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ECONOMY METHODS OF IMPROVE THE FINANCIAL RELIABILITY OF INDUSTRIAL CORPORATE CAPITALS

The author in the processes of justification, explanations and proofs of the main organizational modes of modernization mechanisms of industrial corporations' working capital management, first, identified the key features of the sequence of obtaining secondary information for receivables management, secondly, developed the methodology of information support of the working capital analysis and management and methodological foundations of the search for reserves to accelerate turnover of circulating capital, in the third place, proposed the options mechanisms for achieving the standards of financial stability in a formalized way by controlling the turnover of working capital and the approach to obtaining information to analyze the patterns of the circulation of working capital, and fourth, grouped assets and liabilities by the levels of manageability.

Subsequent studies should be devoted to solving of a spectrum of problems regarding the development of working capital analysis and management functional systems at the industrial corporations, which involve the search for integration of their components, corresponding to different types of working capital, and use of optimization approaches to study the indicators of turnover working capital of corporations in the process of regulation of the working capital structure.

Keywords: associations, corporation, corporate capitals, financial reliability, industry, management, methods, organizational modernization, working capital.

Кудря Я. В. ЕКОНОМІЧНІ МЕТОДИ ПІДВИЩЕННЯ ФІНАНСОВОЇ НАДІЙНОСТІ ПРОМИСЛОВИХ КОРПОРАТИВНИХ КАПІТАЛІВ

Під час обґрунтування організаційних напрямків модернізації механізмів управління оборотним капіталом промислових об'єднань (корпорацій) автором визначено ключові особливості послідовності одержання вторинної інформації для управління матеріальними активами, розвинуто методику інформаційного забезпечення

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аналізу і управління оборотними коштами, покращено методичні засади пошуку організаційних резервів прискорення оборотності оборотного капіталу корпорацій, сформовано та запропоновано організаційно-економічні механізми досягнення норм фінансової стійкості у формалізованому вигляді шляхом управління оборотністю оборотного капіталу корпорацій, ефективний підхід до отримання корпоративної інформації, яка необхідна для проведення аналізу закономірностей кругообігу оборотних коштів, згруповано активи та пасиви за рівнями керуваності.

Ключові слова: корпоративні капітали, корпорації, методика, об'єднання, оборотні засоби, організаційна модернізація, промисловість, управління, фінансова надійність.

Formulation of the problem

Political and economic crises, lack of economic growth, ineffective monetary policy, devaluation, increase the money supply, inflation, reduction of loan portfolios and lending, the crisis of production, low efficiency of industrial policy, competence and skills of managers of industrial corporations, production breaks and cooperation chains, the technological gap and energy intensity of industrial products and costs of industrial production, low level of competitiveness of industrial activities, lack of the development of new industries and industrial production and loss of markets are the key

systemic factors of returning financial difficulties, the deterioration of the basic indicators of activity industrial corporations in Ukraine. Consequently, the financial status of many domestic industrial corporations is unsatisfactory, which is reflected in excessive loan financing and low profitability of activity of the Ukrainian industrial corporations. They are prone to failure credit obligations, which leads to a critical deterioration in the financial condition of industrial corporations, and financial crises, bankruptcy. The possible changes in the financial condition of industrial corporations in the country given below (Table. 1).

Table 1

Forecasts the changes in financial condition of Ukraine industrial corporations

Scenarios of changes in financial condition of the corporations	Forecasts marks of changes, bill. UAH				
	2012	2013	2014	2015	2016
pessimistic	-3.3219	-4.9518	-6.5817	-8.2116	-9.8414
realistic	0.0234	0.0195	0.0157	0.0118	0.0079

Resource: [21].

One of the important challenges is the rapid detection of threatening signs of deterioration in the financial condition of industrial corporations and the development of measures aimed at elimination of conditions and factors that contribute to the onset of corporations financial crises. Their actual implementation is provided by genesis financial industry corporate management.

The improvement and development of the systems of financial management of industrial corporations is in the process of implementation of practical modes of modernization of industry corporate financial management. The important place in system of measures on development of system of financial management of industrial corporations is regulation of the working capital structure of capital. The importance of working capital lies in the fact that these material assets are necessary and integral, components of system the internal economic mechanisms of activities of industrial corporations. They ensure processes of production and sales of industrial products.

