pKyiv National University of Trade and Economics
Department of Economics and Finance of Enterprise

FINAL QUALIFYING PAPER
ON THE TOPIC:

Solvency management of enterprise

based on materials of «Dveri Bilorusii» Ltd.

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Contents

ANNOTATION

Ibrahim Syamand Ibrahim. Solvency management of enterprise. - Manuscript. Final qualifying paper (project) in the specialty 051 « Economics, specialization Financial Management». - Kyiv National Trade and Economic University, Kyiv, 2018.

The final qualification work is devoted to the study of theoretical foundations and practical aspects of solvency management at an enterprise, its essence, systems and methods. The methodological principles and solvency management tools are considered. The work contains an assessment of the main indicators of solvency management within the current financial performance of Doors of Belarus. The suggestions for implementation of the system of improvement of solvency management of the enterprise are substantiated.

The results of the development can be used in the practical activities of the enterprise "Doors of Belarus" LLC.

Key words: solvency, management, optimal capital structure, price of capital, cost of capital, evaluation, performance.

АНОТАЦІЯ

Ібрагім Сиаманд. Управління платоспроможністю підприємства. – Рукопис. Випускна кваліфікаційна робота (проект) за спеціальністю 051 «Економіка, спеціалізаці «Фінанси підприємства». – Київський національний торговельно–економічний університет, К., 2018.

Випускна кваліфікаційна робота присвячена вивченню теоретичних засад та практичних аспектів управління платоспроможністю на підприємстві, його сутності, систем та методів. Розглянуто методологічні засади та інструменти управління платоспроможністю. Робота містить оцінку основних показників управління платоспроможністю в межах поточних фінансових показників ТОВ «Двері Білорусі». Обгрунтовано пропозиції до впровадження системи удосконалення управління платоспроможністю підприємства.

Результати розробок можуть бути використані в практичній діяльності підприємства ТОВ «Двері Білорусії».

Ключові слова: платоспроможність, управління, оптимальна структура капіталу, ціна капіталу, вартість капіталу, оцінювання, результативність.

INTRODUCTION

The urgency of the study of solvency management problem of an enterprise lies in the fact that it is considered as an integral attribute of financial policy in the ordinary market conditions of management. The level of solvency of an enterprise is also an important indicator of not only an effective policy of asset formation and financing, but also a general level of financial discipline at an enterprise. Another important argument for the relevance of the chosen topic of the diploma research is that enterprises in the economy today have to cooperate with a number of financial banking and parabank institutions, which are mostly lenders or guarantors. These institutions, when deciding on cooperation with a client, first of all analyze the level of its financial stability, which determines the ability of the client (creditor) to pay off their debt obligations.

Solvency of an enterprise is a complex concept, which is the result of the interaction of all elements of the system of financial relations of the enterprise, determined by a set of production and economic factors and is characterized by a system of indicators that reflect the availability, allocation and use of financial resources.

A systematic analysis of solvency of the enterprise, its liquidity and financial condition is also necessary because the profitability of any enterprise, the size of its profit depends largely on its financial condition. And the latter is determined by the ability of the enterprise to receive revenues that ensure the profitability of its operation, the ability to timely settle their obligations and form their own capital. Take into account the solvency of enterprises and banks, considering its mode of lending and the differentiation of interest rates.

The problem of solvency management is devoted to many scientific works of foreign and domestic scientists, such as: I. Ansoff, A. Weisman, A. Voronkov, V. Galasyuk, M. Goltsberg, V. Grinev, M. Kovalev, T. Lepeiko, T Momot, V. Ponomarenko, V. Hausta, A. Yakubovich, O. Yastremskaya. In some works solved the problems connected with attraction of solvency management on the basis of calculation of the indexes of solvency of the enterprise.

The purpose of the research is to generalize theoretical and methodical approaches to solvency management of the enterprise and the development of practical recommendations for its improvement.

To achieve this purpose, the following tasks were solved:

- define the economical essence of enterprise solvency management;
- have a look through the methodological bases of enterprise solvency management (goal, tasks, stages of solvency management);
- navigate through the methods of evaluation the solvency of enterprise;
- provide the analysis of asset's dynamic and structure;
- have analysis of liabilitie's dynamic and structure;
- provide the analysis of the level of enterprise's solvency and influence the main factors on;
- suggest the proposals of creation informational and methodological improvement solvency management of enterprise;
- draw a creation the financial plan of enterprise;
- provide evaluation the future solvency of enterprise.

The subject of research is the solvency management process.

The object of research is the solvency management mechanism.

In the final qualification work, the following methods were used: historical and comparative analysis, which allowed to follow the evolution of investment analysis in the management of the enterprise; the system approach became the basis for the definition of the essence, factors, approaches to managing the investment activity of the enterprise. Investigation of investment planning indicators was done using index methods. In analyzing the factors of influence on investment activity, an approach based on the studied relative indicators of the ratio of income, expenses, results and resources involved in the investment process of the enterprise is used. An assessment of the effectiveness of investment planning is carried out using index and qualitic analysis. The justification of the proposal for the formation of an optimal investment portfolio is based on the methods of solvency management analysis and forecasting.

Scientific literature, monographs of scientists, periodical literature, legislation of Ukraine, Internet sources were the theoretical basis for writing the work. Information sources in the research process are the internal management and accounting information from the enterprise - the research object for 2015-2018 years.

The level of practical value of the work is the possibility of using the results of empirical research in the formulation of recommendations for the enterprise «Dveri Bilorusii» Ltd.

The final qualifying work consists of an introduction, 3 sections, 9 subunits, conclusions and proposals, a list of sources used, and applications. The work is presented on 110 pages of computer text, contains 21 illustrations, 39 tablesm, 3 applications, the list of sources used has 74 titles.

CHAPTER 1
THE THEORETICAL BASES OF ENTERPRISE SOLVENCY MANAGEMENT

1.1. The economical essence of enterprise solvency management

Solvency management issues are referred to many aspects which are closely connected with the problem of financial stability and sustainable economic growth. Such aspects are:

1. the evaluation of liabilities;
2. the evaluation of assets;
3. the level of the premiums of long term policies and
4. reinsurance [25].

A solvency margin defined as the difference between assets and the expected value of liabilities would not be a reliable measure of the financial state of a company, if either of these-or maybe both-are not evaluated in a reliable way. The fixing of solvency margins is not an isolated problem, on the contrary it is only part of the security measures which must all be managed at the same time [8].

However, if the problem of solvency is understood in as wide a sense as is mentioned above, the subject has apparently grown so much that it would be inpracticable to discuss the whole of it at one meeting. That is why it seems to be advisable to limit the scope to the solvency problem “in a narrower meaning’’, i.e. to the solvency margin question only and to give up items 1-3 mentioned above and also partially item 4 and let them be discussed at some other meeting or in some other organisation [11].

In principle, the balance sheet represents no more than the Directors’ opinion about the financial position of the company. There is considerable uncertainty about the true amount of the liabilities and the realizable value of the assets. The auditors may place some restraints on how the Directors present the position but their role is largely confined to ensuring that what the Directors have done is reasonable.

There is in fact no single correct value that can be ascribed to either assets or liabilities. Different values may be appropriate according to one’s perspective. Shareholders want a “true and fair” view, authorities want a cautious assessment of the position and tax authorities want as little as possible to be offset against taxable profits, to name but three interested parties. A balance sheet which shows a solvent position should reflect an expectation that the assets will be adequate, but it may, either deliberately or inadvertently, present a misleading picture. It certainly does not give any idea of the probability that the assets may prove to be inadequate to meet the liabilities.

Reserving standards are frequently ill-defined or non-existent and do not require special provision to be made to cover the effects of changes in the value of assets on their adequacy to meet the liabilities. Problems may arise from some or all of the following [35]:

adverse run-off of existing business;

poor underwriting experience;

failure to recover from reinsurers;

falls in asset values;

excessive expenses;

mismanagement, negligence or fraud.

A more extended description of the factors affecting solvency and a discussion of the interaction between solvency margin requirements and standards for technical provisions may be found in a paper by Davydenko N. [12].

The object of a statutory solvency margin is two-fold. It reduces the probability that the assets will prove inadequate to meet the liabilities and it provides a buffer against further deterioration in a company’s financial position which can occur in the period before its authorization to write new business can be withdrawn. The effect of a statutory minimum requirement is in practice also to set a somewhat higher formal standard in the market place.

Throug the question research we propose to view different scientific approaches on economic essence of company solvency (tabl. 1.1)

Table 1.1

Different scientific approaches on economic essence of company solvency

Author	Economic essence of company solvency
Khylvalev V.V., Kreinina M. M. [26]	availability of financial resources of the enterprise and their equivalents are sufficient to pay for accounts payable, which requires immediate repayment
Blank I.A. [7]	Solvency measures a company's ability to meet its financial obligations. Short-term solvency is often measured by the current ratio, which is calculated by dividing current assets by current liabilities. Longer-term solvency is evaluated using the solvency ratio, which divides the company’s net worth by its total assets.
Kravchenko L.I. [28]	solvency refers to an enterprise's capacity to meet its long-term financial commitments.
Kulik A.V. [32]	that a company is able to pay its obligations when they come due
Makarchuk I. [38]	the ability of a business to have enough assets to cover its liabilities
Neopochatenko O.A. [45]	the company's ability to comply with current and external obligations
Paliy G.V. [50]	solvency is characterized by a sufficient amount of current assets to meet its obligations for the year. Company is solvent if its total assets exceed current
Sitnik G.V. [61]	solvency depends on the availability of working capital and the ability to cover losses

Khylvalev V.V., Kreinina M. M. [26] determened “solvency” as "the presence of company resources and cash equivalents sufficient to pay for accounts payable, which requires immediate repayment" [26]. To give this definition there is a need allegations that the company must have sufficient funds to pay short-term obligations and to continue its production activities. But other than those provided short-term obligations in due time he will also pay long-term loans and borrowings maturing can approach and enter the next period.

