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**CURRENT CAPITAL ANALYSIS OF ENTERPRISES
IN AUTOMOBILE INDUSTRY IN THE
CONTEMPORARY ECONOMIC CONDITIONS**

**ANALIZA KAPITAŁU OBROTOWEGO PRZEDSIĘBIORSTWA
SEKTORA MOTORYZACYJNEGO W OBECNYCH WARUNKACH
GOSPODARCZYCH**

**АНАЛИЗ ОБОРОТНОГО КАПИТАЛА ПРЕДПРИЯТИЙ
АВТОМОБИЛЬНОЙ ОТРАСЛИ
В СОВРЕМЕННЫХ УСЛОВИЯХ ХОЗЯЙСТВОВАНИЯ**

Abstracts

The article deals with the analytical study of current capital of automobile enterprises. Particular attention is paid to assessing the effectiveness of current assets in the motor transport enterprises. The way of optimization of current assets structure in the motor transport enterprises has been proposed.

Keywords: *motor transport, statistics, analysis, motor transport enterprises, current capital, current assets, efficiency.*

Streszczenie

W artykule przedstawiono wyniki analiz dotyczących wykorzystania kapitału obrotowego w przedsiębiorstwach sektora motoryzacyjnego. Szczególną uwagę przywiązano do kwestii oceny efektywności wykorzystania aktywów obrotowych przedsiębiorstwa sektora motoryzacyjnego i optymalizacji struktury tych aktywów.

Słowa kluczowe: *transport drogowy, statystyki, analizy, przedsiębiorstwo sektora motoryzacyjnego, kapitał obrotowy, aktywa obrotowe, wydajność.*

Аннотация

В статье рассматриваются вопросы аналитического изучения оборотного капитала автомобильного транспорта. Особое внимание уделяется оценке эффективности использования оборотных активов автотранспортного предприятия и оптимизации их структуры.

Ключевые слова: автомобильный транспорт, статистика, анализ, автотранспортное предприятие, оборотный капитал, оборотные активы, эффективность.

Introduction. The modern market transformations in the country's economy considerably influence the demand for quality of analytical information, which is the basis for making the necessary managerial decisions at motor transportation enterprises with different organizational legal forms. Their management needs exact and complete information on the results of the business entity's activities and its financial standing. The lack of clear recommendations on the method of analysis of current assets does not allow the proper collection of data on their flow. In addition, accounting departments and other economic divisions of motor transport enterprises do not apply in practice a scientifically developed methodology for the analysis of current assets because of its high complexity and complicated calculations.

Therefore, there is a need to create such a technique for analysing the current assets of motor transport enterprises, which would allow not only to clearly determine their financial standing, but also to be accessible, clear and cost-effective in terms of the "benefit-cost" ratio. All the above-mentioned confirm the urgency of research.

The body. The successful business activity of each motor transportation enterprise largely depends on its resource potential, such as material resources, production capacities, labour resources. But the most important component of this potential is the current assets availability.

The term "current assets" started to be used in Ukraine with the adoption of the Law "On Accounting and Financial Reporting in Ukraine". A specification of this term is provided by the separate national provisions (standards) of accounting, namely: Statement of Standard Accounting Practice 2 "Balance" (SSAP), SSAP 4 "Statement of cash flows" and SSAP 5 "Statement of Owner's Equity". Significant part of information related to the current assets is disclosed in the notes to the financial statements..

The following definition of current assets is given in the economic encyclopaedia: "Current assets are the funds of enterprises, firms, companies advancing to the facility, used within a single replenishment cycle or in the short term (up to one year)" [9, p. 613].

In the national accounting standards, current assets are defined as "cash resources and cash equivalents unlimited in use, as well as other assets intended for sale or consumption during the replenishment cycle or within 12 months from the balance sheet date" [5].

In scientific economic terminology, current assets are treated as "a set of circulating funds and floating funds in circulation that are used to finance current economic activities and expressed in monetary form" [10, p. 236].

G.G. Kiretsev considers that current assets are a set of funds advanced to stocks and floating funds in circulation to ensure the continuity of the production process

and sale of products [11, p. 104].

Attending carefully to the definitions, it will be seen that they do not connect the concepts of current assets and capital. In our opinion, a different interpretation of the category "current assets" is due to the fact that it is considered by specialists from different fields of economic science: economic theory, financial management, accounting and audit.