Revolving funds are characterized by flexibility – if changes in turnover of the industrial corporations working capital, the same volume of realization the industrial products can be achieved using different values of corporations' capital. Therefore, the practical implementation of the modern trends of formation and modernization, the development of regulatory mechanisms of working capital, in particular through measures to accelerate the turnover of working capital of industrial corporations, will allow to improve structure of assets and liabilities, financial position of corporations, warning of financial crises.

Analysis of recent researches and publications by problem

Issues of methodology and techniques financial management were considered in [1-23] etc. On their pages no-

ted the importance of research and identifying the common, sectoral and corporate preconditions, the most effective practical strategies to prevent deterioration, to improve the financial situation and the approaches to the management of financial resources.

However, economic studies and publications of the present time insufficient attention is paid to tactical, operational activities for development of the systems of financial management of industrial corporations, which are formalized in algorithms of actions to prevent financial threats and crises, to improve the financial condition of corporations. Logically and obviously, the construction of algorithms should be based primarily on the generalized effects of economic diagnostics of the financial state of industrial corporations.

The main feature of diagnostics of the financial state of industrial corporations is the existence of various parameters. Its also determine the financial condition of the industrial corporations. As known, this is a business activity, liquidity, solvency, profitability and financial stability. The other characteristics of the financial state of industrial corporations often are parameters that determine the financial condition of corporations. For example, in [11] proposed an economic term «lending capacity». So, under it determined «the maximum amount of borrowed funds, which is able to keep the enterprise in structure of sources of formation the economic resources, which it is with high degree of probability will return the principal and the interest» [11, 203].

In [1; 8; 19] indicated that complex assessment of financial state of industrial corporations can obtain, taking into account simultaneously the main parameters that determine the financial condition of corporations. Following application of effective approaches to the inte-

grated assessment of their financial condition gave reason to formalize the management of financial reliability in practice. By the way, in [8], the method of management of financial reliability, which provides for the normalization of the integral index of financial sustainability, including through the preparation of the corporate payment calendar, which is a prerequisite system (logical and rational) of allocation.

Domestic and international experience in financial management of industrial corporations has led to the formation reasonable system of indicators for diagnostics of the financial condition of corporations, first of all, the recommended values of the solvency and financial reliability. In this regard, bringing the existing values of the indicators financial status of corporations to the standard adopted for the important practical modus modernization of the financial management of corporations.

Using integral indicators of the financial condition of industrial corporations should create, develop mechanisms to achieve the recommended values of indicators characterizing the financial condition of corporations. It's not unreasonable to assume that an important component of the system and mechanisms needs to be regulation of tangible assets, which are more amenable to managerial influences in the short period of time, that is the structure of working capital.

Task statement

The purpose is to study the possible organisational areas of the modernization of the management mechanisms for the tangible assets that are the most amenable to management actions in the short term, for example, proposals and recommendations for development of information support of process analysis, control and regulation structure of current assets of domestic industrial corporations.

The development of information support of the analysis and working capital management provides justification, explanation and evidence of its importance, the grouping of the information required for assessment of working capital of industrial corporations and submission of the recommendation of measures which are aimed at structuring and optimization volumes of working capital in the complex, a method of forming arrays of primary data to analyze the patterns of circulation and technology of obtaining secondary information which is necessary for organization of accounts receivable management.

Recent results of research the problem

The performance of the industrial corporations is determined by the quality of managerial decisions. In practice, it depends on how complete and practical, timely and accurate is the corporate information. The development and adoption of sound management decisions that will ensure profitability for the industrial corporations need to develop information support analysis and supply management, production, sales industrial products. In addition to information about the environment activities, information system analysis and control should have the necessary methodological, technical and software which will allow timely application of effective procedures for processing information, including obtaining, processing, preserving and transmitting.

The technical design of information system analysis, management of industrial corporations consider that the

activities provided by the functioning of subsystems, which meet the components of the internal economic functioning. Current assets are the basis of financial security (capital) supply, the industrial production and the sales industrial products.