An important scientific and practical aspect into account Blank I.A. [7]: "Solvency means the sufficiency of liquid assets to repay at any moment all its short-term obligations to creditors." As can be seen from definition, the authors emphasize the role of liquidity to quickly repay short-term loans and the need to maintain sufficient levels.

But there are also several different views when solvency is associated with the ability to pay for long-term liabilities and the ability to pay short-term obligations - called liquidity [5]. Thus, representatives of the second approach Kravchenko L.I. [28] under solvency understand "the company's ability to timely and fully pay for their long-term liabilities" or include "... to short-term liabilities Long-term loans and borrowings repayable in the next period ". This approach supports and Kulik A.V. [27], stating that "... the solvency of the company is defined as the ability to meet the obligations of the company (short and long) all the assets".

Given this approach, solvency means the sufficiency of liquid assets to repay at any time all of its short-term liabilities to creditors. " As can be seen from the definition, the authors emphasize the role of liquidity for the quick repayment of short-term loans, as well as the need to maintain its sufficient level.

By Makarchuk I. [38] approach treats the concept of solvency as "the opportunity of enterprise financial resources available in time to repay its term liabilities"; Neopochatenko O.A. [45] - the ability of a business to have enough assets to cover its liabilities, Paliy G.V. [50] - both enterprise readiness timely fulfill its payment obligations, that the company is solvent when it has sufficient cash assets to pay for current obligations that require immediate repayment.

In our opinion, the authors of this approach do not see the difference between such characteristics of the company as solvency and financial stability. At the same time, "the main sign of sustainability is the availability of net liquid assets, which are defined as the difference between all liquid assets and all short-term liabilities at one time or another". The assessment of solvency is based on the characteristics of the liquidity of assets, which means the ability to turn the asset into cash ". It should be noted that the essential point of this statement is a mix of concepts of solvency and its indicators.

For the approach of Sitnik G.V. [61] is characterized by the following definition: solvency is characterized by a sufficient amount of current assets to meet its obligations for the year. Company is solvent if its total assets exceed current. The authors of this approach do not see the difference between the characteristics of the enterprise as solvency and financial stability. Some defining solvency as "... the sufficiency of liquid assets to repay at any time all its short-term obligations to creditors' financial stability characterize as" ... a guaranteed solvency, independence from accidents and conduct market research partners. " The "main feature of sustainability - is the presence of net liquid assets, defined as the difference between all the liquid assets and short-term obligations at all or that time". Solvency Assessment is based on the liquidity characteristics of assets, which means the ability of converting assets into cash" [61]. It should be noted that a significant aspect of this statement is mixing concepts of solvency and its performance. In our opinion, it should be understood as the performance characteristics of solvency and not identify them. This approach is not conducive to the proper understanding of the essence of solvency.

In our opinion, it is necessary to understand indicators as a characteristic of solvency of an enterprise, and not to identify them. Such an approach does not contribute to the correct understanding of the essence of solvency of the enterprise.

A problem assessment of solvency management is its differentiation from other characteristics of financial condition. Value concepts of "company solvency" with other characteristics of enterprise financial condition shown in Fig. 1.1.

Thus, the content solvency characterize optimal formation and use of financial resources needed for normal production and business activities. By own financial resources available to the company, include net income and depreciation. External signs solvency serving entity. It expresses the firm's ability to meet its financial obligations arising out of the commercial credit and other payment transactions nature. Objective analysis of solvency is to assess the size, structure and accountability of assets and liabilities of the company.

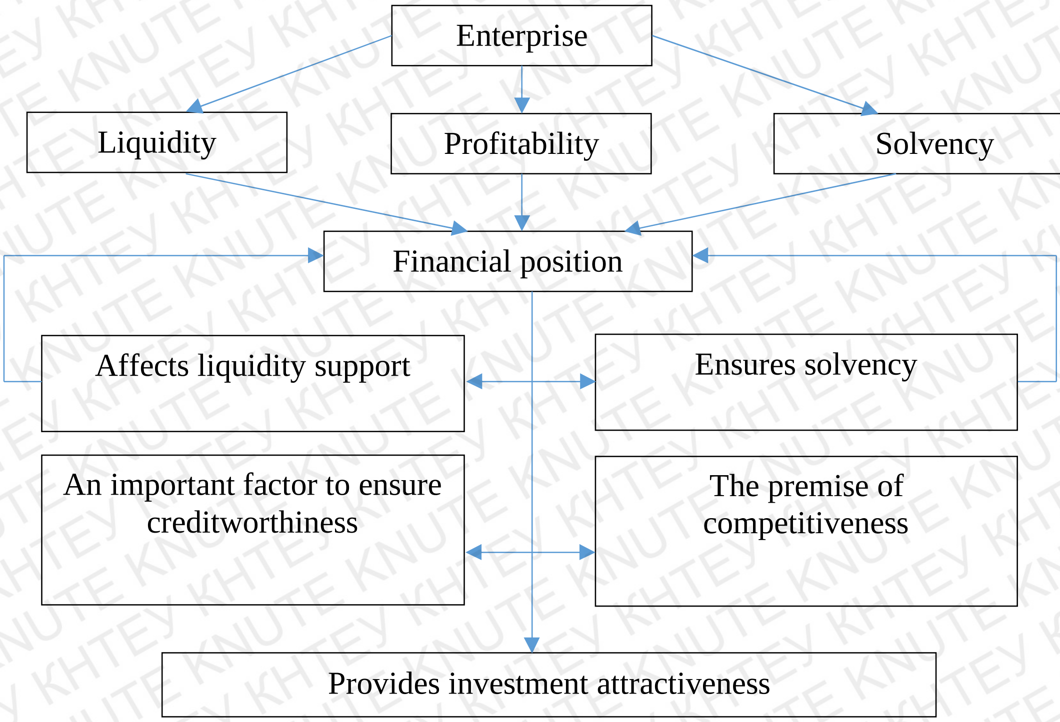

Fig. 1.1. The impact on the solvency of other characteristics of enterprise financial condition [16]

The volume and structure of financial resources must meet the needs of the market and the need of enterprise development, as insufficient financial stability could lead to insolvency, bankruptcy and liquidation, and surplus - to prevent development costs burdening businesses holding excess reserves and reserves.

Key aspects of of enterprise financial condition are requirements related to:

- Risk management, including risk-management strategy, policies, processes and internal reporting procedures
- Internal control, including internal control framework and appropriate reporting procedures to ensure compliance with applicable laws and regulations, efficiency of an undertakings' operations and reliability of information used
- System of governance, including risk management, actuarial, compliance and internal audit function

- Supervisory review of undertakings' risk management and governance system, aiming to ensure undertakings' are well run and meet risk management standards.

The analysis of scientific papers highlight the main features allow things to pay attention to researchers in the study of economic categories "solvency management", the main of which is shown in Fig. 1.2.

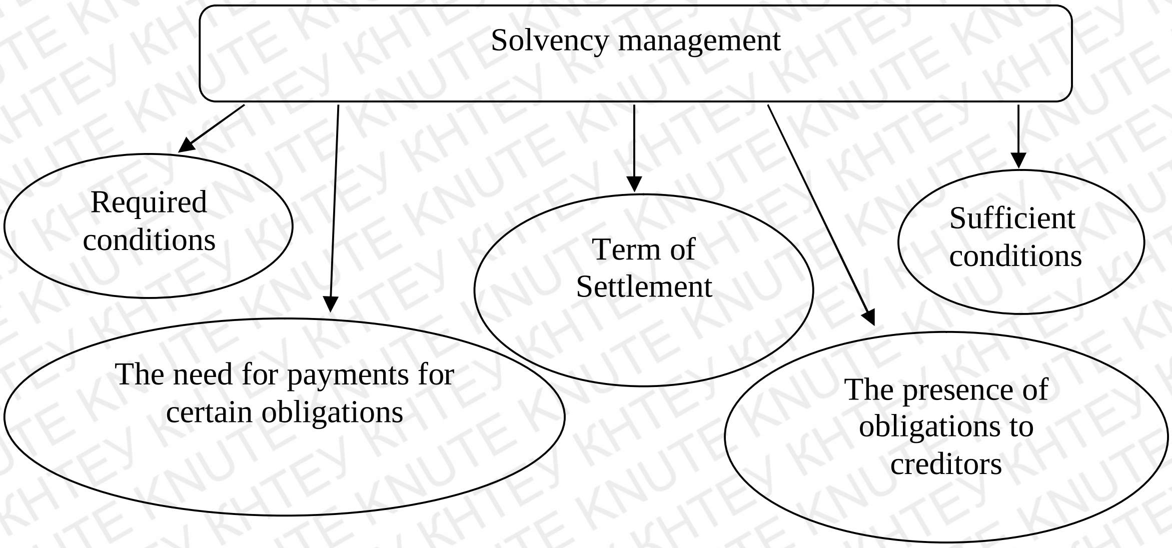

Fig. 1.2. The main components of meaningful term "solvency management" [19]

From Fig. 1.1 shows that the known, the most common definitions of "solvency management" can identify five specific content components. These are: necessary and sufficient conditions for achieving effective enterprise class, limit the settlement period, the need for payments for different types of obligations and commitments to the presence of numerous lenders.

Thus, the necessary conditions of solvency management scientists include the handling with availability or adequacy of the size, resources, working capital, cash resources and cash equivalent assets, liquid assets, current assets of different levels of liquidity, financial resources and other assets, mobile financial resources (cash, goods (shipped not paid by buyers for safekeeping), excessive inventories of finished goods, receivables, etc.) of assets, suspension control which does not, see chynyaye loss of value. [19]

All companies subject to the Solvency management must demonstrate that they have implemented an effective governance system, including risk management and internal control. Solvency management may be described on the organizational arrangements of an insurer's internal control and risk management process (Appendix 1).