We will try to clarify the concept of current assets in terms of the analyst's perspective.

In order to carry out productive or commercial activities any motor transportation enterprise must possess a clearly defined amount of current assets, namely:

- assets;
- accounts receivable (current);
- current financial investments;
- money resources.

Current assets perform two functions: production and payment-and-settlement.

The production function ensures the continuity of the production process. The payment-and-settlement function of current assets, first of all, affects the state of the part of the funds that is removed from the sphere of circulation, directly affects the state of settlements and, in general, for monetary circulation.

The turnover of current assets goes according to the following scheme:

$$Д - T \dots B \dots - T1 - \Gamma 2, \quad (1)$$

where Γ – funds that are advanced by economic entities;

T – production means;

B – production;

T1 – final product;

$\Gamma 2$ – money resources received from the sale of products, including the realized income.

The dots (...) indicate that circulation of current assets has been interrupted, but

the process of its circulation will last in the production sphere.

Thus, there is an objective necessity to advance funds to ensure the continuous flow of current assets in order to create the necessary productive supplies, goods-in-process inventory, final products and the conditions for its implementation.

The movement of current assets is a single process, which is provided by appropriate current capital.

There are two main approaches to the interpretation of the concept of "capital" in domestic and foreign practice. According to the first approach, capital is a value that is determined by subtracting liabilities from the assets.

According to the second approach, capital refers to various assets, expressed in material form (for example, fixed assets, materials, raw materials, semi-finished articles, goods-in-process inventory, final products, etc.).

In our opinion, it is necessary to combine these two approaches. It is appropriate to distinguish between "active capital" and "passive capital". The active capital is used to characterize assets. In turn, it is divided into fixed and current. The fixed capital means fixed assets, and the current capital is referred to current assets. Passive capital is the source of asset formation. It is also divided into owned and debt capital.

Thus, the term "current assets" is closely related to the concept of "current capital."

Initially, the current capital is always an investment, that is, a source of formation, but this investment should be placed. The current assets reflect the nature of the placement of invested capital in the business process of the enterprise. The working capital is financial resources invested in facilities used by the enterprise

within a single production cycle or within a short calendar period of time [11, p. 81].

The composition of the current capital of a motor transportation enterprise is shown in Fig. 1.



Fig. 1. The composition of the current capital.

The current capital includes: material elements (productive supplies - fuel stocks, working and maintenance stocks, expendable equipment), short-term financial investments (bond certificates, securities, loans granted, promissory notes issued to customers), financial resources (cash on hand and on the account) and receivables for transportation and other services provided by a motor transportation enterprise (MTE).

The source of the financial resources, which consists of own capital (authorized capital, special purpose funds, profit) and obtained funds (bank loans, trade creditors).

A greater understanding of the formation mechanism of the current assets sources requires an analytical approach to the indicators of the capital structure of the economic society in terms of the price that the enterprise must pay in order to attract and use it. It should be noted that both own and obtained capitals come at a price. "The price of capital is the total amount of funds that an enterprise should pay for the use of a certain volume of current assets, ex-

pressed as a percentage of this volume" [12, p. 113].

The right way of attracting this or that type of capital will directly affect the price that should be paid for its use. This, of course, will affect the effectiveness of any business transaction.

It should be noted that the price of the debt capital does not depend on the desire of the owners. It is dictated by the market conditions, since it does not depend on whether it is own or debt capital. The enterprise, however, recovers a certain price, expressed as a percentage of the use of the loan or in the market value of a property that is contributed to the authorized capital of the enterprise.

Despite the diversity of types of capital, its price should be determined in the context of each individual element.

Skilful fund raising due to the consideration of its price allows maintaining the economic potential of the enterprise, reducing the cost of operations performed, and effectively carrying out investment activities.

This is what necessitated the separation of internal and external sources of current assets.

The current capital management system is subordinated to the main goal of financial management - to maximize the profitability of a business entity in the current and forward-looking time periods. The main objective of the current capital management is to form the necessary size and composition, rationalize and optimize the structure of the sources of financing. Therefore, the system of the current capital management of the motor transportation enterprise must solve the following tasks:

1. Optimization of the size and structure of working capital.
2. Providing high speed of circulation of current assets, which allows you to

reduce the need for them due to more rational use.

3. Identifying the impact of money resources, receivables and inventories on the profit and liquidity of enterprise assets.