Security industrial corporations and the rationality of the allocation of working capital between working capital, working funds is the continuity and synchrony of the processes of supplying, production, sales of industrial products. The importance and complexity of the task is effective (the adequate, balanced, prompt, efficient, timely, high-quality etc.) the optimal volume of working capital of industrial corporations by any and every of the components, for which there are no threats to stop the process of industrial production and excessive working capital balances.

The economic analysis of practices and development of industrial corporations showed that many of them, there is an urgent need for structuring and optimization of the volume of working capital with due account of their specificities. The specificities of the structuring and optimization of volumes of working capital lies in the fact that the structuring and optimization can't be carried out simultaneously. Their production are continuous processes, the implementation of which is entrusted to the information management system analysis and management of working capital, to use of modern and effective mechanisms.

Attention at the corporate, organizational and technical design of information systems' was focused in [6; 22]. At that time described in detail theoretical, applied and fundamental imperatives, tools and approaches to formation of the information systems managerial decision-making, and investigated the main regularities of the genesis and the functions of systems in different circumstances, in terms of activities. Also noted the importance of the information flows and process incoming, formation of arrays the primary and secondary information are as much the prerequisites for the adoption of a quality management decisions [12; 15]. In particular, in [12, 275] it was noted that a key condition for receiving the secondary information used for decision-making is the availability of methodological support for assessment, processing and transformation of the primary into the secondary.

The separate issues of information provision of analysis and management of financial resources industrial corporations covered in [1; 3; 9]. However, the analysis showed that the provision of information of working capital management has not allocated to a subsystem of information security.

Since the problems of formation and development of systems analysis, working capital management is not solved in majority of industrial corporations and because they are real still, there is a need to search for new approaches to the development of databases and methodological support of the processes of information processing.

The formation and development of information management systems analysis, industrial corporations working capital management involves use of methodological guidelines for their implementation in practice. A logical generalization of the results of recent economic research

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gives the opportunity to propose methodological rules, which are reproduced below (Table 2).

The essence of information systems industrial corporation is different from the essence of the system of information support of managerial decision-making. In our view, the information system of industrial corporations, in addition to methodological support, provides tools of the collecting, storing, stockpiling and transfer of corporate information. Otherwise, the first term is broader in essence from the systems of information support of managerial decision-making. Information systems design of industrial corpora-

tions requires special technical knowledge, the formation of the systems of information support managerial decision-making analysis of regularities of economic processes.

We believe that the system of information support of the analysis, management of working capital is a combination of databases of the information necessary for the analysis and management of working capital of industrial corporations and structured algorithms for processing arrays of information, which can assess the status of the use of working capital and to develop actions aimed at structuring and optimization of funds.

Table 2

Principles of formation the information support systems analysis and management industrial corporations working capital

Principles
fundamental
the immediate and unconditional correlation of database information with the methodological support of its processing (a kind of connecting link between primary and secondary information);
the integrated in information system analysis and management of industrial corporations;
the methodical and systematic updating of information for the analysis of working capital anagement;
the current input (primary) information is current, true, accurate and complete;
the system contain complete database information for analysis and working capital management of corporations;
the formation of arrays of input and output (secondary) information on the types, all industrial stocks, finished goods, receivables (for example, industrial products), cash on hand and in accounts and each of the components of working capital of industrial corporations, etc.
applied
the amounts of information allow an assessment of the status of use of working capital of corporations and to develop measures to improve the structure, capacity optimisation working capital;
the monitoring changes in the environment activities and identify needs for working capital;
the processing of primary information on industrial products and components working capital of corporations involves the use of optimization techniques, establish the best amounts of working capital in each stage of circuit;
the systematization of information on industrial products;
the systems include formalized procedures bring the arrays of input information into a form that makes it impossible and/or not interfere, does not interfere with the observance and application of section 1 of such, etc.

Resource: grouped by author.

The information for analysis and management of the working capital, database information needed for analysis and management, assessment of the working capital of

industrial corporations offered to group on the grounds, which are presented below (Table 3).

