“The peculiarities of working capital management at agroindustrial enterprises of Ukraine”

AUTHORS	Ruslan Mann https://orcid.org/0000-0003-3936-2677 Victor Martinovich Oksana Yakusheva

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Ruslan Mann (Ukraine), **Victor Martinovich** (Ukraine), **Oksana Yakusheva** (Ukraine)

THE PECULIARITIES OF WORKING CAPITAL MANAGEMENT AT AGROINDUSTRIAL ENTERPRISES OF UKRAINE

Abstract

Achieving the balance in the formation of working capital is a prerequisite for stable development of enterprises and improvement of the economic situation in Ukraine as a whole that is especially relevant during the period of socio-economic crisis. The study of working capital management peculiarities of agricultural enterprises deserves special attention, since their contribution to the national economy is significant.

The purpose of the article is to investigate methods of assessing the efficiency of formation of enterprises working capital and prospects for its application to characterize the current state of domestic agricultural enterprises activity. The object of the research is determining the actual model of working capital financing at Ukrainian agricultural enterprises.

In the article, the efficiency of formation and use of working capital in Ukrainian agricultural sector is analyzed. The actual model of working capital financing of enterprises in this sector is determined. It is typical for this sphere to adhere the aggressive policy of current assets formation, which increases the risk of loss of the solvency and financial stability. Optimization of sources of working capital financing at domestic agricultural enterprises will increase the volume of economic activity financing and improve the enterprises liquidity.

Keywords working capital, strategy of current assets financing, net working capital, variable component of current assets, constant component of current assets

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Ruslan Mann, Doctor of Economics, Associate Professor, Cherkasy State Technological University, Ukraine.

Victor Martinovich, Ph.D. in Economics, Senior Lecturer, Cherkasy State Technological University, Ukraine.

Oksana Yakusheva, Ph.D. in Economics, Lecturer, Cherkasy State Technological University, Ukraine.

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INTRODUCTION

Current assets is one of the components of the property of an enterprise, the state and efficiency of which directly affect the efficiency of its operation.

In terms of socio-economic changes in the national economy, the issue of lack of own working capital, low turnover of current assets and insufficient liquidity are relevant for many enterprises.

At the present stage of economic development, most agricultural enterprises are acutely having a deficit of current assets. The main reason for this phenomenon was the lack of their effective management at enterprises.

Therefore, achieving a balance in working capital formation is a prerequisite for stable development of enterprises and improvement of the economic situation in Ukraine as a whole. The particular attention should be paid to the study of the peculiarities of the working capital

formation at the agricultural enterprises of Ukraine, as their contribution to the economy is significant: manufacturing of about 12% of GDP and employment of about 18% of the population (State Statistics Service of Ukraine, 2017).

However, today many Ukrainian agricultural enterprises face problems of financial and production nature, which is accompanied by the emergence of crisis phenomena. Thus, as of the end of September 2017, 9.9% of agricultural enterprises have a loss (State Statistics Service of Ukraine, 2017). The reasons are as follows: the enterprises have a lack of current assets; the presence of significant imbalances in the sources of their funding; difficulties in maintaining the continuity of the supply processes, production and sales of manufactured products, which reduce the solvency and financial stability of enterprises. The strategy and tactics of combating crises and providing financial rehabilitation of enterprises include the formation of methods for efficient working capital management, which is in a choice of the optimal ratio between the risk of investing in current assets and the return on them as turnover growth and return on investment.

1. LITERATURE REVIEW

Methodological and theoretical aspects of working capital management of enterprises are the subject of research by many scientists, such as: Vlasova (2014), Diadiuk (2013), Mykhailova and Romaniuk (2009), Iermak (2011), Kalmakova (2010). The abovementioned researchers conducted the studies on the features of working capital management at agricultural enterprises.