We believe that the ability to pay debts arising upon availability of assets in the company, which by definition is its own enterprise resource because it is not appropriate to use the term "own." It should also be noted that working capital - a known rate, which is calculated as the difference between current assets and short-term liabilities [3]. However, in our view under the solvency management should understand the company's ability to pay for its short-term obligations, secured the availability of funds and their equivalents.

The concept of solvency management is inextricably linked with the concept of liquidity. However, we note that the concept of solvency management and liquidity keeping closely related, but not identical. It should be noted that the term "liquidity" refers to a specific type of assets and their aggregate as a whole ("liquidity balance", "liquidity investments") and now as the financial relationship.

Under the liquidity of any asset is the ability to understand it transformed into monetary means, and the degree of liquidity is determined by the duration of the interim period during which this transformation can be accomplished. The shorter the period, the higher liquidity of this type of asset"[5]. Meaning liquidity category determined by the existence of an asset that has a special feature - the absolute liquidity, it is the exchange absolute power. These assets are the proceeds.

Liquidity can be characterized on both sides. First, it is reciprocal with respect to the time required to quickly sell an asset at a certain price. Second, is the amount you can get for it. They are definitely linked to receive a high price for the goods (assets) need more time; to accelerate the implementation process should reduce the price [7].

Drobysheva O.O. decided that the qualitative difference between the concepts of "liquidity assets" and "liquidity of the company" is that the later is synthesized not only property assets, but the conditions for attracting funding for their education, while the liquidity of assets is determined without regard to the right side of the balance sheet [13]. We quite agree with such point of view.

Investors can use ratios to analyze a company's solvency. The interest coverage ratio divides operating income by interest expense to show a company's ability to pay the interest on its debt, with a higher result indicating a greater solvency. The debt-to-assets ratio divides a company's debt by the value of its assets to show whether a company has taken on too much debt, with a lower result indicating a greater solvency. Equity ratios demonstrate the amount of funds that remain after the value of the assets, offset by the outstanding debt, is divided among eligible investors.

Solvency ratios vary by industry, so it is important to understand what constitutes a good ratio for the company before drawing conclusions from the ratio calculations. Ratios that suggest a lower solvency than the industry average may suggest financial problems are on the horizon.

Certain events can create a risk to an entity’s solvency. In the case of business, the pending expiration of a patent may pose risks to solvency as it will allow competitors to produce the product in question, and it results in a loss of associated royalty payments. Further, changes in certain regulations that directly impact a company’s ability to continue business operations can pose an additional risk. Both businesses and individuals may experience solvency issues should a large judgement be ordered against them after a lawsuit.

While solvency represents a company’s ability to meet long-term obligations, liquidity represents a company's ability to meet its short-term obligations. In order for funds to be considered liquid, they must be either immediately accessible or easily converted into usable funds. Cash is considered the most liquid payment vehicle. A company that lacks liquidity can be forced to enter bankruptcy even if it is solvent if it cannot convert its assets into funds that can be used to meet financial obligations.

The company's solvency in the wider sense includes creditworthiness, solvency and liquidity (Figure 1.3). The ability of an enterprise to fulfill its tax liabilities to the state is characterized by its tax capacity [27].

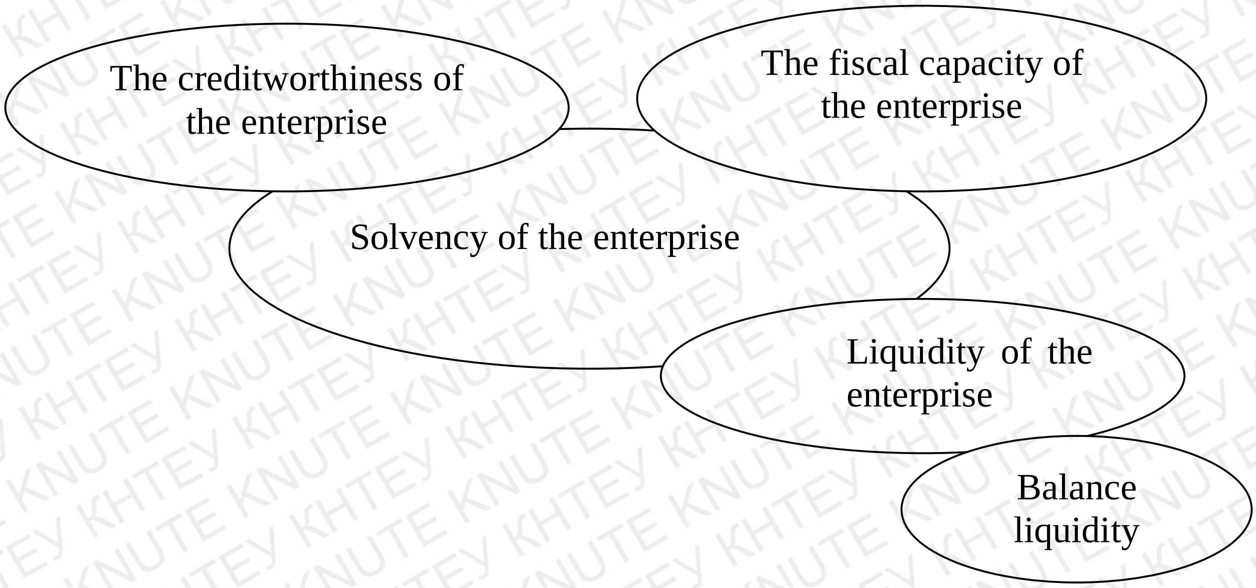

Fig. 1.3. Interconnection of solvency with creditworthiness, fiscal capacity, liquidity of an enterprise [27]

Summarizing the existing definition of the liquidity of the enterprise, we can say that the liquidity characterizes the ability of the entity to calculate their obligations both at the expense of available cash, and at the expense of cash received from the sale of certain elements of the property of the enterprise [27].

On the basis of the research we can identify the following essential features of solvency:

1. The solvency of an enterprise expresses the level of coverage of current liabilities with current assets. It is closely connected with the possibilities of transformation of circulating assets, as the most mobile part of the property. Therefore, we are joining the opinions of scientists who emphasize working assets as a basis for the formation of solvency.

2. An important essential feature of solvency is the rate of transformation of current assets into ready-made means of payment.

3. An important essential feature of solvency is the achievement of the possibility of repayment of current liabilities, and not of all debts, including long-term ones. Therefore, we are joining the thoughts of those scientists who in this part of the definition emphasize on current commitments.

4. In our opinion, it is important to give another such essential feature of solvency as the rate of repayment of current liabilities. Solvency affects only the structure of assets, but also the structure of current liabilities, among which more and less critical ones can be distinguished. Based on the above views of scholars, the issue of the maturity of current liabilities is controversial, as they may be past due and not past due, namely: those that arise immediately and those which will arise in accordance with the current legislation, concluded contracts, contracts etc. In our view, it is necessary to specify all current debts as there can be and past due, which should necessarily be taken into account when calculating various indicators of liquidity and conducting financial analysis.

Thus, synthesis of represented in the economic literature definitions of solvency management allowes to formulate the following definition: the process of operating with different financial resources, characterizing the performance of their formation, placement and use, which ensured the continuity of the process of production and sales, and financing costs for expansion company that guarantees its solvency, financial independence and investment attractiveness in the long ne rspektyvi within the acceptable level of risk. Solvency represents a company’s ability to meet long-term obligations, liquidity represents a company's ability to meet its short-term obligations. In order for funds to be considered liquid, they must be either immediately accessible or easily converted into usable funds. Cash is considered the most liquid payment vehicle. A company that lacks liquidity can be forced to enter bankruptcy even if it is solvent if it cannot convert its assets into funds that can be used to meet financial obligations.

1.2. Methodological bases of enterprise solvency management

Solvency management is one of the most important functional areas of financial management, which is very closely linked with other management systems. Undoubtedly, solvency management is organic part of the system of income and expenditure, the movement of assets, capital and cash flow management. It may have impact on the capital structure and other aspects of enterprise operations.

Zhuravlev Yu. (2016) defines that managing solvency is a system of principles and methods for developing and implementing management decisions related to the provision of the state financial resources and assets, their development and distribution. Solvency management would allow to develop business entity based on profit growth and equity while maintaining solvency and creditworthiness and ensuring and maintaining its financial equilibrium [53]. To our mind in the study of solvency, account must be taken of the features and duration of the operational and financial cycles of the enterprise in the context of certain types of activities.

The main objective of solvency management organically combined with the main purpose of financial management. It is implemented into a single complex and serves as a security financial management. In particular, Nepochatenko E.A. suppose that the purpose of managing solvency of the company is maintaining its financial equilibrium, avoiding risks to investors and creditors and rating of its debt [49].

Thus, the purpose of solvency management is to ensure solvency of forming a rational structure of assets and capital. We propose to add here some extra features into the goal of solvency managemend definition:

- obtaining the effective proportions within volume of financial resources through various sources;

- obtaining the stable self-sufficient financing of investment needs.

Lihonenko L.O. (2013) notes that to achieve this, management must ensure solvency perform the following tasks [30]:

- ensuring the optimal capital structure and assets

- ensure continued solvency and creditworthiness,

- balance and optimum structure of cash flows.To our mind it is also important to determine the direction of change in assets or liabilities of an enterprise so that the amount of its funds increases. The smaller the duration of the financial cycle, the less financial resources needed to finance the production needs of the enterprise

According to Filimonenkov O.S. [15] solvency management tasks are:

-defining the content and object of ensuring the solvency of the enterprise;

-formulation of the purpose and main tasks of solvency management;

- substantiation of the functional essence of solvency management;

Somewhat different from the previous one is Blank I.A. [15], which defines the following tasks for solvency management:

1) ensuring the liquidity of the assets of the enterprise;

2) ensuring the effective use of enterprise capital;

3) management of receivables of the enterprise;

4) management of accounts payable of the enterprise;

5) application of effective forms of payments.