4. Identification of conditions leading to liquidity risk and a decline in the efficiency of the enterprise, protecting current assets from inflation.

5. Development of options for financing current assets, providing reduction in the cost of the current assets by maintaining certain of their funding structure available to the motor transportation enterprise.

The implementation of the above tasks of management of current assets will positively affect the efficiency of the motor transportation enterprise.

It should be noted that analysis is one of the main functions of the management system of any enterprise. According to analysis report the necessary managerial decisions are taken. The numerous financial coefficients are applied for the analysis of current assets. They can be divided into several groups:

1. Structural coefficients show the debt value of a business entity.

2. Liquidity ratios determine the ability of a business entity to raise funds to fulfil its obligations.

3. Earnings ratios are used to evaluate the effectiveness of assets.

4. Coefficients of market value show how attractive the enterprise is for investors.

The full range of information used in economic analysis and providing a management system can be divided into internal and external.

As a rule, internal sources provide information for the analysis of current assets.

According to the national standards of accounting and reporting, financial reporting includes the following forms, which are the information base for the analysis of the formation and use of current assets:

1. Form No. 1 «Balance».

2. Form No. 2 «Statement of financial results».

3. Form No. 3 «Statement of cash flows».

4. Form No. 4 «Statement of owner's equity».

5. Form No. 5 «Notes to the annual accounts».

The relationship between the balance sheet and other forms of financial reporting and the purpose of each of them can be presented in the form of tab. 1.

Table 1. Relationship of the balance sheet with other forms of financial statements

Forms of financial statements	Role
1. Form No. 1 «Balance».	The report on the financial condition of the enterprise, which for a certain date reflects its assets, liabilities and owned capital
2. Form No. 2 «Statement of financial results».	The report on incomes, expenses and financial results of the enterprise for the accounting period
3. Form No. 3 «Statement of cash flows».	The report reflecting the cash inflow and outflow as a result of the operating, investment and financial activities of the enterprise in the accounting period
4. Form No. 4 «Statement of owner's equity».	The report reflecting changes in the composition of owned capital in the accounting period

The implementation of the analysis involves the use of a certain methodology. In turn, the methodology for analysing current assets should include: a list of analytical problems, their sequence; design of analytical table layouts; selection of appropriate coefficients and compilation of algorithms for their calculation; the development of measures to introduce the results of analysis into the business activities of enterprises.

The main purpose of analysis is to evaluate the efficiency of current assets use and optimize their structure. The analysis of current assets is carried out in several stages.

At the first stage, the structure and dynamics of the company's current assets are reviewed, the rates of their changes are compared with the rates of change in the volume of sales revenue, and the dynamics of the specific gravity of current assets in the structure of the enterprise's property is studied.

At the second stage, the dynamics of the current assets is studied in terms of the main types - inventory stocks, raw materials, materials, final products, accounts receivable, balances of monetary assets. The analysis of current assets makes it possible to evaluate their liquidity.

At the third stage, the turnover of current assets is estimated on the basis of calculation of indicators (turnover time, turnover ratio), as well as checking the actual balances of current assets, their justified demand for a period ahead.

Each item of the current assets is analysed after studying their structure and dynamics on the enterprise as a whole.

The analysis of inventory stocks is also carried out in several stages.

At the first stage, the value of total inventory of material assets and the percentage in the total volume of current assets are estimated. Then, the status and struc-

ture of stocks are analysed in the context of types and main groups. The compatibility of inventories with their justified necessity is checked. The inventory stock level can be determined by different methods. There are a direct solution method, model of economic order quantity and other methods.

Further, the utilization efficiency of various types of inventory stocks and their quantity as a whole are assessed. It is characterized by turnover ratio. Then the expenditure and structure of costs associated with servicing stocks is studied.

The analysis of accounts receivable occurs in the following sequence:

1. The volume of accounts receivable and its dynamics are estimated and the proportion of accounts receivable in current assets is determined.

2. The composition of accounts receivable with stated maturity is studied. In the process of analysis, the normal receivables (the collection period of which has not arrived yet) and the overdue (the collection period of which has already been violated) are singled out.

3. It is determined the amount of damage due to delayed payment of accounts receivable, that is depreciation because of inflation or alternatives to the use of this amount.

4. The possibilities of transferring receivables to other forms of current assets are being studied. The use of various forms of refinancing receivables is assessed.