Table 3

Grouping of information for the assessment of industrial corporations working capital

Main criteria groupings by	Basic groups
according to the degree of aggregation	aggregated; unaggregated.
ready to use	intermediate; primary; secondary.
the duration of storage	long-term; short-term.
the source	external; internal.
the time of receipt	current; promising; retrospective.

Resource: grouped by author.

The primary information needed for assessment of working capital of industrial corporations derived from the sources of the unstructured information. In this case, the intermediate information is the result of processing the primary due to removal of unnecessary and bringing it to the common forms, which may use the information in practice with the use of formal methods.

Internal information for the analysis and management of working capital comes from internal industrial corporations environment activities. Accordingly, the external information received from the external environment.

The aggregated database information needed for analysis and management of working capital of industrial

corporations that provide volumes of data about many relatively similar objects with averaged characteristics; the unaggregated information properly describe any and every single objects.

The assessment of working capital of industrial corporations using long-term information makes its periodic revision as it is relevant for a long period of time. But short-term rapidly losing relevance due to its specific nature and continuously.

Modern economic studies of national practice and international experience of financial management industrial corporations show that information system analysis and working capital management must provide

information about the components of working capital, types of working capital. It is a derivative of information for analysis and working capital management. Its actual existence is a prerequisite for structuring an integral natural part of the process of optimization the volumes of working capital.

The author's alternative a typology of the corporate information to optimize the volume of working capital,

the working capital of industrial corporations given below (Table 4).

So, the results of the decomposition of the information for the analysis and management of working capital and components of its, the current assets, sources of the information are the main basis for carrying out financial management industrial corporations on the basis of indicators of financial strength and evaluation of working capital turnover corporations.

Table 4

Typology of the information to optimize the volume of industrial corporations working capital

The decomposition of information for the analysis and management of working capital on the basis of		
the components of working capital and revolving funds	the sources of information	
	of the external environment activities	of the internal environment activities
the inventories	the prices of resources which necessary for the storage of supplies and the material supply.	the physical volume of industrial production, its change over time, etc.
unfinished production	the prices of resources which consumed completely at the beginning of the production cycle, etc.	the duration of the production cycle, the technological features of industrial production, the rates of consumption of the resources.
the industrial products receivables	the prices and the accelerating calculations for industrial products.	the organic sales of industrial products, the current accounts receivable.

Resource: grouped by author.

The important modern direction of the development of systems of the financial management and improving financial performance of industrial corporations is the organization of long-term, medium-term credit obligations and accordingly improve the level of financial reliability in practice. In turn, an important means of improving the financial soundness consider bringing the structure of assets and liabilities to the condition under which corporations will be judged financially sound. So, practice of activity of industrial corporations and experience in the management of their financial resources, the methodology of the financial analysis lead recommended normative values of the domestic indicators of financial stability. Compliance indicators reduces the probability of financial crises, including account analysis and accounting intra-corporation factors in the business environment.

Among the main indicators that determine financial reliability and financial condition of industrial corporations, it is appropriate to highlight the following: its the autonomy and the coating.

To prove actual values of the coefficients of autonomy and coverage to levels that are not below the recommended standard values of the indicators characterizing financial reliability and financial status of industrial corporations offered by using method separatists of assets and liabilities that are more susceptible to changes in the composition, compared to the other. Similarly, in accordance with the theory of cost management, in such situation can encourage differentiation the assets and liabilities of controllability. We obtain the following results of groups the assets and liabilities for the handling, which are presented below by levels: high (cash and the equivalents, current liabilities according to calculation, payables and receivables), low (the equity, fixed and non-current assets), middle (inventories, loans, work-in-process etc.).

The grouping, using groups of assets and liabilities according to the degree of control is, in our opinion, a simple and effective approach to the presentation of the calculated values of the coefficients of autonomy and coverage to levels that are not below the recommended standard values of the indicators of financial reliability and financial status of industrial corporations. Thus they are brought without deterioration of financial results of the activity of industrial corporations.