We consider it expedient to supplement the list of tasks identified by the scientists with such tasks as determining requirements for the management of solvency of the enterprise.

Ismailova K. (2011) belives that main goal of solvency management prefers to be within the next tasks: finance flows handling, debt capacity optimization, predicting lack of liquidity. She studyied the main stages and elements at solvency management mechanism prior definition of the content and essence of the concept of "financial mechanism". The above economic category used to describe phenomena in various spheres of life, both economic and political and social. This part of the financial mechanism include a financial mechanism for enterprises, financial mechanism and non-profit organizations and other institutions [20].

Seliverstova L. S. (2016) suppose that enterprise solvency management mechanism peform the next tasks:

- creating financial resources for enterprice payments;

- supporting financial stability;
- gaining short term liquidity.

Author belives that solvency management is a system of forms, methods and tools used in financing activities for the operation of all sectors and areas, operating through financial resources, taking into account the economic interests of businesses. The main elements of the solvency management mechanism are: financial relations as an object of financial management, financial leverage, financial methods, regulatory and information provision [45].

We suppose that availability and provision of liquidity of assets helps to minimize the risk of non-payment of obligations, which in turn increases the level of financial security of an enterprise.

To my opinion, realization is made by the purpose of controlling the funds by means of diligence and is carried out on the basis of a significant solution to a number of problems, of which the following are the most significant:

- ensuring the liquidity of the assets of the enterprise: in the process of solving this task it is not necessary to carry out, first of all, an analysis of the specific assets of the enterprise with the goal of allocating the part that it will be difficult to realize in ecumenical minds that formed during the analysis period;

- ensuring efficient use of capital for the enterprise: the realization of this task involves the study of the business activity of the company (financial resilience) of the enterprise in analyzing the structure and amount of capital;

- management of debits with a variety of volatility of an enterprise: to solve this task, the task is to reduce the number of bottlenecks in the business hours of enterprises in order to increase the level of liquidity of non-financial assets;

- management of a loan with a combination of the complexity of the enterprise: the solution to this task of controlling the funds by means of prudence involves the availability of the existing and planned securities, in spite of the fact that the lending rate is considered to be the best source for the enterprise's resources;

- the creation of effective financial resources: the solution of the problem involves the selection of the most suitable financial resources for calculating the cost of the cost of banking services, the transfer of funds, from insurance pledges (minimization of risks) from non-payment for a given proceeding, taking into account the fact that the realization of the business activities of affiliated companies with business The partner is for the first time, with the most important aspect of keeping (or translating) the funds.

The formation mechanism of solvency management can be represented as a sequence of interconnected steps (Fig. 1.4).

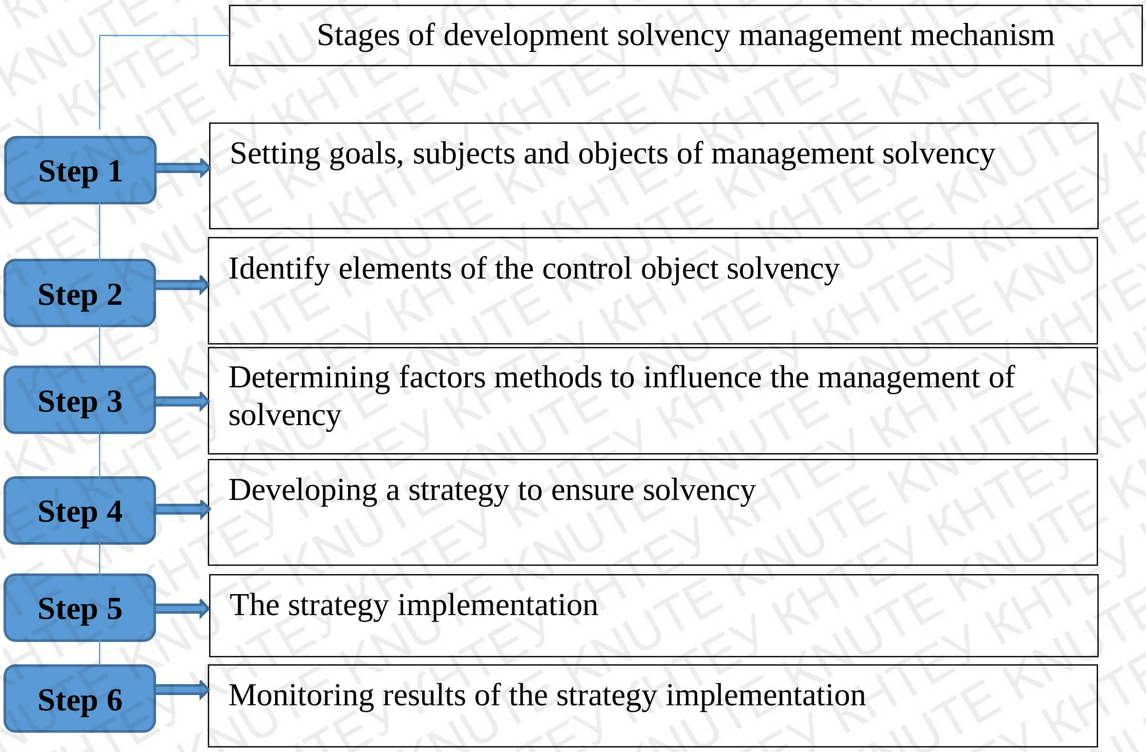

Fig. 1.4. The sequence of stages of development the solvency management mechanism [49]

We agree with all of these stages, as they provide the comprehencive approach to essens of the main tasks and goal of solvency management for enterprise.

We suppose that use of effective forms of settlement: the solution to the problem is to choose the most appropriate forms of settlement from the standpoint of saving costs for payment of banking services for the transfer of funds from the position of insurance (minimizing risks) from non-payment for the delivered products, taking into account the fact that the implementation of contractual arrangements with the business A partner is for the first time, from the position of the earliest receipt (or transfer) of funds.

The importance for an enterprise to maintain a solvent state at any given time to meet the requirements of creditors, investors, and state controlling institutions requires substantiation of the conceptual framework for solvency management.

Kulik A.V. emphasized that the object of ensuring the solvent state of the enterprise is production and financial and economic activity, as a result of which there is a contractual relationship between business entities, employees of the enterprise, the state and other creditors, related to the implementation of accepted contractual obligations for the payment of funds for Received products, goods, work, services; In relation to payment of wages, in relation to payment of taxes and other payments [35]. The untimely fulfillment of contractual obligations by the enterprise leads to distrust on the part of business partners, to future difficulties associated with the need to win the reputation of a reliable business partner. Failure to comply with the obligations may lead to the bankruptcy of the enterprise.

Solvency management mechanism of the company is a part of the overall enterprise management system, which ensures impact on the factors that affect the overall outcome of the subject. Under the control mechanism should be understood integral system of organizational and economic elements that provide the interconnection of all elements to achieve the strategic goals of the company [18].

The formation of solvency management mechanism must start with the characteristics of its components, and determining the sequence of certain stages. Since the mechanism is based on a systematic approach, it is legitimate to highlight its components such as objects and subjects [16]. So, the first stage of the formation process should include a definition of facilities management; actors who have performed specific actions; and objectives pursued by the data subjects. In this case, the objects can be of an enterprise or a separate entity, a production process, finance, income, financial resources and others. The subjects may make senior managers, financial managers, and financial services companies, analysts and other financial security. The objective is the preservation, maintenance or achievement of a certain level of solvency in which the company would receive revenue was solvent and profitable.

The second step is to assess the current status and level of solvency, as well as to identify and to analyze the factors that affect the facility and carry out its mission and goals. Assessment of the current situation and solvency based on different methods of financial analysis (such as calculation performance and solvency ratios and comparing them with the basic or standard values, etc.). The results will determine the scope, depth and direction of the impact on business management activities or progress of the company. In determining the factors that influence the goals, it is necessary to estimate the depth of their impact on the value of the studied parameters. Most of these factors are classified into internal and external. Assessing the impact of certain factors will determine the weak and strong place, identify the reserves and to develop effective management decisions and possible directions of development. [7]

Common to each development phase management mechanism is the use of solvency management tools, so the design scheme management mechanism would be appropriate to specify the management process for each stage wich are set of tools that can be used. So, financial stability is the qualitative characteristics of financial condition of the company and of course one of the main financial components of financial security, as is the need for further development of solvency management mechanism as part of the overall strategy management.

Today one of the main problems of industrial enterprises is the lack of a coherent strategy aimed at ensuring the stability of financial and sustainable development in the future.

The mechanism of solvency management functions consists of the subject and certain organizational structures, principles, methods, financial instruments of law in oarder to establish the optimum parameters of the structure and volume of financial assets. Assets involvement should be performed various sources and in various forms to enhance the competitiveness and innovation activity of enterprises subject to specified solvency level (Fig. 1.5).

One of the preconditions for a successful entrepreneurial activity is the solvency of an enterprise and availability of financial resources. Decision making on capital deployment is based also on financial analysis methods which are used by specialists of many professions - accountants, economists, auditors, financial managers and analysts, i.e. essentially by experts involved in preparing financial reports and managerial decision making in enterprises and banks, or who check the credibility of financial reports, business plans and consult the potential investors. Before making investment, the potential partners and investors have to estimate both the enterprise’s current financial situation and tendencies of its economic activity development.