The study of the methods for assessing the efficiency of current assets management and optimizing the structure of the formation of the corresponding capital was conducted by Zubkov (2012), Dudukalo (2012), Deineka and Yurchenko (2012), Selezen (2014). In particular, Deineka, Yurchenko, and Selezen undertook a study about the sources of working capital formation of enterprises and its structure optimization.

The importance of efficient working capital management in enhancing the operational efficiency of enterprises and their ultimate profitability is the subject of research by Kasozi (2017). The author has researched an example of manufacturing firms on the Johannesburg Stock Exchange (JSE).

Lin, Horng, and Chou (2016) (WCM) studied the impact of working capital management on the profitability and operating performance of companies.

Sefideh and Asgari (2016) studied the impact of working capital policy on risk management in the companies listed on Tehran Stock Exchange. In the authours' opinion, the management of resources and current expenditures, working capital management is to maximize shareholder wealth as part of the task of financial management.

Working capital plays a vital role in shareholders' wealth creation, yet there is a dearth of empirical studies on the relationship between working capital management and firm value in the economic environment. The study by Oseifuah and Gyekye (2017) attempts to fill in this gap.

The issues related to the peculiarities of the forming and financing the working capital of agricultural enterprises, as well as the development of policies for managing them, remain insufficiently studied.

According to theoretical and practical studies, insufficient attention was paid to the issues of current assets managing at enterprises under the changing market conditions of the economy, which complicates the observance of the basic methodological principles of their analytical assessment, distorts information about the financial standing of the enterprise, the state of payments, and the reducing the effectiveness of the managerial decisions adoption.

Issues of current assets management at enterprises are debatable, which evidenced by the problems associated with the discrepancy of concepts of their economic content; the classification of current assets as a set of features needs to be improved

to strengthen control functions of management. That's why there is a need to improve the analysis methodology to increase efficient use of current assets and their components.

Of particular relevance is the problem of further improvement of the working capital management methodology, which is the most mature component of enterprise resources and the state of the entity depends on the degree of its efficient use.

The choice of sources of working capital formation has an impact on the speed of its rotation and the efficiency of using the enterprise current assets. Therefore, determining the formation sources of current assets at the enterprise is an important component of effective financial management.

The choice of formation sources of current assets determines the optimal correlation between the level of resource efficiency, on the one hand, and the risk of reducing financial stability and solvency, on the other. Taking into account these factors, the policy of working capital management is determined (Zubkov, 2012). The integrated management policy consists, on the one hand, in ensuring the required level and rational structure of current assets, and, on the other hand, in calculating the volume and structure of sources of current assets financing.

The most common ones are the models of working capital financing, such as aggressive, conservative and compromise (Deineka & Yurchenko, 2012; Dudukalo, 2012; Omelchenko & Piskulova, 2015). A conservative financing policy involves the formation of permanent assets and half of variables at the expense of long-term sources, which facilitates the increasing the level of the enterprise financial sustainability, but it leads to a decrease in the level of return on equity. According to a moderate approach, at the expense of its own and long-term borrowed resources, financing of fixed current assets is carried out, and at the expense of the short-term ones the variable part is. An aggressive policy of current assets financing is provided by financing the entire volume of non-current assets and a part of fixed working capital at the expense of long-term borrowed resources, and the remaining assets are secured by attracting current loans and payables. However, this policy is highly risky, although it facilitates a high level of return on equity (Alforova & Kuvychko, 2013; Diadiuk & Mykhailova, 2013; Proskurina & Romaniuk, 2009; Vlasova et al., 2014). The choice of a specific funding policy depends on determining the amount of long-term liabilities and net working capital as the difference between long-term liabilities and non-current assets (Selezen, 2014).

Some scholars (Kreidych, Nakonechna, & Kharchenko, 2015; Peltek & Pysarenko, 2010) further highlight the ideal financing model. In accordance with this model, the volume of long-term liabilities is set at the level of non-current assets, and short-term liabilities are in the amount of current assets. Under such conditions, the company does not own both current assets and working capital. However, this model is very risky, since it does not provide for the establishment of solvency reserve.

