ANALYTICAL SUPPORT AS A BASIS OF MANAGEMENT OF CURRENT ASSETS OF INDUSTRIAL ENTERPRISES

Kateryna Datsko
PhD, Kryvyi Rih Economic Institute
SHEE “Kyiv National Economic University named after Vadym Hetman”,
e-mail: datsko_kp@kneu.dp.ua, Ukraine

Abstract. The article contains the study of the traditional system of current assets analysis and determination of peculiarities of the development of a system of analytical support of current assets management on the stage of its development. Besides, the article offers the structure of internal regulation documents to ensure consistency of analytical work. The article contains characteristics of the process of current assets planning and the practical aspects of use of certain analysis elements providing strategy for the future development of the enterprise.

Keywords: analysis, internal law, current assets, management.

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Introduction

The modern development of market relations, economic and political crisis in Ukraine and the whole world create problems, which the country inevitably faces, namely, the instability of external and internal environment, competition for consumer and product quality, increased competition, high dynamism of production, uncertainty of processes of formation and development of production factors. All these problems require a deep substantiation of managerial decisions using modern analytical methods and inevitable application of systematic analysis measures in compliance with clearly defined method that is regulated by the system of internal law documents of the organization.

Management issues of the current assets at industrial enterprises

The traditional domestic method of analysis of enterprises current assets should be considered from a new point of view, namely, as a component of accounting and analytical support of current assets management, which requires analysis and synthesis of accounting data. In its turn, the structure of the necessary accounting support is the basis for the formation of analytical support system. The interrelation of analytical and accounting support is unquestionable, but one of the main problems of formation of analytical support is insufficient reliability and speed of getting information. Table 1 summarizes the problems of current assets management and defines methodological instruments that can serve as the basis for their solving.

The analysis directions, which are studied in the scientific works of leading economists, define general provisions of method of analysis of the current assets of the enterprise taking into account the typical management tasks. It is worth highlighting the importance of developing the analysis method that would ensure prompt, systematic and reliable collection of analytical information for the purposes of efficient management.
Table 1

Problems of management of enterprise current assets and methodological instruments for their solution

| Management problems                                      | Methodological instruments of solving certain problems of current assets management                                                                 | Results of usage of methodological instruments in management activities                                                                 |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Accumulation of inventories                              | The calculation of index of optimal volume of inventory order                                                                                | The solution of problems concerning the appropriateness of the accumulation of inventories in stockhouses or the organization of its more frequent deliveries |
|                                                           | Development of planned indexes: planned norm of inventories, the optimal volume of work in progress, the optimal stock of finished products         | The definition of economically reasonable volume of inventory needed to ensure uninterrupted production process                         |
| Underpayment of receivables                              | Monitoring of the state of receivables of enterprise through the usage of operational accounting information                                    | Increasing of the reliability level of information on the status of work with debtors that reduces the risk of default on receipts     |
|                                                           | Calculation of the economic effect of usage of factoring for refinancing of receipts                                                           | Decline of the risk of losing of paying capacity and minimizing of the tax consequences from the introduction of factoring in receipts management |
|                                                           | Calculation of planned index of allowable outstanding balance of receivables for products being sold with deferred payment                      | The reliable assessment of the optimal terms of deferred receipts payment for debtors, taking into account the volume of sales of finished products and the duration of its turnover |
| Growth of professional risk in the decision-making process concerning the management of current assets | Refinement of calculation methods of financial indicators characterizing business activity and liquidity of separate assets of the enterprise with regard to modern financial reporting format and essential loads of given coefficients | Improvement of reliability and efficiency of data analysis and reduction of professional risk during the preparation of analytical reports on solving problems of current assets management |

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Therefore, one should strive to conduct the financial analysis as a whole system, where the interrelated constituent elements of a lower order are defined that is the integral part of system of a higher level, in which economic analysis of current assets interacts with other subsystems. The systematicity of analysis, determination of its logic chain and identification of multiple internal connections are the basis of system approach, which is one of the directions of scientific knowledge.

