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ECONOMIC VALIDATION OF EFFICIENT MODEL FOR FINANCING OF CURRENT CAPITAL AT UKRAINIAN INDUSTRIAL ENTERPRISES

The article analyzes the main strategies of formation and using of enterprises' current assets. The types of current assets management policy of industrial enterprises in Ukraine are grounded. The actual type of the policy of current assets management at Ukrainian industry in 2015 is determined.

Keywords: *current capital; strategy of current assets funding; net current capital; variable component of current assets; constant component of current assets.*

Introduction. Socio-economic changes in the national economy of Ukraine have a significant impact on economic activities of enterprises. In particular, the lack of current capital, low turnover of current assets and the lack of liquidity are very relevant issues for many companies. Therefore, the balance of current capital is a prerequisite for sustainable development of enterprises and improves economic situation in Ukraine.

The research of features of current capital formation at Ukrainian industrial companies deserves for special attention because of its significant economic contribution. According to 2015, 37,2 % of GDP was created by enterprises of industrial sector; 29,6 % of the employee works in the industry [1]. However, today many Ukrainian industrial enterprises are faced with different financial and industrial problems. In particular, at the first half of 2016 36,5 % of industrial enterprises were unprofitable [1]. That was caused by: the lack of current assets of enterprises; difficulties with ensuring the continuity of supply, production and sales of manufactured products. The strategy and tactics of overcoming the crisis and ensuring financial recovery of companies include methods of forming effective management of current assets. The aim of this procedure is to choose the optimal ratio between risk investments in current assets and the return on them in the form of growing the turnover and profits from investments. Therefore, the identification of appropriate sources of current assets and compliance with certain proportions of their use will contribute to solve financial problems and reach economic efficiency of industrial enterprises.

Analysis of the recent research and publications, unresolved problems. The task of effective management by current assets is the subject of many scientific researches [2-11]. Scientists in their developments have made economic justification of the nature and characteristics of current assets formation at enterprises. However, the formation and funding of current assets and industrial development management policy require more detailed investigation.

The purpose of the study is to determine an effective economic model of financing current capital at Ukrainian industrial companies.

The main research results. Current assets of a company are formed by equity, equated to own resources financing (payables, steel liabilities, earmarking) and debt capital. The choice of sources for current assets financing affects the speed of their rotation and efficiency of enterprises' current capital. Therefore, the identification of sources of current capital at the enterprise is an important component of effective financial management. All sources of current assets are characterized by both positive and negative characteristics, which are determined by different impact of own and borrowed resources on the results of enterprises' activity (Tab. 1).

The companies which use borrowed resources, have more financial opportunities for further development due to additional generated assets. However, bank credit is the main component of borrowed funds for enterprises. But during financial crisis and instability, which negatively affects on the economy, enterprises in which the essential part of the capital is formed by own resources are more financially stable. However, such enterprises limit their pace of development, because they are not able to ensure the formation of the optimal level of current capital and additional value of assets in establishing favorable market conditions.

The growing of debt burden of enterprises and falling of consumers' demand increase the likelihood of rise of non-liquid goods in balances which actually "freeze" current capital in stocks. However, there is no sufficient amount of highly liquid current assets at companies (including cash) that during the crisis of bank liquidity and worsening the credit conditions can lead to significant loss of capital of a company or bankruptcy. The devaluation of the national currency is another problem arising in the formation of current capital by borrowed sources. This can lead to the bankruptcy of companies that have received loans in foreign currency.

Table 1

Advantages and disadvantages of equity and debt for a company

№	Using of equity	
	Advantages	Disadvantages
1.	the process of attracting the equity is easier compared to borrowing because for rising of the capital there is no need for owners and managers of consent of other entities;	significant number of ways to attract additional resources is limited. It means the lack of ability of significant expansion of operating and investing activities during favorable market conditions;
2.	provides the higher ability to create profits, because for its using it is not required to support pay interest on loans;	high cost compared to alternatives fundraising (for example, commercial credit);
3.	provides financial stability and solvency of a company for a long term and, therefore, reduces the probability of bankruptcy.	inability to increase the return on equity due to the effect of financial leverage.
№	Using of debt	
	Advantages	Disadvantages
1.	providing the increase of financial capacity of a company as needed to substantially increase its assets and grow its economic activity;	reducing the rate of return on assets on interest paid by loan;
2.	the capacity expansion of a company is faster;	high dependence of the cost of debt from changes at financial market;
3.	reduction of the tax base and therefore government revenues (interest on loans are referred to gross expenses, which reduce the amount of profit before tax);	the reducing of financial stability and increasing of risk probability of bankruptcy;
4.	the opportunity to increase financial return on assets due to the effect of financial leverage;	the complexity of the procedure of resources attraction in large quantities and for a long period of time.
5.	increasing the return on equity through the implementation of expanded reproduction of production.	