Iermak (2011) characterizes the model of working capital financing only at the expense of the loan as absurd. At the same time, to the conservative, compromise and aggressive financing models a restrictive one is added, which involves the formation of current assets only at the expense of its own working capital.

2. AIM

The purpose of the article is to research methods for assessing the efficiency of formation of enterprises working capital and to determine the actual model of working capital financing at agricultural enterprises of Ukraine.

3. METHODS

The level of liquidity and the efficiency of formed current assets depends on the size of net working capital (working capital), which shows how much current assets are covered by long-term sources of financing. As short-term liabilities, as a rule, are not directed at covering non-current assets, therefore the amount of net working capital is in the range from zero to a certain maximum value. The zero value of the indicator denotes the maximization of the risk level of a liquidity loss, as the

financing of the total amount of current assets is carried out at the expense of current resources. The growth of the net working capital amount reduces the risk of a liquidity loss by the enterprise.

Therefore, choosing a model of working capital financing, it is necessary to consider the optimal level of profitability and solvency ratio, which is estimated by the appropriate size of working capital. An important role in assessing the model of working capital financing is played by the use of an effective method that considers the influence of the most significant factors on the research object.

Nowadays, there is a significant number of methods for assessing the efficiency of working capital financing of enterprises. One of the most common is the definition of financing policy from the point of view of the sources of forming working capital components (respectively, aggressive, conservative and compromise). However, this method is not sufficiently precise and has certain disadvantages, because, depending on the current situation, the enterprise satisfies its need for financing capital, in particular, working, due to different ratios of own and borrowed sources. In addition, depending on the organizational and legal form of management and the business profile of the enterprise, the conditions for attracting borrowed resources are different (in particular, state enterprises, whose economic activity is a priority for the state, have more opportunities to use borrowed resources).

Deineka and Yurchenko (2012) suggest to utilize a model of the optimal structure of sources of working capital financing, which is based on the principle of minimizing the total cost of capital raising (average weighted capital cost indicator). At the same time, in order to obtain more accurate results, additional limitations were established, in particular: ensuring the normative value of the coverage factor (on the criterion of the adequacy of current assets to meet current liabilities) and the growth of the current value of the financial leverage effect (on the criterion of growth of return on equity in the change of a borrowed capital share).

In order to study the efficiency of managing the process of working capital reproduction, Nechaieva and Horlov (2014) propose to use an integral estimation. The values of the calculated indicators of a separate entity, which characterize the level of turnover of the working assets components, financial stability of the enterprise and profitability of activity, are compared with the values of the enterprise-standard. However, there are risks of using insufficiently representative indicators-criteria in the assessment and selecting enterprises that are not suitable for comparison (various branches of economy, functioning markets, business forms of enterprises).

4. DATA

In order to study the efficiency of the formation and use of working capital in the agricultural sector of the Ukrainian economy, which is the basic component of national production, the actual model of working capital financing of agricultural enterprises is determined. Based on the statistics of agricultural enterprises of Ukraine for 2015–2017, the calculation of net working capital according to different strategies for the formation of working capital was carried out. At the same time, in order to obtain more objective results, the value of the property of enterprises was adjusted to the level of inflation and presented at the level of basic values of 2015.

The system part of current assets represents the minimum need for working capital for the analyzed period and is equal to UAH 410,386.8 mln in 2015. The minimum need for capital sources is UAH 546,867.6 mln in 2015, the maximum – UAH 1,161,108 mln in 2017. The weighted average value of non-current assets is UAH 136,313.9 million.

5. RESULTS

The correctness and completeness of the organization and accounting of current assets depends on a large number of factors, such as the accuracy of determining the company's profit, its financial status, competitiveness in the market and, in general, the efficiency of the company.

Current assets are one of the components that make up the material basis of the production process. The final results of production and the finan-

Table 1. Dynamics of current assets of agricultural enterprises of Ukraine in 2015–2017, UAH mln

Source: Own calculations based on State Statistics Service of Ukraine.