The systematic study of the method of financial analysis of current assets was carried out in the work of D.A. Endovytskyi, who defined the basic principles of financial analysis of assets. He determined the following principles of systemic analysis: the objectivity and relevance of results obtained in process of economic analysis; the scientific validity of analysis results; the systematicity and complexity of analytical measures; the considerableness and optimality for making rational management decisions; the ratio of analysis cost and usefulness of obtained information for the interested user; the principle of identification of the leading link; the timeliness of obtainment of output analytical data; the quantitative certainty, variability, reliability, clarity and comparability of analysis results.

The most popular model of analysis stages ratio, which is based on the systematic approach, is given in scientific research of A. D. Sheremet. Despite the fact that there are the fundamental researches of analysis based on the systematic approach concerning the development of the systematic economic analysis method, there is still a number of unresolved problems. In particular, there is no unified method of analysis of current assets, which would provide the basis for a logical and consistent approach to management decisions. Basing on our own studies and achievements of leading scientists, we should mention that the analysis of the current assets, which is grounded on the systematic approach and accurate data from the accounting support, provides the company with an opportunity to solve given problems of current assets management. To build the analytical support of current assets management it is necessary to create a separate system of their analysis, which solves a number of given management problems.

Let's define the main purpose of the current assets analysis, namely: determining the signs and causes of reduction of volume or, on the contrary, of the excessive accumulation of inventories, monetary funds and receivables accounts. As previously stated, the domestic system of the enterprise current assets analysis is not perfect, so it is necessary to define the specific procedure of financial analysis and examine its instruments based on well-known methods and systems of economic analysis. The results of this research, which was based on the practical data of PAO “NPP “Smelyanskiy electromechanicheskiy zavod” (SEMZ), are given in table. 2.

The defined stages were formed, taking into account the specific features of activities of the main enterprise, operating in heavy conditions of modern competition in the field of heavy engineering in production of electric motors for rail transport. The particular characteristics of the industry in Ukraine are strict conditions of search of the finished products sales market, therefore the enterprise is forced to look for foreign partners and export its own products. The planning of volumes of the assets is a strategic issue, because it has a direct impact on amount of the prime cost and level of profitability and competitiveness of the enterprise.

The planning stage is based on the information stages and assumes the definition of general problematic issues in management of current assets, identification of factors impacting the solution of these issues and search of alternative options of management decisions or implementation of policy of drift.
**Table 2**

**Instruments of analytical support of management of current assets of the enterprise in terms of its stages** [made by author]

| Analysis stage | Characteristics of the stage and its components | Current procedure of current assets analysis at PAO “NPP “SEMZ” | Recommended instruments for current assets analysis |
|----------------|-------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------|
| Stage of analytical activity planning | Planning of analytical procedures concerning the efficiency of use of current assets | The current assets analysis was carried out at the end of the reporting year without approval of the plan of analytical procedures | Development of the plan of analytical procedures at the beginning of the reporting year, that involves the preparation of analytical reports each quarter |
| Information stage | Analysis of statistical information about structure and dynamics of current assets of industrial enterprises of Ukraine | Was not carried out | Construction of analytical tables, aimed at analysis of changes in composition, structure and dynamics of current assets of industrial enterprises in comparison with data of PAO “NPP “SEMZ” based on using the method of vertical and horizontal analysis |
| Stage of direct analysis | General production analysis of current assets | Analysis was carried out in accordance with financial statements to assess the structure and dynamics of current assets during the reporting year | Use of the method of financial ratios to calculate the liquidity indexes, efficiency of use of current assets, own current capital and subsequent assessment of their dynamics |
| Stage of direct analysis | Planning of admissible balances of current assets | Was not carried out | Calculation of admissible balances of certain current assets based on the integration of ratio, analytical methods and direct counting method with subsequent comparison of reported data with the planned indexes |
| | Analysis of sources of current assets financing | Was not carried out | Analysis of sources of current assets financing by three groups: own, borrowed and additionally involved by carrying out the horizontal and vertical analysis of their structure and dynamics based on data of financial statements |
| Resultative stage | Creation of strategy of current assets management based on synthesis of the carried out research, aimed at formation of management decisions | Management decision was made based on the data of general production analysis that based on financial statements | Making of management decision concerning the efficiency of use of current assets is based on advanced analytical statements about efficiency of use of current assets and size of their admissible balances |
For more precise and effective result, it is necessary to base on the results of the expert estimations that will ensure the successful implementation of management decision.