Given the above, features of management the financial condition of industrial corporations we described by equation (1):

$$a + b = c + d + e + f, \quad (1)$$

where a – non-current, b – current assets (deferred costs), c – own capital, d – long-term, e – current and f – other liabilities with deferred income to simplify analytical expressions given relatively low weight in the majority of corporations are assumed equal to zero, UAH.

As other liabilities, including deferred income are assumed equal to zero, the recommendations about increase of the financial reliability and improve the financial condition of industrial corporations proposed to be formalized in the following way:

in the case of the recommended standard values of the coefficient of autonomy as:

$$c \geq d + e, \quad (2)$$

in a situation with the recommended standard values of the coverage ratio as:

$$b \geq 2e. \quad (3)$$

Taking into account that the rapid increase of equity capital (including share) is a complex task, assess opportunities for industrial corporations to achieve standards of

financial reliability for existing equity. It is necessary to evaluate the possibilities for reduction of the following values: non-current assets (e.g. by selling excess) and working capital of industrial corporations without deterioration of financial results of the corporate activities; the loan capital (at the expense of its individual components).

The reduction of assets by components borrowed capital should occur with the implementation of the equality (4):

$$a_n + b_n = c + d_n + e_n, \quad (4)$$

where subscript characterises the values after correction according to the following algorithm. If there are observed inequalities (5) and (6):

$$c \geq d_n + e_n, \quad (5)$$

$$b_n \geq 2e_n, \quad (6)$$

the task of improving the financial reliability and improve the financial condition of industrial corporations consider it done.

At practice, its should be noted that (5) in the absence of excess non-current assets is equivalent to the inequality (7) and (8):

$$b_n + a - c \leq c, \quad (7)$$

$$b_n \leq 2c - a. \quad (8)$$

But in the absence of excess fixed assets, (6) is equal to inequality (9) and (10):

$$b_n \geq 2(b_n + a - c - d), \quad (9)$$

$$b_n \leq 2(c + d - a). \quad (10)$$

Therefore, for parallel execution (5) and (6) decreases in the working capital of industrial corporations to values at which implement (8) and (10). In a situation when the decrease in working capital to spend is unlikely, it is to bring the actual values of the coefficients of autonomy and coverage of the recommended standard values, we recommend the implementation of measures for the

partial substitution of borrowed capital for their own short-term and long-term debt.

The decrease in working capital of industrial corporations to enhance financial strength and improve financial condition of corporations provides for implementation of measures to accelerate the turnover of working capital corporations. In this regard, there is a requirement for justification and explanation of regulations of turnover the components of working capital of industrial corporations, working capital categorical specific types of industrial activities. To develop and establish recommended values for the turnover ratio of the components of working capital, to carry out the proposed use for the basis of these values:

the estimated values of turnover of components of working capital of industrial corporations are the most profitable and financially sustainable (is analog method);

the actual values of industrial corporations working capital turnover, averaged over the previous periods, the activities of corporations, when turnover of individual components of working capital was the best, as recommended in indicator values (is average method).

Then the maximum value of the reduction of working capital of the industrial corporations by accelerating the turnover of the components of working capital (Δb) define the following formula:

$$\Delta b = \frac{g}{365} \times \left(\frac{365}{k_{bf} - k_{br}} \right), \quad (11)$$

where g – the annual volume of industrial production (UAH), k_{bf} – actual value ratios turnover and k_{br} – the recommended value ratios turnover are components of working capital.

The detailed search and identification of the reserves, acceleration of turnover of working capital of industrial corporations include the analysis of possibilities of the acceleration of turnover working capital for each the main directions of increase of efficiency of the use of circulating capital. In our opinion, directions should be conditionally distributed on such groups, which are presented below (Table 5).

Table 5

Directions group of increase the efficiency of use industrial corporations working capital

Groups directions (by stages of working capital)	Directions
the advances in inventories	the improvement of supply; to choose the best conditions for payments to suppliers; the reducing unit costs; to optimize intervals between deliveries; the improving standards of spare parts and the low value items of work; the rationalization reserves and insurance the reserves; to reduce waste and losses, etc.
the Industrial production	to reduce product cost and the duration of the production cycle; the rationalization of distribution expenses during the cycle; to improve valuation of deferred charges, etc.
the implementation in industrial products	to improve the management of accounts receivable; the selection of the best of conditions of the settlements with customers; the optimization of finished products; to optimize the most liquid assets (cash etc.) improving the uniformity of receipts from sales; to accelerate the product sales by using flexible pricing policies; the rational capitalization structure of the sources of working capital; to realize of surplus inventory, etc.