Indicator	Year		
	2015	2016	2017
Current assets	410,386.8	818,539.4	1,024,318.7
System component of current assets	410,386.8	410,386.8	410,386.8
Specific weight, %	100	50.14	40.06
Variable component of current assets	0	408,152.7	613,931.9
Specific weight, %	0	49.86	59.94

cial condition of agricultural enterprises depend on the degree of their efficient use. The use of circulating assets by purpose helps to increase the profitability of enterprises, and vice versa, diversion of such assets to unscheduled purposes reduces their efficiency, adversely affects the entire financial position of the enterprise.

There were defined the system (permanent) and variable components of current assets for agricultural enterprises of Ukraine in 2015–2017 (Table 1).

Thus, the system component is the minimum volume of current assets necessary to ensure the production process, therefore, it amounts to UAH 410,386.8 mln. The variable component has changed every year, since it reflects other current assets required as an insurance stock. There is a tendency towards an increase in specific weight of the variable component in 2017, which accounted for 59.94% of the working capital structure. This is due to an increase in the volume of unfinished production due to the slowdown in the capital turnover, which leads to a prolonged freezing of working capital, lack of cash, the need to attract loans, the growth of payables and, as a result, leads to a decline in production and a reduction in the solvency of enterprises.

In accordance with the above methodology, calculations of the average net working capital of agricultural enterprises of Ukraine for 2015–2017 were made based on the three main variants of the strategies.

Under the aggressive strategy, long-term liabilities are maintained at the minimum level and should amount to UAH 546,867.6 mln. Net working capital will amount to UAH 410,554 mln, (UAH 546,867.6 mln – UAH 136,313.9 mln).

According to the conservative policy, the volume of long-term liabilities is maintained at the maximum necessary level, namely in the amount of UAH 1,161,108 mln. Net working capital equals UAH 1,024,794 mln (UAH 1,161,108 mln – UAH 136,3139 mln).

According to a moderate strategy, long-term liabilities comprise a value that covers non-current assets, a system part of current assets, and half of the forecast value of the variable part of current assets (UAH 136,3139 mln + UAH 410,386 mln + (UAH 0 mln + UAH 408,1527 mln + UAH 613,9319 mln) / 3 × 2 = UAH 717,048 mln).

In this case, net working capital should amount to UAH 580,734 mln (UAH 717,048 mln – UAH 136,313.9 mln).

According to State Statistics Service of Ukraine, net working capital of enterprises in the agriculture at the end of the analysis period (that is, at the end of 2017) amounted to UAH 323,477 mln.

The result of the analysis is that the actual amount of net working capital of agricultural enterprises for 2017 corresponds to the riskiest aggressive strategy of working capital financing. This policy creates a threat of liquidity and solvency loss at agricultural enterprises. The reason for the negative value of net working capital is the high proportion of current liabilities (in particular, payables) in the capital structure of many enterprises. In particular, due to the faster growth of the production cost (for the 2015–2017 period, growth was 87.3%) above the growth of sales revenue (the growth was 83.2%), there was a shortage of liquid assets, which complicates the process of calculations with contractors. This is due to rising prices for resources, the national currency devaluation, high energy consumption

Table 2. Structure of current assets of agricultural enterprises in Ukraine

Source: State Statistics Service of Ukraine.

Current assets	2014		2015		2016	
	UAH mln	%	UAH mln	%	UAH mln	%
1. Current assets, total	3,028,941.8	100.0	4,108,602.7	100.0	5,772,816.5	100.0
1.1. Current assets in stock of materials	629,853.9	20.8	850,835.4	20.7	1,046,468	18.1
1.2. Receivables	1,798,121.7	59.4	2,517,203.5	61.3	3,945,631.4	68.3
1.3. Other current assets	76,554.3	2.5	115,362.4	2.8	145,084.6	2.5

of domestic agricultural enterprises and, consequently, their low competitiveness.