The essence of the information stage is to examine standard and actual field indexes in dynamics that will provide the basis for creation of the planned indexes and assessment of management activity efficiency. At this stage, it is necessary to carry out the research of structure and dynamics of current assets of the industrial enterprises of Ukraine and separately in the field, in which the research subjects work.

At the stage of direct analysis, the calculation of the required analytical indexes is performed and the specific features of activity and organization management system are examined. This stage involves the calculation of coefficients and determination of the degree of impact of certain factors on the efficiency of management of current assets and financial condition of the enterprise.

Taking into account the carried out research, we can assert that at the stage of direct analysis of current assets we have the opportunity to assess the return on assets of the enterprise and their liquidity, as well as to define the effectiveness of their management.

The creation of strategy of current assets management is the resultative stage of formation of analytical support, and expressed in search of optimum alternative of current assets management, creation of strategy for formation of more effective mechanism of management and elimination of identified deficiencies. This stage involves optimization of the volume of current assets that shall proceed from the selected type of current assets formation policy, ensuring the given level of the efficiency ratio of their use and risk. The resultative stage shall solve two main issues: “What is the need for current assets of the enterprise?” “What are the sources of current assets financing?”. This stage is the most difficult because it requires creativity from managers and application of modern instruments of impact on the condition of current assets.

During management, the planning of the volume of current assets, based on reliable data and methods of financial planning, is the strategic element. The Fig. 1 shows the algorithm of implementation of financial planning of the volume of current assets in the management system of the enterprise. That should be reflected in the document of internal regulations, aimed at detailing the planning system of the size of current assets.

Selection of planning method of current asset depends on factors such as the availability of comparative data of previous periods, labor-output ratio of calculations, particular characteristics of the business. As a matter of practice, three main methods are used: direct counting method, analytical and ration methods.

The direct counting method is in the calculation of the amount of current assets on each type of inventory, then they are added, and as the result we get the determination of the standard of each element of normed current assets. The general standard is the total of standards on all elements. This method is the most accurate, reasonable, but nevertheless, very time-consuming. The ratio method is based on calculation of planned indexes by making adjustments (using ratios) in standards of the previous period. The ratios take account of change in production volumes, turnover of current assets, range changes and other factors.

The analytical method uses actual data on the value of current assets for the definite period. At this we specify the unnecessary and unrequired stocks, make amendments on changes in conditions of production and supply. The adjusted results of these calculations are considered as the norm of current assets for the planning period. This method is used in cases where no significant changes are expected in terms of the company work and the funds invested in tangible assets and stocks have a large share.
The combination of analytical and ratio method and the direct counting method makes it possible to generalize the procedure of financial planning of volume of current assets. Availability of reliable information necessary for calculations in its turn provides accounting support, researched in the second chapter of the thesis paper.

In addition, in the paper we proved the expediency of implementation of financial ratios of planned indexes of permissible balances of current assets to the system with the aim to improve analytical support of current assets management. The calculation of these planned ratios was proposed by way of combining analytical, ratio and the direct counting method.

The procedure for calculating was tested at PAO “NPP “Smelyanskiy elektromehanicheskiy zavod” (SEMZ) and is given in Table 3.

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**Fig. 1. Algorithm of implementation of financial planning system in the management practice of the enterprise** (developed by author)

| STAGES OF IMPLEMENTATION OF SYSTEM OF FINANCIAL PLANNING OF CURRENT ASSETS IN THE MANAGEMENT PRACTICE OF THE INDUSTRIAL ENTERPRISE |  |
| --- | --- |
| Definition of current assets groups to be planned | Assessment of frequency of transactions with certain groups of current assets |
| Selection of planning method of certain groups of current assets | Definition of ration of certain groups of current assets in their total amount |
| Definition of information sources for necessary calculations | Assessment of degree of control over the volumes of certain groups of current assets |
| Appointment of persons responsible for calculation of planned values for certain groups of current assets |  |
| Direct counting method |  |
| Analytical method |  |
| Ratio method |  |
| Data of receivables monitoring |  |
| Results of current assets analysis, planned indexes, accounting and reporting data |  |
| Finished products – sales department |  |
| Raw materials and materials at production site – Production Director |  |
| Raw materials and materials at warehouse and on the road – Director for Logistics |  |
| Receivables – Sales Manager |  |
The recommended procedure for calculating of planned indexes of current assets