Resource: grouped by author.

For the most of working capital for fixed volumes of industrial production are optimal. Their realization will allow to obtain industrial corporations the most profit in

practice. In particular, this applies to current inventory. It is known that reducing of the time between the moments a regular supply of leads average inventories. This often

leads to increased costs for the organization of the material supplies and reducing costs that are directly associated with storing inventory. Conversely, due to the increase in time average rising inventories. At the end, we having a reduced level of expenditure on organizing the process of the material supply and increasing costs that are related to storage inventory.

Therefore, the achievement of optimality of current inventories on the balance sheets encourages to minimize corporate expenses on the organization of the supply and storage of the current inventories.

It should be noted that the use of the factors of independence, turnover of the working capital of industrial corporations, coverage, average duration of the turnover of working capital in financial management as the corporate sector does not provide full information about effectiveness of working capital. We given this fact, arrays of information describing cycle of working capital, propose to complement the profiles of turnover of working capital.

Profile of turnover of working capital is an analytical (graphical) description balance changes in working capital of industrial corporations in the manufacturing unit, of party of industrial production from the time of the payment and purchases, acquisition of the corporate resources (the components, materials, raw materials, etc.) to obtain funds for the sale of products to consumers.

If we make the assumption that the working capital of industrial corporations in the industrial production is the stage of the production stocks, unfinished production, finished goods and receivables, then the cycle time of turnover of the current assets can be expressed by next formula:

$$t_h = t_i + t_j + t_l + t_m, \quad (12)$$

where is t_i – the cycle of the time turnover of industrial corporations working capital in the processes of production and sales of industrial products, t_j – the average time storage inventories in the corporate warehouses for industrial production, t_l – the duration of the production cycle, t_l – the storage stocks of the finished industrial products to the corporate warehouse and t_m – the average length of the detention of receivables for industrial products on the balance sheets, days.

According to the average duration of the turnover of industrial corporations working capital in the industrial production offer calculated by the following formula:

$$t_o = \frac{((pt_i) + 0,5(p + q)t_j + (qt_l) + (rt_m))}{r}, \quad (13)$$

where t_o – the average duration of the turnover of working capital in the processes of the production and sales units of industrial products (days), p – the material costs for industrial production, q – the total cost and r – price of industrial production, UAH.

The duration of the turnover of industrial corporations working capital, which is calculated as the ratio of the number of calendar days in the year-to-turnover ratio of working capital determined by dividing the annual

volume of industrial production to the average annual amount of working capital of corporations, we defines possible average time of immobilization of working capital in practice circulation of them.

Therefore, the information system analysis and working capital management should contain comprehensive coverage and amounts of information not only on the average duration of the turnover of working capital of the industrial corporations by industrial production, but also on the components of turnover the current assets that are measured by (12).

On the peculiarities of the technology of arrays the secondary information in process of accounts receivable management, they are determined by the peculiarities of formation and development of the mechanisms for obtaining secondary arrays of the information that are basis for making effective management decisions that relate to the use of working capital. The main practical features include the optimal volume of working capital of industrial corporations. They are extremely important in cases when working capital is a leader in the structures of industrial corporations working capital. The last argument given is not only for receivables for industrial products.

So, between the time of shipment the industrial products, receipt of funds and the average receivables at the first approximation (i.e. without considering changes in the range and volumes of products) in the reporting period compared to the base year, there is a relationship:

$$d_1 = d_0 \times \frac{S_1}{S_0}, \quad (14)$$

where d_1 – the average receivables for the shipped industrial products in the reporting calendar year, d_0 – the receivables for the shipped industrial products in the base year (UAH), S_1 – the average time between shipment of industrial products and inflow of cash funds in the reporting calendar year, S_0 – the average length of time between shipment of industrial products and revenues in the base year, days.