Analysing the current assets of the enterprise, it is necessary to pay attention to the liquidity issues of the balance sheet. The liquidity reflects the ability of rapid mobilization of its own funds for the timely and full payment of debts. All funds rank according their degree of liquidity into highly liquid assets, assets with an

average degree of liquidity and low liquid assets.

In order to calculate the optimal amount of money used in the business activities of the enterprise, you can use the Miller-Orr model, which is based on the cash-flow uncertainty. The essence of this model is to establish the upper and lower limits for money funds, as well as in calculating the optimal amount of cash balances.

The balance of funds on current account changes chaotically until it reaches the upper limit. When it is achieved, the enterprise must transform the money, for example, into securities in order to return the reserve of monetary resources to a certain established optimal level. In the case when the reserve of monetary resources reaches the lower limit, the entrepreneur must sell his securities and replenish the spare money to the established optimal level.

The dynamics of money balances on the current account according to the Miller-Orr model is represented graphically in Fig. 2.

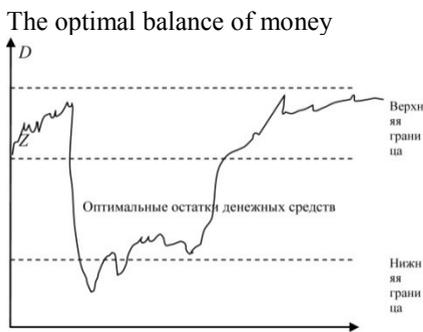


Fig.2. The flow chart of money balances on the current account according to the Miller-Orr model

The optimal money balances are calculated using the formula:

$$Z = \sqrt[3]{\frac{3 \cdot F \cdot \sigma^2}{4 \cdot i}} \quad (2)$$

Where Z – the optimal money balances;
 F – fixed costs associated with securities transactions;

Σ – daily variation of net cash flow;
 i – expenses on keeping funds deposited in accounts (the daily yield rate on marketable securities).

The policy of managing money balances on a current account can be formulated as follows: the upper limit in the Miller-Orr formula is a control one, and therefore, when the cash balance (Z) reaches the upper level, the company needs to start acquiring securities. In this case, the optimal value of the upper limit (D) is determined by the formula $D = C \cdot Z$, securities are purchased for an amount equal to $(D \cdot Z)$, and the total money balance again becomes equal to Z . When the money balance is zero, securities are sold for Z conventional units, and then the cash balance again reaches the value of Z . The average money balance is calculated as approximately $(Z + D) / C$.

It must be admitted that in the current situation in domestic enterprises, the direct application of models for managing money resources is difficult due to inflationary processes, anomalous discount rates, and the underdevelopment of the securities market, but the value of this model is obvious and its practical implementation in the strategy of managing current assets is a near future.

Thus, the main objectives of the analytical study of the current capital are:

- volume and composition of the current capital study;
- characteristics of the current capital volume with the identification of the factors that determine it;

- the study of utilization efficiency and liquidity of the current capital;
- control over supply of MTE by material and financial resources;
- characteristics of the use of material and monetary resources, determining their savings or overexpenditure.

The following indicators are used to characterize the use of the enterprise working capital:

- asset turnover ratio;
- average duration of a turnover per a day;
- working capital ratio.

The asset turnover ratio (or the number of turnovers for the reporting period) characterizes the number of turnovers that are carried out by each hryvnia invested in the current capital

$$k_{o\bar{o}} = \frac{\bar{D}}{O}, \text{ times} \quad (3)$$

where \bar{D} – total income from works and services performed, UAH;

O – average balance of current capital, UAH.

The turnover ratio for the current capital is identical to the capital productivity ratio for fixed capital.

The indicator of the average duration of a turnover in days

$$t = \frac{T}{k_{o\bar{o}}}, \quad (4)$$

where T – duration of the period for which the indicator is determined (month, quarter, year) in days.

Working capital to net sales ratio is an inverse value of the asset turnover ratio. It characterizes the amount of the average balance of the current capital to 1 UAH of income

$$k_s = \frac{O}{\bar{D}} \text{ или } k_s = \frac{1}{k_{o\bar{o}}}. \quad (5)$$

The indicators of the current capital turnover are calculated for comparison with the plan only for the normalized current capital, and for comparison in dynamics - for all current capital. They can be calculated for both the current capital of the MTE as a whole and for individual elements of current assets in particular.