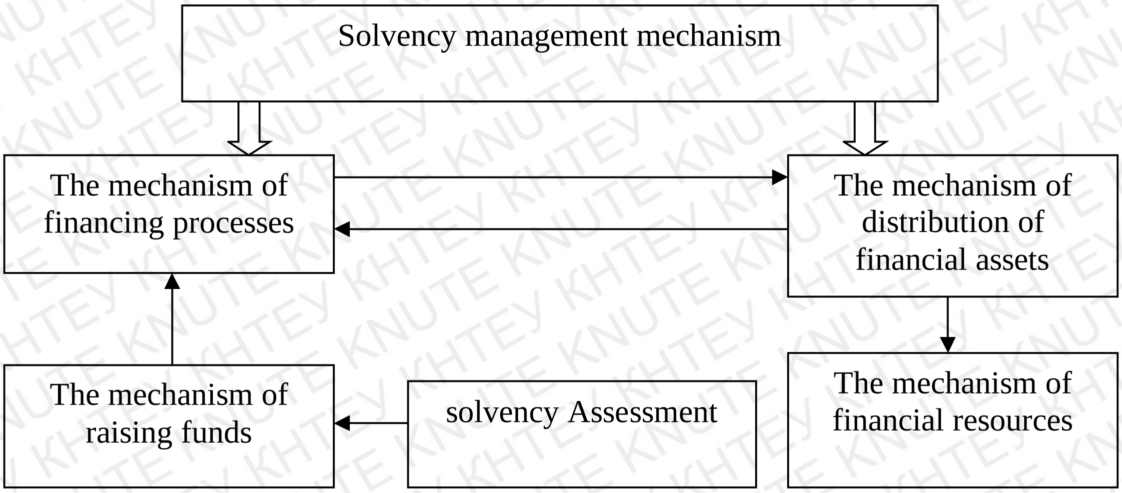

Fig. 1.5. The structure of the mechanism for managing solvency [22]

The financial situation of an enterprise is an economic category which describes the capital turnover process in an economic entity, its development capability without attracting external capital. In the course of economic activity, capital is in continuous movement; the structure, amount, sources of and the necessity for finances are changing and so is the financial situation. As a result, the solvency of the enterprise either improves or deteriorates. The financial situation of an enterprise may be either stable or unstable. An enterprise is considered financially stable if it is able to cover timely its liabilities and pay the bills, to finance enterprise activities by income from the basic economic activities and avoid situations of financial crises. Concurrently with the development of entrepreneurship develops also the branch of economic analysis - analysis of financial coefficients, the purpose of which is to assess the enterprise's financial situation and to forecast insolvency.

When analysing and comparing views of several scientists, the authors of this paper have concluded that the range of financial coefficients (which are recommended for insolvency prediction) is very wide. However, calculating financial coefficients and investigating their changes by means of data comparative analysis do not provide a precise estimate of solvency and the level of bankruptcy probability.

The essence of managing solvency based on fundamental concepts of classical financial management is given a general understanding of the financial mechanism and its components, select the main elements of its control mechanism (tab. 1.2) [12].

Table 1.2

Contents of financial management mechanism solvency [12]

Financial methods	Financial subjects	Regulatory support	Information and methodological support
- methods of management investment process; - methods of financial resources; - methods of distribution of financial resources; - methods of allocation of financial resources; - minimizing the risk of the investment portfolio of the company; - methods of stimulating innovation; - Methods of cost management; - methods of controlling and others .	- cash flows; - fines and penalties; - rent; - prices; - interest rates; - depreciation; - financial resources; - the structure of financial resources; - the cost structure of the company; - form of payment; - a system of financial penalties and incentives; - dividends, etc..	- laws and regulations that govern the investment process (NP (S), IFRS); - provisions on the composition and content of the project documentation; - internal standards for evaluating projects; - internal orders, regulations, instructions and documents regulating the investment process in the enterprise; - governmental and departmental orders, letters, instructions, regulations, instructions, and so on.	- information on the environment; - information about sources of funding; - information about investment areas; - financial documents reflecting financial relations with businesses and other entities affecting them; - financial statements and others.

Financial methods are a set of ways in which the company generates and spends money funds, manages cash flows.

Financial leverage some authors define as "tricks of the financial practices that are implemented through revenues, profits, financial penalties, prices, dividend payments forms, types of loans and currencies, interest rates, stocks, etc [22, 41]. "Thought of other researchers," financial instruments are a set of financial indicators through which the control system can influence the business activities of the company [12, 16, 25]. They include: profit, revenue, financial penalties, costs, dividends, interest, wages, taxes, etc. ". In fact, in these definitions refers to the tools as the means by which the financial methods are implemented. In our opinion, the financial instruments represent funds (instruments), used in financial methods to perform the functions of the financial mechanism of the enterprise and solve some financial problems, primarily to increase revenue and reduce risk.

These include: prices, interest rates, depreciation, financial resources structure, cost structure of the company, form of payment, the system of financial penalties and incentives, dividends and others. The management of financial leverage is reflected in the financial policy of the company. The financial policy of the enterprise is a set of principles, methods and procedures of cash flow management and includes the following types: dividend policy; credit policy; depreciation policy; investment policy; pricing policy; accounting policies. Financial Instruments - term used in domestic financial science recently. This concept is used in a number of regulations, such as the Law of Ukraine "On securities and stock market", according to which the instrument - a security or fixed-term contract. In International Financial Reporting Standards (IAS 32, "Financial Instruments: Presentation") provided a different definition of financial instruments - "is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument in another entity. " With certain financial instruments carried out effectively channeling financial assets.

When speaking of the solvency margin we understand, as mentioned above, the difference between the actual assets and liabilities of the company. There are reasons, as shown in the previous paragraph, for setting some minimum amount as the solvency margin in the legislation. Also the question of establishing some international standard as is well known. Such standards can probably be motivated even though we must always keep in mind that the solvency margin is only a part of the general solvency problem and the existence of an actual solvency margin exceeding the standardised minimum does not by any means alone guarantee the company’s solvency.

To find a rule for the minimum amount of the solvency margin all the risks must be taken into account and the margin ought to be, with a large probability, sufficient to cover the risks mentioned in regard to reassurance and other safety measures and arrangements discussed above.

The key purpose of an enterprise that secures achieving the strategic objective is maintenance or restoring of solvency depending on the current financial situation of an enterprise, because enterprise insolvency leads to a breach in relations with contractors, loss of market position, reduction of opportunities for involvement of labor, financial and productive resources, which, without the corresponding response system, leads to bankruptcy and enterprise liquidation. Therefore, the main goal of using financial potential is ensuring enterprise solvency. Thus, regarding the subject matter of the research, financial potential is an amount of financial resources of an enterprise, an opportunity of their mobilization, effective distribution and employment for preventing and overcoming enterprise insolvency.

Given this, financial potential must be considered as the factor of maintenance and restoring enterprise solvency. However, K. Solomyanova-Kyrylchyuk, O. Tereshchenko define bailout and anti-crisis potential as the reserve for restoring enterprise solvency, the types of enterprise potential which are employed under unstable financial condition of an enterprise and at crisis. Financial potential, in its turn, in considered within the framework of providing enterprise competitiveness and development. The given incon-sistency between opinions of scientists and the consequence coming from the notion "financial potential" stipulated the need for a more detailed study of such notions as "bailout potential" and "anti-crisis potential" in the perspective of enterprise insolvency. Therefore, the essence of these categories will be defined on the basis of their morphological constituents: the terms "bailout" and "anti-crisis management".

The Law of Ukraine "On Restoring Debtor Solvency or Declaring a Debtor Bankrupt" states that bailout and pre-trial bailout is the system of measures, taken for the sake of a debtor in order to avoid declaration of its bankruptcy and liquidation. Based on the Law of Ukraine, the bailout procedure is carried out in respect of the debtor - the economic entity that during 3 months does not prove able to fulfil held by a court financial liabilities, in other words, in respect of an enterprise with a breach of solvency and is directed at its restoring. That is why, the goal of using the bailout potential, similarly to bailout procedure, is restoring the solvency of a debtor.

According to this approach, anti-crisis potential is an amount of enterprise resources and opportunities to overcome the consequences of crisis and restore solvency.

Considering the anti-crisis potential from the perspective of anti-crisis management within the framework of the "narrow" approach, bailout and anti-crisis potential in Ukraine have a common goal — restoring the enterprise solvency, and similar conditions of employment — occurrence of the crisis at enterprise. The existence of a crisis while employing the anti-crisis potential is evident from the name "anti-crisis", and the condition of employment of bailout potential, as mentioned before, is declaring an enterprise a debtor, which is possible when there is a crisis at the enterprise. These two potentials are distinguished by the severeness of crisis, which implicates the necessity of potential activation, and the presence of legal constituent. Thereby, bailout potential is employed while carrying out a trial procedure, which is the consequence of a more severe crisis, compared to the employment of anti-crisis potential, for which a trial procedure is not obligatory.

Under approaches above mentioned we may conlude the next staged of solvency management (fig. 1.6)

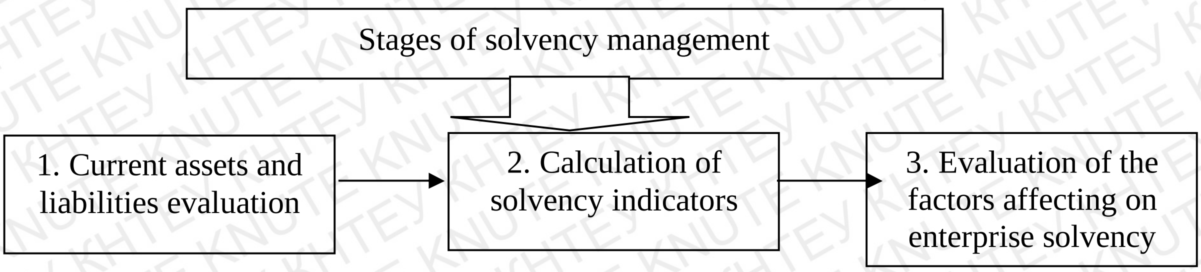

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Fig. 1.6. Stages of solvency management [22]

The first step of solvency management is to evaluate the indicators of current assets and liabilities volume. This stage obtaines to define general tendencies in assets and liabilities.