Management decisions to reduce the level of accounts receivable with the same conditions of activity of industrial corporations leads to the granting price discounts for industrial products. While discounts can provide in situations where they really speed up the calculations for derived industrial products. Depending on the average time between shipment of industrial products and flow of funds, in practice there are a variety of discounts, each of which describe alternative interest.

Accordingly, the function of dependence of price discounts, which provided by industrial corporations, and receivables proposed to express as (15) and (16):

$$v = f(s), \quad (15)$$

$$v = v_{max} \left(1 - \left(\frac{S_3}{S_2} \right)^\alpha \right), \quad (16)$$

where v – the price discounts in fractions of a unit to current price level for industrial products as a function of the average time between shipments and receipts of funds,

S – the time between shipment of industrial products and the cash flow (days), v_{max} – the maximum price

discounts that provide for urgent payment of industrial products (fractions of a unit), S_3 – the average time between shipment of industrial products and the flow of funds in cases of providing price discounts, S_2 – base time between shipment of industrial products and the cash flow (days), α – dependencies parameter (defined by statistical methods).

The majority of theoretical and economy research indicate that the increase in the accounts receivable turnover by providing price discounts leads to a decrease in corporate profits. However, despite this, corporations have the opportunity to invest money from livelan receivables in investment projects. This will generate additional corporate profits.

It should be noted that the provision of price discounts is appropriate, if additional corporate profits from reinvestments the released parts of the receivables will be higher uncompensated operational corporate profits.

Therefore, a function for determining the optimal time between shipment of the industrial products and the cash flow can be expressed by the following formula:

$$Z(S_3) = -w \left(v_{max} \left(1 - \left(\frac{S_3}{S_2} \right)^\alpha \right) + \left(d_2 - d_2 \times \frac{S_3}{S_2} \right) x \right) \rightarrow max, \quad (17)$$

where is $Z(S_3)$ – the function to determine the optimal time between shipment of the industrial products and flow of funds, w – the annual volume of industrial products sold (excluding corporate taxes), d_2 – the underlying receivable for the shipped industrial production (UAH), x – the yield corporate reinvestment of the released receivables (fractions of a unit).

Equate the derivative (17) to zero, we obtain the next formula:

$$S_{3opt} = S_2 \left(\frac{d_2 x}{w \cdot v_{max} \cdot \alpha} \right)^{\frac{1}{\alpha-1}}, \quad (18)$$

where is S_{3opt} – the optimal average time between shipment of the industrial products and inflow of funds in the case of providing price discounts (days).

The base interval between shipment of the industrial products and the receipt of funds proposed to determine in corporate practice by the following formula:

$$S_2 = \frac{w}{d_2}, \quad (19)$$

according to (18) can be in the form of a following formula:

$$S_{3opt} = S_2 \left(\frac{x}{S_2 \cdot v_{max} \cdot \alpha} \right)^{\frac{1}{\alpha-1}}. \quad (20)$$

At the end, on the basis of (14) and (16) we calculate the optimal receivables and the price discounts, thanks to which accelerating the turnover of working capital of industrial corporations in practice.

Thus, it is reasonably possible organizational directions of the modernization of the mechanisms of management of industrial corporations working capital that are the most amenable to management actions in the short

term. It is a proposals and recommendations for development of the information support analysis, management and regulation of the structure of industrial corporations working capital.

Conclusions

In the process of justification of the organizational modes of modernization the mechanisms of management of industrial corporations working capital has been: developed the methodology of information support, analysis working capital management and methodological foundations of search the reserves of acceleration the turnover of working capital; grouped assets and liabilities for handling; identified the main features of sequence obtaining the secondary information to ensure receivables management; proposed the mechanisms for achieving the standards of financial stability in a formalized way by controlling turnover of working capital, its done at the approach to obtaining information to analyze the patterns of the circulation of working capital.

Subsequent studies appropriate to devote solving a spectrum of the problems of development the functional systems analysis and management of working capital the industrial corporations, which involve the search for integration of their components, corresponding to different types of working capital, and use optimization approaches to study the indicators of turnover working capital of corporations in the process of regulation the structure of working capital.

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