Analysing the use of current capital, an enterprise should have information on how the acceleration or deceleration of cash flow affects the change of their total value. For this purpose, it is determined the amount of current capital, that became available from turnover (or additionally attracted to turnover) from the change in turnover speed. The change of the average balance of working the current capital is determined by the formula:

$$I_O = \frac{O_1}{O_0} = \frac{k_{s1} \cdot \bar{D}_1}{k_{s2} \cdot \bar{D}_0}. \quad (6)$$

This model allows us to determine the absolute change in the average balance of current capital due to the dynamics of each of the factors, in particular:

- a) by changing the ratio of working capital to net sales

$$\Delta_O^{k_s} = (k_{s1} - k_{s0}) \cdot \bar{D}_1; \quad (7)$$

- b) by changing the level of revenues

$$\Delta_O^{\bar{D}} = (\bar{D}_1 - \bar{D}_0) \cdot k_{s0}. \quad (8)$$

The asset turnover ratio and the working capital to net sales ratio by group of enterprises is a weighted arithmetic

mean:

$$k_{o\bar{o}} = \frac{\sum k_{o\bar{o}} \cdot O}{\sum O},$$

$$k_3 = \frac{\sum k_3 \cdot \bar{D}}{\sum \bar{D}}. \quad (9)$$

The average duration of a turnover in days is defined as a weighted harmonic mean:

$$t = \frac{\sum O}{\sum \left(\frac{1}{t} \cdot O\right)}. \quad (10)$$

This average performance for the group of enterprises can be calculated on the basis of the total results of average balance of the current capital and the total amount of income from work and rendering transportation services.

Describing the state of the current capital, it is necessary to consider the possibility of the company to fulfil its short-term obligations. This is due to the level of liquidity of the current capital, which can be characterized by the following factors:

- cover ratio;
- marginal liquidity ratio;
- absolute liquidity ratio.

The current ratio is defined as the ratio of the value of the current capital and the amount of short-term obligations of the enterprise. The short-term liabilities include settlements with creditors, short-term bank loans, remuneration

owed to employees and notes for payment.

The cover ratio is also called a current ratio. It shows the financial solvency of the enterprise, which is evaluated under the condition of timely settlements with debtors. The more its value is increased, the more confidence in paying short-term obligations will be. In addition, the cover ratio measures the safety margin to cover the depreciation of current assets, shows the liquid reserves funds that can be used as a security guarantee against uncertainty and any risk related to the flow of funds at enterprise (the normal value of this indicator varies from 1.5 to 2)

The marginal (quick) liquidity ratio is a ratio of monetary funds, receivables and other assets to the amount of short-term liabilities of the enterprise (theoretically its value is considered sufficient at a level of 0.7 to 0.8).

The absolute liquidity ratio is the ratio of the amount of money to the value of short-term liabilities of the enterprise. The normal value of this indicator for the MTE ranges from 0.05 to 0.2.

It is necessary to provide timely and comprehensive flow of materials, fuel, and the availability of their stocks in the warehouse for the rhythmic work of the MTE. Particular attention should be paid to the gasoline and fuel saving, considering that the cost of fuel is about 15% of the cargo transportation cost.

The objectives of the analytical study of subjects of labour (fuel, maintenance and repair materials, electricity)

is to control the implementation of the supply plan on the volume, range, according to calendar dates of delivery, security of these items, regulatory compliance costs, to determine the causes of the excess or decrease, etc.

All MTEs must have a certain stock of materials in order to ensure uninterrupted operation. The stocks, depending on the purpose, are divided into current and insurance. *The current stocks* provide a regular work in conditions of normal flow of material. *Insurance stocks* provide renewal of the current stocks in case of unexpected disruptions in supply.

The supply of the MTE with fuel and materials is conducted in two directions: for a reporting period and for a certain date. It should be calculated the plan performance percentage in order to determine a resource endowment over the periods of time (month, quarter, year). This indicator is defined as the ratio of the quantity of material received to the amount of material specified in the supply plan.

The comparison of actual balances with the established norms of stocks characterizes the shortage or excess of materials in the warehouse of the enterprise. For operational stock management, it should be calculated the index of material ability, which is defined as a ratio of the material balance at specified date in physical terms to the average daily discharge according to the plan in the future (next) period.

The deviation of the actual consumption of materials from a planned one can be due to two factors:

- 1) the deviation of the effective capacity from the standard one;
- 2) the deviation of the actual consumption of material per unit.