Calculation of solvency indicators allows to define the general understanding of stages in solvency management. It may be described on the fig. 1.7.

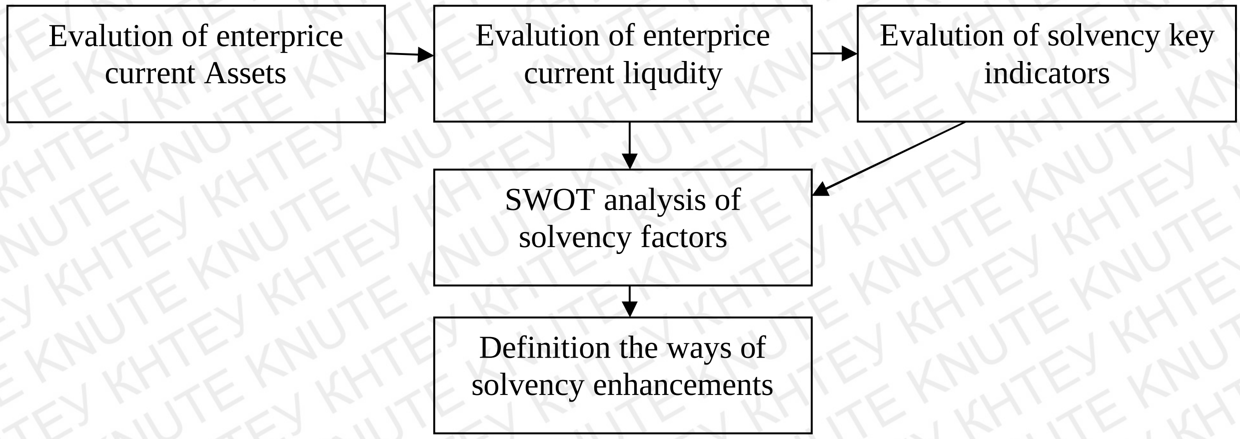

Fig. 1.7. Author approach to the definition of solvency management stages

Thus, solvency management can be represented as a system of business goals in solvency of different relationships. Mechanism of solvency management is an integral part of the mechanism for financing businesses. As part of the solvency management consisting solvency certain financial relations on the engagement, distribution and use of financial assets, payments to state organizations, employees and other partners. Solvency management helps to mobilize and allocate financial assets necessary to operate businesses in key areas and to ensure the stability provided external factors, including tax and credit and banking. The instruments of solvency management include conditions and sources of financial assets, methods of forming used in determining revenues and costs.

1.3. The methods of evaluation the solvency of enterprise

Managing solvency involves the use of certain methodological tools of analysis. Therefore, we consider the main stages of solvency assessment and basic techniques that are used for this purpose.

Based on research and synthesis of different methodological approaches for assessing the solvency of the following steps should be defined (Fig. 1.8).

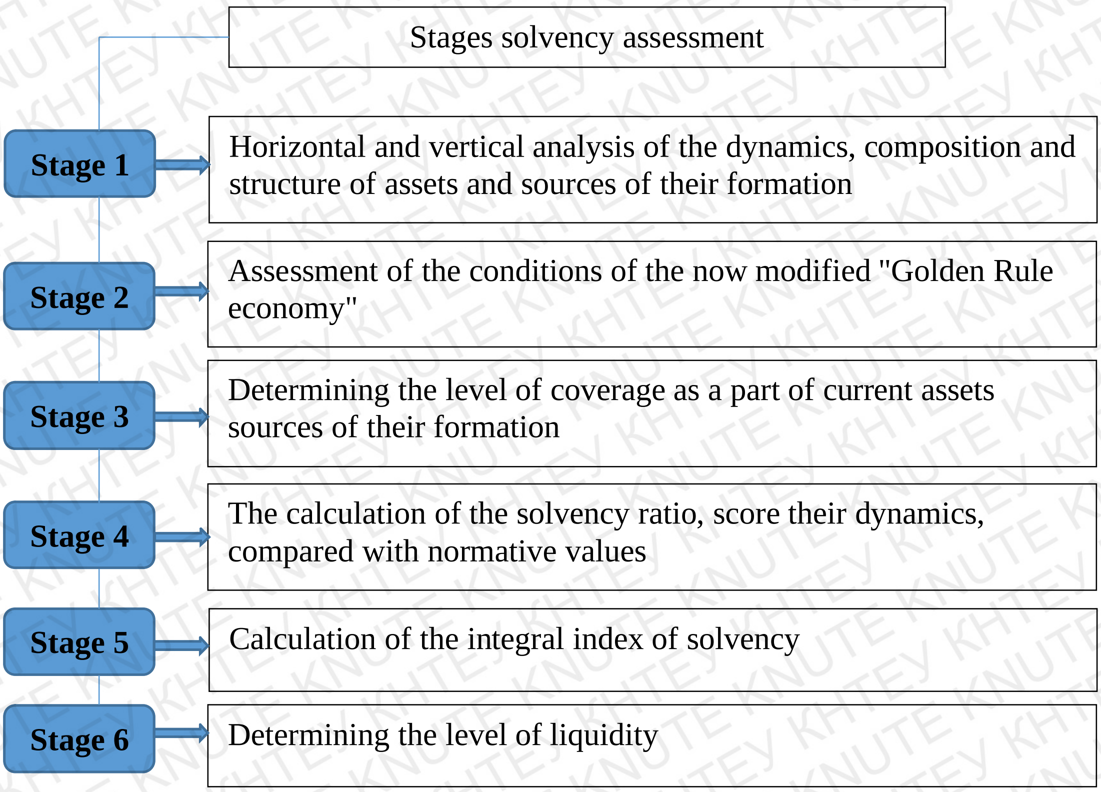

Fig. 1.8. Stages solvency assessment [22]

Let us consider the nature of each stage of evaluation of solvency.

Stage 1. Analysis of the dynamics, composition and structure of assets and sources of their formation is based on the use of methods of vertical and horizontal analysis. Vertical analysis - a performance evaluation of assets and liabilities of the company for their constituents; horizontal analysis involves the determination of the absolute and relative deviation of individual assets and liabilities of the company [22].

We can agree with the author's thought as evaluation the current assets and liabilities creates prerequisites for solvency enhancements.

Stage 2. Evaluation of application conditions improved model of the "golden rule economy" companies. Modified "Golden Rule economy" company provides compliance conditions under which the rate of growth of company profits exceed the growth rate home equity advanced in the business, which, in turn, exceed the rate of growth in sales and the latter should be higher than the growth rate assets (property) is as follows [8]:

$$100\% < Tr < Tn < TEC, \tag{1.1}$$

where Tr - the rate of change of sales of products;

Tn - rate of change in earnings.

TEC - the rate of change in equity of an enterprise in advanced.

At the same time, achieving growth rates exceeding equity company obtained by increasing the growth rate of net profit growth of capital raised, will rapidly increase the rate of financial autonomy and improve other indicators of the capital structure of the company. That is, much attention should be given to achieving efficiency production company [38].

This is right but we cannot agree totally with the description above as golden rule evaluation should be applied not only for production companies but for others as well.

Stage 3. Determining the level of coverage as a part of current assets sources of their formation. This is a summary measure of excess or shortage of funding sources for building supplies, which is defined as the difference between the largest sources of coverage and value stocks. The cost of inventories is compared sequentially with the availability of working capital, which gradually add value long-term liabilities and short-term loans [38].

Also to our mind it should be better to increase the sope analisis with own capital determination. This is because the most companies are finances by their own capital also. Stage 4. The calculation of the solvency ratio, the study of the dynamics and compared with normative values definitive conclusions regarding the financial condition of the company. Key indicators of solvency are: the ratio of financial autonomy, the rate of financial dependence factor of financial risk, factor mobility equity ratio structures covering long-term investments, the rate of long-term borrowing, the ratio of financial independence capitalized sources rate the share of equity and long-term commitments, current debt ratio, the ratio of concentration of capital raised, the coefficient c Rahove stability of capital (business insurance) solvency ratio (Table 1.3).

Table 1.3.

System of indicators of liquidity and solvency [34]

Indicator	Method of calculation (according F.№1 "Balance Sheet")	Normative (optimal) value
Absolute liquidity ratio (immediate liquidity)	(Cash + current financial investments) / current assets	≥ 0,2
Quick ratio (refined, liquidity)	(Cash + current financial investments + current receivables + other current assets) / current assets	≥ 0,7
Solvency ratio	cash / current liabilities	≥ 0,1
Critical Solvency ratio	(Current assets - current operating assets) / current liabilities	≥ 0,8
The coverage ratio of inventories	Normal sources of financing / inventories	≥ 1,0
Ratio of own funds	Own current assets / current assets	≥ 0,5

It should be noted that in the real world entities large part of the enterprise can not observe accepted standards in terms of money and the estimated solvency is explained as features of the production processes in agriculture and in some way inexpediency in high inflation processes keep the accounts of large sums of money funds.

Therefore, assessing the liquidity and concluding the presence or absence of this type of crisis, in our opinion, should adhere to the following principles [19]:

- liquidity crisis will sign mismatch monetary indicators and the estimated solvency for at least three years;

- liquidity crisis can be diagnosed only when the mismatch along with standards the company has losses or reduced income level dynamics;

- a stable situation of individual enterprise is to respect the actual property solvency coefficient of at least 1.5, which will help the company in terms of immediate repayment of current liabilities continue its business;

- assessing the liquidity available should correlate the amount of receivables and payables that will predict the future level of solvency.

For most entities the most important in the context of the prospects for future activities is the diagnosis of the presence of signs of crisis return (results).

