investments	0,77	0,72	0,92	0,70	0,55	0,18	0,61

Source: own calculations based on data of Central Statistical Office in Poland

To confirm that the level of net working capital depends on GDP and investments, the value of linear correlation was calculated also with the reference to the WC/Revenue coefficient which indicates productivity of working capital. Statistically relevant dependences were found in 5 out of 6 presented sectors, both with reference to GDP and investments.

1.5. CONCLUSION

The world in which real firms function is not perfect. It is characterized by the firm's considerable uncertainty regarding the demand, market price, quality, and many other factors. Information is costly to obtain, and the firm is faced with limits on the productions capacity and technology that it can employ (Scherr 1988, p. 3). Similar uncertainty can be seen in the macroeconomic environment, which the financial crisis after 2008 clearly proved. It is necessary for enterprises to deal with the new economic reality and to develop new methods and forms of management.

Decisions concerning net working capital impact the risk of an enterprise operation. This risk involves shutting down production or sales processes or inability to repay liabilities based on the most liquid assets. Thus, it is important that financial managers have possibly most extensive knowledge of both the tools for effective management of working capital and internal and external factors which affect demand for net working capital and determine management of WC and financial liquidity of an enterprise.

Literature of the subject emphasises variety of factors referring to working capital and a firm's liquidity. Part of them are macroeconomic factors which are connected with the economic situation in a given period. Economic recovery is a period of growing turnovers of companies, increasing investments and easier access to sources of financing. Expected sales growth usually requires appropriate increase in operating current assets. This is possible by obtaining long-term interest financing.

Whereas, as shown by Tăgăduan (2011), in conditions of economic crisis, the policy of the working capital should be adapted to new requirements. This way the whole strategy of financing the operating

cycle should be modified in the sense of increasing the share of financing on the basis of the working capital towards the policy adopted during favorable economic conditions, when the accent is mainly on financing mostly from attracted sources.

There is, thus, no doubt that macroeconomic environment has an impact on an enterprise's finances. However, the direction and strength of this impact should be analyzed and assessed on a continuous basis so that managers could take into account the risk of the impact of the environment when managing finances, including working capital management.

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