| Index | Method of calculation | Description of index | Calculated indexes for PAO “NPP “SEMZ” for 2015, thous. hryvnias |
|-------|-----------------------|----------------------|---------------------------------------------------------------|
| PRI   | \( PRI = \frac{C_{mat}}{T} \times t \) | The optimal amount of inventories in the stockhouse, given the current needs of production and the risk of delays in deliveries on the road | 6 779,73 |
| PWP   | \( PWP = \frac{CRMP + LC}{T} \times t_2 \) | The optimal amount of work in progress, given the degree of influence the duration of individual stages of the production cycle and production volumes | 3 222,84 |
| OSFP  | \( OSFP = \frac{NP}{T} \times t_3 \) | The optimal stock of finished products, which must be in stockhouse to ensure uninterrupted supply of products to customers | 12 518,83 |
| PBR   | \( PBR = \frac{NP}{T} \times t_4 \) | The optimal balance of receivables, taking into account the planned volume of sales, including one that will be sold with deferred payment and the period for which it will be implemented | 13 864 |

A revised procedure of analytical support of current assets found its practical use in the developed documents of internal regulations: Provisions on financial analysis of current assets and Provisions on financial planning of current assets, which were introduced in management practice of PAO “NPP “Smelyanskiy elektromehanicheskiy zavod” (SEMZ), facilitate coordination of actions of analytical employees and arrangement of the requirements for implementing of analytical procedures. The structure of these documents is presented in Table 4.
### Table 4
The structure and purpose of the proposed documents of internal regulation on the organization of analytical support of management of current assets of the enterprise

| Purpose of the document | Regulations on financial analysis of current assets | Regulations on financial planning of current assets | Purpose of the document |
|-------------------------|----------------------------------------------------|----------------------------------------------------|-------------------------|
| Name of section         | Description                                        | Name of section         | Description            |
| Scope                   | There was defined an aim of development of this Regulation | Scope                   | There was defined an aim of development of this Regulation |
| Notations and terms     | The specified list of notations, which were given in the Regulations, and interpretations of key terms used in the analysis of current assets were set out | Notations and terms     | The specified list of notations, which were given in the Regulations, and interpretations of key terms used in the process of planning of current assets were set out |
| Stages of conducting of analysis | Objectives, a list of major tasks, methodological tools and information sources of separate stages of conducting of analysis of current assets were defined | Substantive provisions | Objectives, a list of tasks of the planning process of the size of current assets were defined |
| Persons responsible for conducting of analytical procedures | Persons responsible for conducting of analytical procedures and the accuracy and terms of their implementation were defined | Procedure of Financial Planning | An order of determining the groups of current assets, subject to planning, methodology for calculating of planned indexes and information sources required for calculation was set out |
| Annexes                 | Form samples of work documents in the part of conducting of analysis of current assets were set out | Persons responsible for conducting of analytical procedures | Persons responsible for conducting of planning of the size of certain groups were defined |
Conclusions and suggestions

The use of existing methodological and organizational regulations of analytical support of current assets management of enterprises enables to reduce the risks that arise at management of specified economic resources and, therefore, increase the solvency and ensure the continuity of the enterprise activity. Comprehensive introduction of recommendations developed by authors for the formation of accounting and analytical support of current assets of enterprises will strengthen their financial condition, enhance financial stability and competitiveness in the systemic financial crisis, changing economic environment against the background of economic globalization processes.

References

Bernstein, L. A., and John, J. (2006) Wild Financial Statement Analysis: Theory, Application and Interpretation: McGraw Hill.
Bringham, E. F., and Ehrhardt, M. C. (2008). Financial management: theory and practice: Thomson South-Western.
Fabozzi, F. J. (2008) Financial Management and Analysis: John Wiley & Sons, Inc.
Sheremet, A. A. (2005) Financial Analysis. Kyiv: Kondor. [in Ukrainian].