Any user of financial statements primarily interested in the issue of liquidity and solvency. To this end, according to the balance sheet define a set of performance indicators. Primarily used for this purpose, the following three factors [21]:

1. The coverage ratio (total liquidity) - R that shows what part of current liabilities the company is able to repay if it sells all of its current assets, including stocks. This ratio shows as much as USD working capital accounts for each ruble of current liabilities.

2. The quick ratio (critical) liquidity - Kshl showing part of current liabilities the company is able to repay by the most liquid current assets - cash and cash equivalents, financial investments and accounts receivable. This figure shows the payment capacity of the enterprise to repay current liabilities, subject to timely settlements with debtors.

3. Ratio of absolute (money) liquidity (Kab.l) that shows what part of current

liabilities the company may repay their money immediately.

5. Ratio of own funds, reflecting the ratio of the difference between real equity and fixed assets to the actual value of the current assets that are available to the enterprise.

According to Kravchenko, LI, fundamentals on which we can determine the solvency of the company are: coefficient of autonomy (financial independence); factor of financial stability; financial leverage ratio; ratio of own funds; coverage ratio (solvency) (Fig. 1.9). [26]

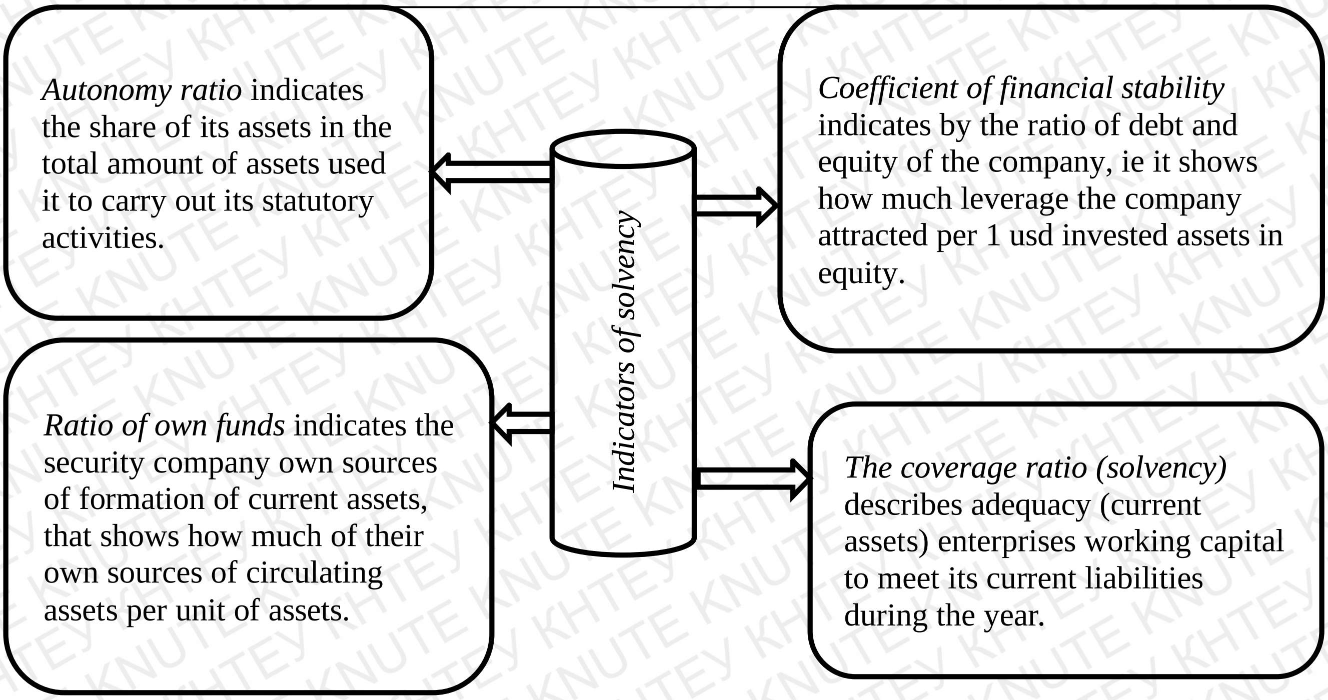

Fig. 1.9. Characteristics solvency indicators [26]

Analising the figure above need to emphesisze that we totally agree with the approach. All the indicators mentioned cover all solvency aspects.

Research analysis of factors affecting the solvency of the company, to be classified in two main groups - external (economy-wide) and internal, as part of which identified the most important factors - financial (state of the economy, monetary policy, fiscal policy, credit policy, amortization policy, the stability of financial and foreign exchange markets, insolvency partner, etc.) and non-financial (social, cultural, demographic, political, legal, science and technology, the level of organization of matter iznes process, contract compliance, etc.) [26].

Based on in-depth analysis of financial and business enterprises as well as taking into account the specific conditions of production, sales and cash payments specified normative values most important indicators for assessing solvency, assuming the following values: 1 - coverage ratio, quick ratio - 0,6 coefficient absolute liquidity - 0,2, fiscal - 1 ratio, the ratio of synchronicity cash flows from operating activities - 1 ratio synchronicity cash flows from invest - 1-transformational activity coefficient synchronicity cash flows from financing activities - 1, crude synchronicity cash flow (from operating, investing and financing activities) - 1 ratio of payables and receivables - 1 ratio autonomy - 0,5. Subject to receiving the indicators that do not meet regulations should analyze the factors that influenced their formation, their evolution and causes [26].

In calculating the integral index of financial stability of the company, takes into account the solvency of the company, the level of financial independence and quality of its assets.

When quantify solvency ratios in addition to also use absolute figures. One of the key indicators is absolute working capital, which characterizes the portion of equity that is the source of covering its current assets. This figure depends on the structure of assets and liabilities and is calculated as the difference between equity, current assets and current liabilities of the company [16]. If the company has working capital, it is not only able to pay its current debts, but also need to involve external financing.. The presence of working capital optimum amount depends on the scope, market conditions and their lack or excess indicates not a positive state of solvency.

Through qualitative assessment of solvency balance sheet using the method of grouping data provides for assessment of solvency through the development of "liquidity balance" [16].

Balance sheet liquidity is defined as the degree of coverage obligations on company assets, the term transformation in which cash corresponds to the maturity of these obligations. Analysis of liquidity balance is made by comparing the assets located in the descending order of their liquidity, with commitments in liabilities, in terms of increased maturity.

Having reviewed the statistical approach to determining solvency, based on the calculation capacity of the enterprise to pay for current obligations, were not considered prospective solvency calculation necessary for an effective financial and economic activities in the future. Identifying this problem, use a dynamic approach to assess the solvency of the company, the research it for some time.

Among the indicators that characterize the dynamics of solvency can distinguish synchronization income and expense cash flows and balances the amount of cash flow.

Synchronicity income and expense cash flows describes the receipt and expenditure of cash flows in the company at the time. For the normal distribution in time and consistency of cash flows that largely determines the state of the financial equilibrium of the enterprise, the figure is closer to zero. [28]

We agree with a thought above and want to add that evaluation of income and expense cash flows synchronicity defines main factors for long-term solvency of the company.

The volume of cash balances is defined as a difference between incoming and outgoing cash flows in the case of positive values of the observed availability of funds otherwise observed their deficit.

Having considered possible approaches to assessing solvency, it should be noted the importance of the calculation of financial stability, including autonomy is a factor, the factor of financial dependence.

This will allow more commonly reflect the state of solvency of the entity. [38]

It is believed the company liquid, if its current assets exceed current liabilities, but that in itself is not a total excess liquidity characteristics. Therefore, to assess liquidity uses a system of indicators that are essential, because they are a convenient means of summarizing the vast amount of financial data and an instrument of comparative analysis of the company [32].

The main ones are current ratio, quick ratio and absolute liquidity. Absolute liquidity ratio characterizes the share of current liabilities, which can be refunded at the time of the balance sheet; quick ratio determines the amount of current debt that will be paid for some time, the duration of which is due to maturities of short-term receivables; current ratio - the ratio of current assets and current liabilities of the company.

One of the most important aspects of liquidity and solvency analysis is to determine the effect of individual factors on the effective rate increase. It uses the following methods: chain substitutions, index, absolute and relative differences, integral and others. [13].

Through analyzing and summarizing the results, it is necessary not only to give an integrated assessment of financial stability and solvency, but also develop a series of measures to improve the business where expected increase economic efficiency of enterprises, strengthen inner economic calculation.

Considering all the above, it should be noted that to ensure optimal performance and liquidity of the company on this basis to ensure its solvency should constantly monitor the main areas of financial and business enterprises to follow the ratio of assets held by the company and its current and future obligations. Also important is the study and characterization balance sheet describing the means of payment and liabilities of the entity, and assessment of financial performance, which will help make forecasting cash flow.

At the same time it is necessary to search for internal reserves of liquidity and solvency. First of all here include saving existing resources, optimizing capital structure, a set of measures to improve the quality of products created

Consequently, liquidity and solvency are important in system performance of the enterprise as provide support financial balance of the company. Liquidity should be regarded as state assets in their turnover, ending the receipt of funds, which is a requirement to pay. Given that constitute the basis of solvency assets are characterized by varying degrees of liquidity, liquidity can be considered a quality characteristic of solvency.

Based on the foregoing, we consider that the solvency of an enterprise is characterized not only by the possibilities for immediate repayment of obligations at the time of the valuation at the expense of cash, but also as the ability to ensure the formation of cash flows that, in terms and timing, correspond to the payment needs of the enterprise. In this regard, we can propose a methodological approach to assessing the solvency of the enterprise, which includes the widest list of indicators in comparison with other authors and, in particular, provides for an assessment of solvency on the basis of cash flows.

The most important indicators that should be used to assess solvency, can be attributed to the adequacy of cash, which characterizes the degree of coverage of payment needs of the enterprise at the expense of funds available at the disposal of the enterprise. The growth of this indicator characterizes the ability of the company to generate cash to make the necessary payments.