The norm for consumption is a maximum allowed value of consumption per unit. It is based on technical and economic calculations that take into account working conditions, and are systematically reviewed considering technical advances and improving the organizational management. The actual average material consumption per unit of the transport work performed is called a *specific consumption* (t). This indicator is defined as the ratio of the total amount of consumed material, fuel for the current period (M) to the volume of transportation (Q) for this period:

$$m = \frac{M}{Q}. \quad (11)$$

The index of specific consumption of material is a comparison of the actual rate of consumption with the norm (planned rate of consumption) or with the rate of consumption for the reference period.

The change in the rate of consumption of one type of material, fuel for the implementation of one type of transportation is characterized by an individual *index of rate of consumption change of the material*.

$$I_{1/0} = \frac{m_1}{m_0}, \quad (12)$$

where m_1 , m_0 – the rate of material consumption in the current and reference periods..

The amount of savings or overspending of materials for conducting transport operations can be calculated by formula

$$E(B) = (m_1 - m_0) \cdot q_1, \quad (13)$$

where q_1 – volume of transport work in the current period.

The sign "-" before the result means saving E, and the sign "+" - overspending B.

If it is necessary to estimate the rate of consumption of a material used for the production of several types of products, the formula of the aggregate of the aggregate specific consumption index:

$$I = \frac{\sum m_1 q_1}{\sum m_0 q_1} = \frac{\sum M_1}{\sum m_0 q_1}, \quad (14)$$

where m_1, m_0 – the specific consumption of material for each type of product, respectively, in the current and base periods;

q_1 – the number of items of each type produced in the current period;

$\sum M_1$ – the total consumption of material for the output of all products of the current period.

The difference between the numerator and the denominator of the aggregate index shows the saving in material (overspending) of the material.

Individual and aggregate indices are used to control the fuel consumption, but in this case there are certain features of the use of such indices. There are two types of fuel consumption norms for motor transport: linear (individual) and group (specific).

The linear norms are established differentially for different types of hauling stock. For passenger cars, buses, truck-taxis, and also for trucks, whose work is not calculated in ton-km, fuel consumption rates consist of a norm per 100 km and 100 tkm of hauling operations. The fuel consumption rate for dump trucks is determined for 100 km and for each haul with cargo. The linear norms are nationwide.

The group (specific) rates of fuel con-

sumption are developed per unit of hauling operation by type of transport (per 1 ton/km, passenger/km, 1 paid km) based on linear norms. They are approved by the top management body. They are called the rates of consumption by standard. The enterprises control the implementation of both direct and group specific fuel consumption rates.

When controlling the implementation of linear fuel consumption standards for each brand of cars, buses, truck-taxis, trucks, working on hourly payments, individual indexes are used, which are calculated according to the formula:

$$i_{1/0} = m_1/m_0, \quad (13)$$

where m_1 – the average fuel consumption per 100 km in the current period;

m_0 – the fuel consumption per 100 km.

The economies or fuel overexpenditure is determined by the formula:

$$E(B) = (m_1 - m_0) \cdot L_1 / 100, \quad (14)$$

where L_1 – mileage of cars of a definite model in the current period, km.

The utilization efficiency of materials and fuels can be characterized by a change in the materials-output ratio (the fuel capacity), which is defined as the ratio of the total cost of consumed materials (fuel) to the total output expressed in terms of money (commercial products in current wholesale prices for auto repair enterprises).

The change in the material capacity (the fuel capacity) is determined by the index of the change in the material consumption:

$$I_{.m} = \frac{B_{m1}}{D_1} : \frac{B_{m0}}{D_0}, \quad (15)$$

where B_{m1}, B_{m0} – the total cost of materials (fuel) in the current and base periods;

D_1, D_0 – total revenue in the current and base periods.

The decrease in the material and the fuel consumption demonstrates the in-

crease in the utilization efficiency of operating and repair supplies and fuel. The expense tracking of fuel for each car is based on the waybill. It is entered the fuel availability and fuel received in the waybill when leaving a garage and on return. These data allow you to determine the actual fuel consumption.

In our opinion, it is advisable to apply economical and mathematical methods for efficient management of current assets of a motor transportation enterprise, namely, extrapolation methods, since they, in contrast to other economic and mathematical methods, have significant advantages, namely:

- 1) simple method that may be used by a wide range of specialists;
- 2) possibility to use portable and uncomplicated devices in order to make calculations;
- 3) speed of calculations in the online mode;
- 4) availability of a relatively small amount of information.