The analysis of the composition and structure of the current assets of agroindustry enterprises in Ukraine showed that one of the directions of increasing their efficient use is to optimize their distribution between production and circulation areas (Table 2).

Thus, the total volume of current assets of agricultural enterprises in Ukraine by the end of 2016 is UAH 5,772,816.5 million, which is almost twice as much as in 2014. The largest share in current assets in 2016 is receivables – 68.3%.

Agriculture is a capital-intensive industry, and its effective functioning without sufficient financial resources is impossible under current conditions. Insufficient financial security of agroindustrial enterprises, loss-making industry, lack of liquid collateral, high probability of non-repayment of loans and imperfection of legislative mechanisms made them unattractive for the financial sector of the economy.

A significant risk of non-repayment of loans is forcing banks to set high interest rates on agricultural loans. A significant proportion of receivables in the structure of current assets of agroindustrial enterprises necessitates the use of such approaches to these assets management that would meet the market conditions of enterprise management, consider the specifics of their functioning and, as a result, ensure their effective functioning. One of the most important tasks in this direction is to create conditions for stable liquidity and solvency of economic entities throughout the period of their operation.

In order to increase the financial security of agricultural enterprises, in particular their level of solvency, it is expedient to reduce the volume of current liabilities. Therefore, in determining the structure of working capital financing, it is advisable to use the methodology proposed by Deineka and Yurchenko (2012) and to set limits on the level of balance between payables and receivables (in particular, to reduce the amount of payables).

However, an enterprise cannot develop only at the expense of its own sources of financing. In this context, it is advisable to take measures to increase the availability of agricultural enterprises to use borrowed resources in the development of their economic activities and the introduction of innovative technologies in manufacturing competitive products.

Political instability, imperfect land regulations legislation, reduction of the technical support level and possibilities for an efficient renovation of the material and technical base of agricultural producers hinder the implementation of investment and innovation activities in this area. The basis for the introduction of modern technologies for the production are investments in agricultural enterprises (Ulanchuk, Zharun, Sokolyuk, & Tkachuk, 2017). Thus, the volume of foreign direct investment in agriculture of Ukraine before the global financial crisis gradually increased, amounting to almost 900 million US dollars in 2008 (Avramchuk & Zezul, 2014). However, in recent years (in particular, in 2014 and 2016), the volume of foreign direct investment has been decreasing (Figure 1).

In the total volume of foreign direct investment in the Ukrainian economy, the share of investment in raw agriculture is 1.9%. For comparison, the share of foreign investment in agricultural products processing is about 5%, in industry – 53%, in trade sector – 13%.

Due to insufficient level of financing, technological operations are carried out incompletely and with

Source: Compiled by the authors according to 20. State Statistics Service of Ukraine and OECD.

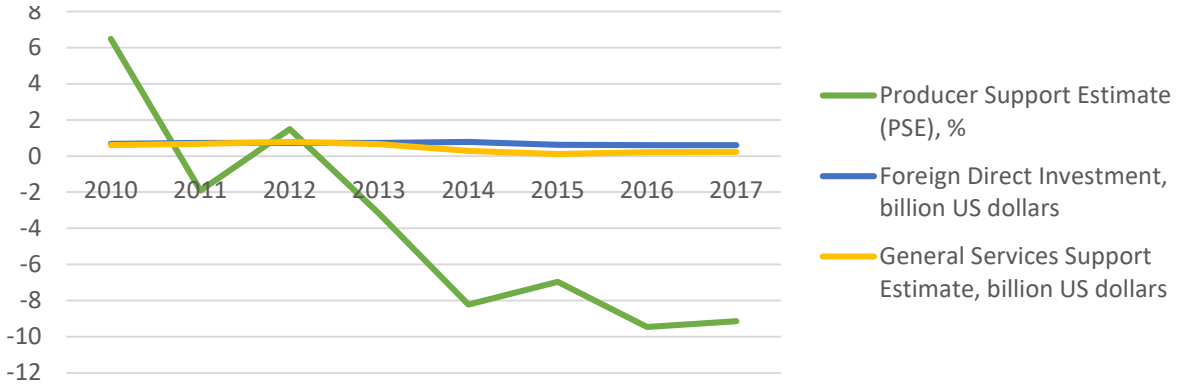

Figure 1. Dynamics of innovation and investment potential of agricultural producers in Ukraine in 2010–2017