Source: built by the author

The choice of sources of current assets determines the optimal balance between the level of resource efficiency, on the one hand, and reducing of the risk of financial stability and solvency, on the other hand. Considering these factors the policy of current capital management is determined [2, p. 123]. Comprehensive management policy is to provide the required level and rational structure of current assets, on the one hand, and the calculation of the amount and structure of sources of current assets financing, on the other hand. There are different financing strategies of current assets in the theory of financial management. The choice of any strategy depends on the selected size of net current capital by financial manager. There are three most generalized models of finance management of current capital, such as: aggressive, conservative and compromise ones [3].

Using a conservative strategy of financing, constant component of current assets (the amount of assets necessary to ensure the minimal economic need of these) and a part of variable component of current assets are formed by long-term loans and growth of company's payable. Companies involve just a little amount of planned short-term loans and at the period of time when the need of current capital is the highest. This strategy provides a high level of financial stability of an enterprise, but reduces the return on equity.

The compromise approach of financing provides the funding of constant component of current assets by using equity and long-term loans, and the variable part – by using the short-term loans. This provides the optimal level of financial the stability and return on equity of the company.

The financing of fixed assets and a part of constant component of current assets by using long-term loans and other assets – by attracting short-term loans and payables of the company – indicates about using an aggressive strategy of current assets financing (Fig. 1). The limit of attraction of long-term loans can fall below the amount of fixed assets. This trend demonstrates that some part of fixed assets is formed by the attraction of short-term loans and payables. Such policy is highly risky, but this provides a high return on equity [6, p. 41-43; 7, p. 107; 8, p. 122; 9, p. 60; 10].

The composition of current assets of the company	The conservative model	The compromise model	The aggressive model
The variable component of current assets	Short-term loan capital	Short-term loan capital	Short-term loan capital
The constant component of current assets	Long-term loan capital + Own capital	Long-term loan capital + Own capital	Long-term loan capital + Own capital

Fig. 1. The approaches to current assets financing*

*Based on data [4, p. 258; 5, p. 181]

The chosen policy of current assets financing should provide the forming of the necessary for production amount of assets. However, it is necessary to form the structure of own and borrowed resources that will provide the appropriate level of liquidity and financial stability of a company. To determine the amount of financial resources for the formation of current assets it is useful to implement the next three stages.

The first one is to determine the principles of current assets financing. At this stage the type of policy of current assets formation is determined. The general conception of financial management policy considering the allowable ratio of profitability and financial viability of a company is displayed.

Secondly, the specific structure of the sources of current assets financing based on previously defined principles of financing is developed. However, it is necessary to take into account the duration of financial cycle stages and evaluate the costs of various sources of capital raising.

Thirdly, methodical approach of current capital financing by using analytical indicators is formed.

The decrease of gross capital formation can be caused by the deficit of own resources for financing the current assets, the net capital outflow and the high costs of attracting additional funds by using loans. So, the formation of economic mechanism of management by the formation and using of current assets in terms of its deficiency is an important prerequisite for providing the effective operation of a company. For implementation this mechanism of current capital management it is necessary to implement the following events, such as:

- analysis of the efficiency of formation and using of current assets and finding the reserves to increase the effectiveness of its management;
- construction of the system of current assets management at strategic, current and operational levels;
- implementation of an effective mechanism of current assets management of enterprises considering their deficit by using a prediction of changes of current capital trends, by evaluating the effectiveness of inventory management, by its normalization in terms of the deficit;
- implementation of effective policy of management by accounts receivable and adjustment of the process of payments to suppliers;
- control and monitoring of the efficiency of current capital management [4, p. 259].