The proposed method involves the use of analytical indicators of time series, which are given in Table 2.

The trend equation is a dependence that is used to analyse trends based on the analytical indicators of time series and to construct the forecast, taking into account the regularities that have been developed in the "prehistory".

The trend, which is usually called the time trend, reflects the changes of under-study process in time. The analytical trend alignment is a fairly common method of forecasting. The trend extrapolation can be applied when the development of the phenomenon is followed by the formula, and the conditions that determine the trend in the past do not undergo significant changes in the future.

Trend equation can be described by a wide range of dependencies, given in Table 3. In order to use the trend as a forecasting tool, it is necessary to evaluate numerically the parameters of the equation (a_0, a_1).

The parameters of the equation are determined using the method of least squares

$$\sum (y_i - \bar{y}_i)^2 = \min,$$

where y_i – actual value;

\bar{y}_i – calculated value of the function,

which is determined on the basis of the selected equation.

Table 2. The main analytical indicators

Indicator description	Calculation formula
1. Absolute increase - chain - basic	$\Delta Y_i = Y_i - Y_{i-1}$ $\Delta Y_i = Y_i - Y_1$
2. Average absolute increase	$\bar{Y}_n = (Y_n - Y_1) / n - 1$
3. Increase ratio - chain - basic	$K_p = Y_i / Y_{i-1}$ $K_p = Y_i / Y_1$
4. Increment rate	$K_{up} = K_p - 1$
5. Average growth rate	$\bar{K}_p = \sqrt[n]{Y_n / Y_1}$

6. Average rate of increase	$\overline{K}_{np} = \overline{K}_p - 1$
7. The absolute size of 1% increase - chain - basic	$\overline{\Delta y} = Y_i / 100$ $\overline{\Delta y}_{1\%} = \overline{\Delta y} / \overline{K}_{np}$
8. Advance ratio	$K = Y_i / Y_{i-1}$

Table 3. Equations used to construct trend extrapolation

Type of relation	Formula of the equation
1. Linear relation	$Y = a_0 + a_1t$
2. Quadratic dependence	$Y = a_0 + a_1t + a_2t^2$
3. Power-law dependence	$Y = a_0l^{aj}$
4. Exponential	$Y = a_0a_1^t$
5. Gompertz's	$Y = a_0a_1^{a_2t}$
6. Hyperbolic	$Y = a_0 + (a_1/t)$

The quality of the equation is estimated by the system of indicators. The most important of them is the pair correlation coefficient for the linear equation and the pair correlation ratio for all nonlinear equations that reflect the condensation of the connection between the score and the factor.

Conclusion. Analysing the theoretical basis for the current assets analysis of motor transport enterprises, it can be drawn the following conclusions.

First, it is necessary to understand that current assets is a single value substance, that is, a single cumulative mass of value that turns into a current capital in the process of business activity of an enterprise in order to gain economic benefits.

Secondly, the principle of systemic relations requires the definition of links between elements of the management system that ensure its integrity, functioning and development. The analysis is considered as a functional element of current assets management.

Thirdly, accounting registers are the main information base for the analysis of

current assets. They reflect the movement and use of current assets, financial and statistical reporting.

Fourth, the system of integrated economic analysis of current assets assumes the use of its various types. Retrospective analysis is carried out for the reporting period and gives an opportunity to make a closer study of all parameters of the activities of the motor transport enterprise. At the same time, traditional methods of analysis are used, namely: comparison, grouping, detailing and elimination.

Fifth, the analysis of current assets requires an assessment of the effectiveness of their use and optimization of the structure. It is carried out in the following consecutive stages: dynamics of the total value of current assets is considered; structure of the current assets of a motor transport enterprise is analysed in terms of their main types.

Sixth, the retrospective analysis is performed on the basis of absolute values. It helps to increase the visibility of the changes in the indicators that were studied within the observation period.

Seventh, the results of the retrospective analysis are complemented by analytical calculations of a prospective nature. In this study, the extrapolation method was used, as a main method that came from the trends of the changes in the statistically established quantitative characteristics of the current assets.

Eighth, apart from the traditional methods of economic analysis, it is appropriate to apply economic-mathematical methods and models.

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