time delay, which causes falling crop yields, reducing product quality and increasing its cost. Therefore, effective state financial support is gaining importance. According to the Organization for Economic Cooperation and Development, the value of the producer support (PSE) indicator, which shows the level of state financial support in the gross income of the agricultural producer, since 2011, becomes negative (Figure 2). In 2014, the lowest value of the indicator (–8.22) is observed since the mid-1990s.

The value of the General Support Services Estimate (GSSE) decreases from 2013, amounting to USD 211 mln in 2016. The main share in the general support services belongs to expenditures for agrarian knowledge and innovation (about 56%). In 2015, there was a reduction in the number and value of agricultural programs funded by the Ministry of Agrarian Policy (13 programs less compared to 2014, accounting for 19 programs, the budget has been decreased by almost five times, amounting to UAH 1.67 billion in 2015). Considering foreign experience, the main directions of development of financial and credit support for domestic agricultural producers should be: the credit infrastructure aimed at servicing the agricultural sector, and the mechanism of non-bank lending. The credit infrastructure must meet the specifics of agricultural production and market requirements and consist of the following structural elements: State Land Mortgage Bank, Special Loan Fund, Credit Cooperatives and Commercial Banks.

The State Land Mortgage Bank, which will ensure the accumulation of financial resources regardless of their sources of formation, will facilitate the development of mortgage lending to agricultural producers, should become the basis for the implementation of the state financial and credit policy in the agriculture. In order to reduce the cost of credit resources, it is expedient to use special credit funds formed through inter-sectoral redistribution of funds and aimed at the development of advanced technologies: revenues from the monetary privatization of agroindustrial objects, custom duties on the export and import of agricultural products, budget financing, etc.

The advantages of creating credit cooperatives are the ability to lend to business structures at lower interest rates, constant control over the purposeful use of loans granted to members of the cooperative and their repayment timeliness. Financial leasing and factoring belong to unconventional methods of lending, whose regulation mechanism is well developed abroad. However, in Ukraine, these tools have not become widespread among agricultural enterprises (Avramchuk & Zezul, 2014). Therefore, in order to increase the possibility of obtaining credit resources by these enterprises, it is necessary to study thoroughly the experience of the countries that successfully use this instrument of raising funds and to take appropriate measures to improve the relevant mechanism of accumulation and use of funds: to increase the profitability (through the use of innovative resource-saving technologies); to ensure diversification of production; to promote the level of financial literacy of agricultural enterprise managers; to settle the problem of land ownership; to improve the mechanism of preferential credit, etc.

CONCLUSION

As a result of the survey, types of working capital financing policies were characterized. The methods for assessing the efficiency of working capital financing of enterprises are considered, and their main advantages and disadvantages are determined. The actual model of working capital financing of domestic agricultural enterprises is determined. For the agriculture sector of the economy, it is typical to observe the aggressive policy of forming current assets (net working capital has a negative value). The reason for this is the low profitability of operating activities, which creates problems in calculations with contractors. As a result, the risk of solvency loss and financial stability increases, which has a negative impact on the overall efficiency of the economic activity of the agriculture branch.

Optimization of sources of working capital financing of domestic agricultural enterprises will increase the amount of economic activity financing and improve the enterprises liquidity. Therefore, it is promising to conduct further research on optimization of the working capital structure of agricultural enterprises in Ukraine and to develop, based on the obtained results, more sophisticated methods for evaluating the effective structure of financial resources considering foreign experience and advanced achievements of scientists in this area.

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