Depending on financial strategy and policy of a company the choice of sources of funding and formation of current assets are made. This affects the efficiency of current assets using, the level of risk, financial stability and solvency. The using of different sources of financial resources formation contributes to make the investment in new production in time, to provide the expansion and technical upgrading of existing fixed assets at enterprises, to finance the scientific researches, their development and implementation. In the conditions of the crisis for building an effective system of current capital formation at enterprises it is useful to: plan the amount of current assets by identifying the need for some of their elements; prove the policy of current capital financing for ensuring the effective turnover of goods at a company; make optimization of the structure of own and borrowed sources of current assets financing according to determined financial strategy of a company; implement the effective credit and investment policies.

The choice of specific financing policy depends on determining the amount of long-term liabilities and net current capital as the difference between long-term liabilities and non-current assets. The level of liquidity and efficiency of the existing current assets depends on the size of net current capital, which shows how

much current assets are covered by long-term sources of funding. Since short-term liabilities usually are not directed to cover non-current assets, the value of net current capital is in the range from zero to a certain maximum value. The increase of the amount of net current capital reduces liquidity risk of a company [11].

The actual type of policy of financing the current assets at Ukrainian industrial enterprises at 2015 was determined by using the industry statistics at 2013–2015. To determine the minimum amount of resources required for financing the assets of industrial enterprises, net current capital for different strategies of current capital formation was calculated. For analysis there was used the information of Ukrainian enterprises which provide their activity at extractive (extraction of raw materials from the bowels of the Earth) and manufacturing (heavy, light and food industry) sectors of economy. The results are presented in Tab. 2.

Table 2

Initial data for calculating Ukrainian industrial enterprises' needs of net current capital, mln UAH*

Year	Current assets	Non-current assets	Total assets	The minimum requirement for sources
2013	755927,1	953183	1709110	1709109,6
2014	942236,5	1068053	2010290	1709109,6
2015	1075532,7	1106905	2182437	1709109,6

*Based on data [1]

According to Tab. 1 it is possible to summarize:

- the minimum required amount of current capital is 755927,1 mln UAH;
- the minimum requirement for sources is 1709110 mln UAH at 2013, the maximum – 2182437 mln UAH at 2015;
- the average value of non-current assets is 1042713 mln UAH.

The definition of constant and variable parts of current assets at Ukrainian industrial enterprises for 2013-2015 is given in Tab. 3.

Table 3

The dynamics of current assets of Ukrainian industrial enterprises for 2013-2015, mln UAH*

Indicator	2013	2014	2015	The relative growth, %	
				2014/2013	2015/2014
Current assets	755927,1	942236,5	1075533	24,65	14,15
Constant part of current assets	755927,1	755927,1	755927,1	-	-
Specific weight, %	100	80,23	70,28	-19,77	-12,39
Variable parts of current assets	0	186309,4	319605,6	-	71,55
Specific weight, %	0	19,77	29,72	-	50,29

*Based on data [1]

The constant part of current assets is a minimum amount of circulating current assets necessary for the production process and is 755927,1 mln UAH. The variable part of current assets reflects additional current capital (safety stock) and varies each year. There is a tendency of increase of the variable part for 2015 on 50,29 % compared to the previous year. This can be explained by the growth of unfinished production due to the slowdown of turnover, that leads to long-term freezing of current capital, the lack of cash, needs to attract loans, the increase in accounts payable and, consequently, causes a decline in production and reduce of solvency of companies. According to the above methods there is a calculation of average net current capital of Ukrainian industrial enterprises for different financial strategies for 2013–2015.

According to the aggressive strategy the amount of long-term liabilities is minimal and is 1709110 mln UAH (Tab. 2). The amount of net current capital is 666397 mln UAH (1709110 mln UAH – 1042713 mln UAH). According to the conservative strategy the amount of long-term liabilities is maximum and is 2182437 mln UAH (Tab. 2). The amount of net current capital is 1139724 mln UAH (2182437 mln UAH – 1042713 mln UAH). According to the compromise strategy the amount of long-term liabilities is 2135916,8 mln UAH (1042713 mln UAH + 755927,1 mln UAH + (0 mln UAH + 186309,4 mln UAH + 319605,6 mln UAH)/3×2). The amount of net current capital is 1093203,8 mln UAH (2135916,8 mln UAH – 1042713 mln UAH).

Net current capital at industrial enterprises by the end of 2015 is 82734 mln UAH [1]. The calculation results are shown in Fig. 2.

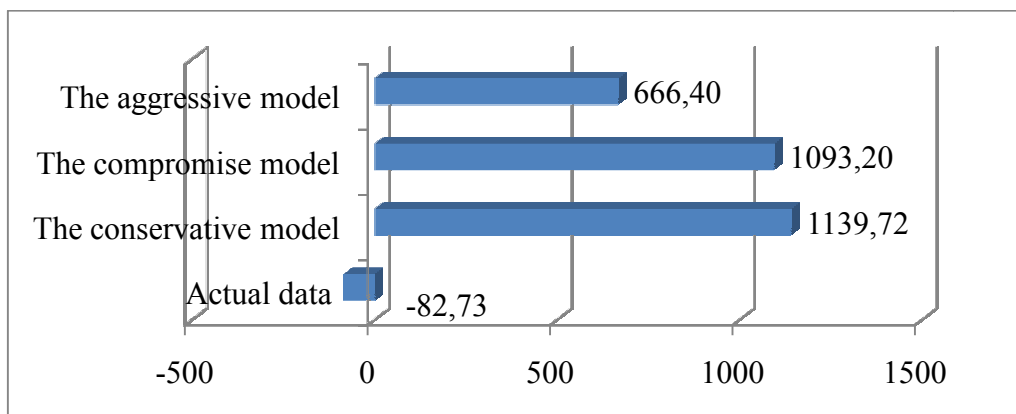


Fig. 2. The value of net current capital due to different strategies of current assets financing, bln UAH., authors'

The result of the analysis is that the actual value of net current capital of industrial enterprises in 2015 describes the most risky strategy of aggressive current capital. This policy creates a threat of the loss of liquidity and solvency at industrial companies. The negative value of net current capital is caused by essential part of current liabilities in the capital structure of many companies (including payables). Operating profitability of industrial companies reduces due to accelerated growth rates of production costs above the level of price increases. As a result, the shortage of liquidity resources makes it difficult to pay contractors.

Thus, the profitability of current activity of industrial enterprises in 2015 amounted to 0,9 %, which is less than in 2013 by 2,1 pp.: in particular, operating profitability of chemical products amounted to -14,9 % (-8,2 % in 2013), mechanical engineering – 3,4 % (6,6 % in 2013), production of electrical equipment – 1,5 % (8,2 % in 2013) [1]. This trend is caused by the rise of input prices, currency devaluation, high energy consumption of domestic industry and, consequently, their low competitiveness.

However, official statistics may be different from the real one because of the existence of shadow economy. In particular, the level of shadow economy in 2015 in mining industry amounted to 56 % of GDP and 46 % at manufacturing. Such high level of shadow activity is caused by losses of enterprises in their positions at key exports commodity markets due to falling of world prices; rising of production costs due to hryvnia devaluation; the growth of rates of electricity and gas for industrial customers; rising of tax burden (introduction of additional import duty and increase of rent for using the subsoil for extraction of natural gas) [12, p. 9].

Conclusion. This study describes the types of current assets management policy and analyses the components of each of these strategies based on scientific works of leading domestic and foreign scientists. Choosing the type of policy formation and using current assets depends on the specifics of the company, including the composition and structure of available current assets, financial capital structure, operational and financial cycles of an enterprise. In its turn, it creates some difficulties of the process of selecting management policy of current capital at Ukrainian industrial enterprises, due to the difficulty of forming evaluation criteria of financial and economic activity of the industry.

After analyzing the structure of industrial property sector of Ukraine, it can be concluded that industrial enterprises have typical compliance aggressive policy of current assets formation (net current capital is negative). This is accompanied by the presence of a high level of risk of the loss of solvency and financial stability, which has a negative impact on the overall efficiency of economic activities at industrial sector. Therefore, the formation of complex science-based management by current capital; finding of the ways to increase the competitiveness of domestic industrial products; the reduction of shadow economy level are the prospect of further research.

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**ЕКОНОМІЧНЕ ОБҐРУНТУВАННЯ ДОЦІЛЬНОЇ МОДЕЛІ ФІНАНСУВАННЯ
ОБОРОТНОГО КАПІТАЛУ ПРОМИСЛОВИХ ПІДПРИЄМСТВ УКРАЇНИ**

У статті проаналізовано основні стратегії формування та використання оборотних активів підприємств. Обґрунтовано типи політики управління оборотними активами промислових підприємств України. Визначено фактичний тип політики управління оборотними активами підприємств галузі промисловості за 2015 рік.

Ключові слова: оборотний капітал; стратегія фінансування оборотних активів; чистий оборотний капітал; змінна складова оборотних активів; постійна складова оборотних активів.