Also, in assessing the solvency, we propose an assessment of the synchrony of income and expenditure, which allows us to assess the equilibrium in time and the volume of incoming and outgoing cash flows.

The indicators we propose are given in the table. 1.4

Table 1.4

Liqudity indicators for solvency assessment suggested by the author

Name	Formula	Description of evaluation results
Recovery (Loss) Solvency Ratio (Qpl)	Rslr = Kgc+ $\frac{3}{T}$ Kilr / Kn Where Kgc - is the coefficient of general coverage; T – is a period of analisis Kilr - intermediate liquidity ratio; Kn is the normative value (Kspn = 2).	If the indicator is equal to or greater than one, this is evidence of the availability of reserves for improving solvency, with Kplp less than 1 - the level of solvency of the company in the near future will be insufficient.
The sufficiency factor in the formation of monetary assets	Ksfma=$\frac{CFR+CI}{CC+CCf}$ where CFR – cash residuals at the beginning of the period; CI - cash receipts for the period; CC - actual spending of money for the period; CCf - deferred cash outflow.	A positive trend is the growth of this indicator, which indicates the ability of the company to generate cash assets to make all necessary payments. The favorable situation is keeping this indicator at 1.2, which is a sign of the lack of cash deficit and the availability of minimum cash balances on their accounts.
Synchronization of cash inflows and expenditures	S=$\sqrt{\sum(CI-CC)^2/n}$	Shows match in time and by volume of incoming and outgoing cash flows. An optimal situation is when the value of the indicator is equal to or as close as possible to 0, which

		indicates the balance of cash flows of the enterprise.

*recommended by the Author

Recovery (Loss) Solvency Ratio (Qpl) defines ability of a company to accumulate liquidity resources. Indicators may take value from 0 to 1 and more. Normal situation is when indicator takes 1 and more – then I this is evidence of the availability of reserves for improving solvency, with Kplp less than 1 - the level of solvency of the company in the near future will be insufficient.

The sufficiency factor in the formation of monetary assets is used for evaluation of ability of the company to generate cash assets to make all necessary payments. The favorable situation is keeping this indicator at 1.2, which is a sign of the lack of cash deficit and the availability of minimum cash balances on their accounts.

Finally we can conclude all the methods mentioned above into general algorithm of solvency evaluation, described on the fig. 1.10.

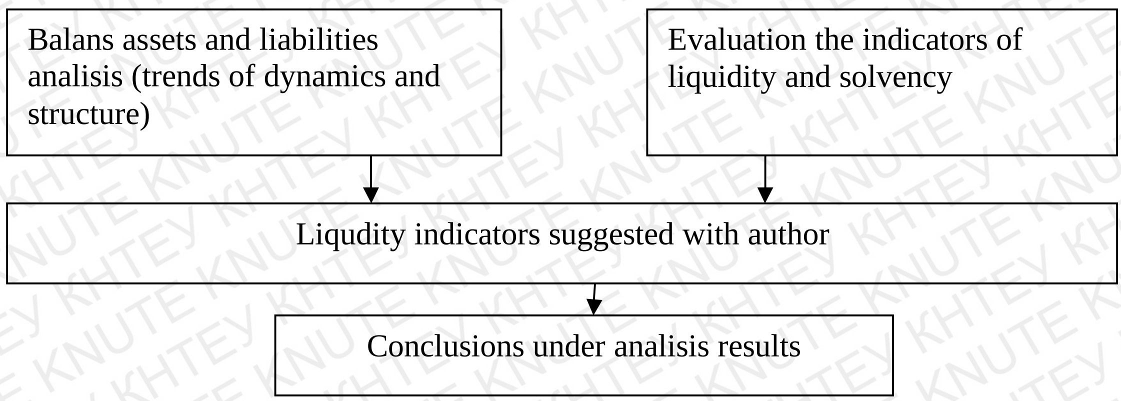

Fig. 1.10. General conclusion about methods and indicators that have to be used to evaluate solvency of enterprise

Thus, the solvency assessment should be performed in the following stages: horizontal and vertical analysis of the dynamics, composition and structure of assets sources of their formation; assessment of the conditions of the now modified "Golden Rule economy"; determine the level of coverage as a part of current assets sources of their formation; calculating solvency ratios, assess their dynamics and comparing them with normative values; calculation integral indicator of solvency; stock financial strength.

CHAPTER 2
THE INVESTIGATION OF «DVERI BILORUSII» LTD. SOLVENCY

2.1. The analysis of asset's dynamic and structure

The *“Dveri Bilorusii” Ltd* trade and industrial company with foreign investments specializes in the production and promotion of interior doors, metal entrance doors and special purpose doors. The products of the brand *“Dveri Bilorusii” Ltd* combine bright design solutions, modern technologies and natural materials; decorates the interior; characterized by an optimal ratio of price and quality; Uses deserved demand from specialists, corporate consumers and the population.

The *“Dveri Bilorusii” Ltd* brand has been successfully developing since 2005 to date. Trade-industrial group (TPG) "Doors of Belarus" delivers products to Ukraine, Belarus, Moldova, Kazakhstan, Russia, Azerbaijan and EU countries; carries out trading, logistical, legal, marketing and advertising support of partners.

Doors of the trade mark "Doors of Belarus" are produced at high-tech production complexes (factories) of the "Doors of Belarus" LTD in the Republic of Belarus and Ukraine. "Door of Belarus" is a high-tech product. The production of each door model has about 40 operations and about 60 items of components. The company constantly invests in the development of new technologies and assortment of products.

At each factory specializing in the production of a specific product range, the technical control department operates. Multistage quality control of products is carried out at all stages - from the supply of raw materials to the production and packaging of finished products.

Conducting an estimation of the dynamics of the volume and structure of assets of the investigated enterprise involves the use of horizontal and vertical analysis methods. In the process of analysis, we will use indicators of absolute and relative deviation (growth rate), structural indicators.

Also all the data for 2018th year are the accountancy forecast.

The dynamics of total assets are shown in Fig. 2.1.

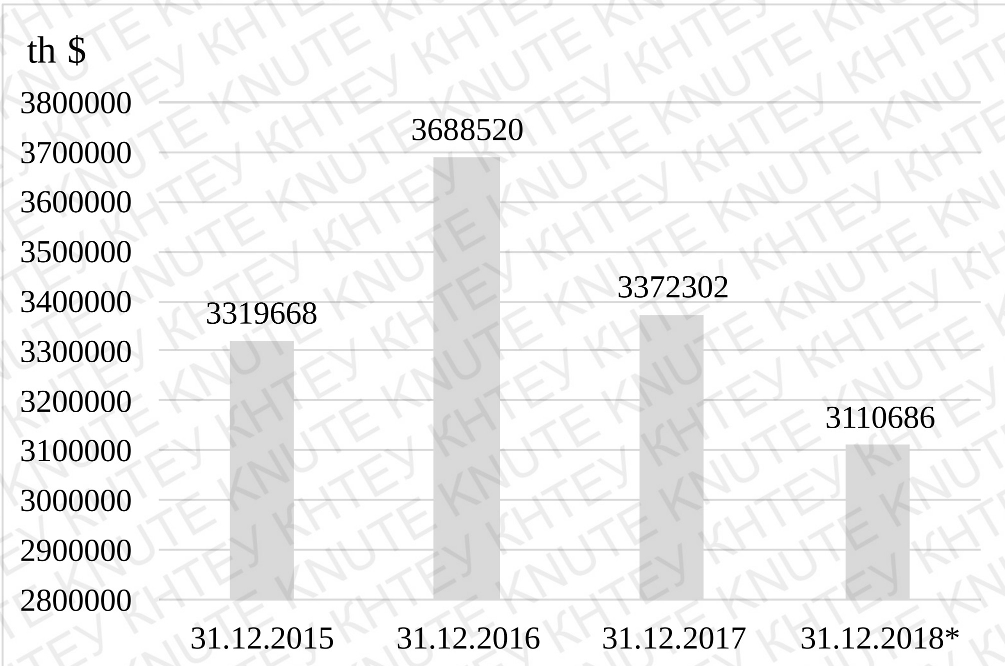

Fig. 2.1. Dynamics of total assets of "Dveri Bilorusii" Ltd for 2016-2018 years, usd

As shown in Fig. 2.1, the volume of assets of the company had a gradual tendency to decrease in 2016-2017 years. On the 01.01.2018 the volume of assets amounted to 3372302 th. usd, on the 01.01.2018 – 3110686 th.usd. However, in 2018 there was a decrease in the amount of assets of the company on -208982 th. usd.

In order to understand the reasons of the assets volume dynamics, we need to analyze their composition (tab. 2.1).

Table 2.1

Dynamics of assets on «Dveri Bilorusii» Ltd for 2016-2018 years, usd

Indicators	On the date, th.usd				Absolute growth, th.usd		Growth rate, %	
	31.12. 2015 y.	31.12. 2016 y.	31.12. 2017 y.	31.12. 2018 y.*	31.12.16 - 31.12.18	31.12.18 - 31.12.18	31.12.16 - 31.12.18	31.12.18 - 31.12.18
I. Noncurrent assets								
Goodwill	66887	74319	66383	66333	-554	-50	-0,8	-0,1
Construction in process	27532	30591	59241	82532	55000	23291	199,8	39,3

Property, plant and equipment:	805057	894507	824409	807553	2496	-16856	0,3	-2,0
								Continue the tab 2.1
Primary value	2072306	2302562	2235341	2260368	188062	25027	9,1	1,1
Less accumulated depreciation and amortization	1267250	1408055	1410932	1452815	185566	41883	14,6	3,0
Other assets	121781	135312	115168	123013	1232	7845	1,0	6,8
Total Non-current assets	1021256	1134729	1065201	1079431	58175	14230	5,7	1,3
II. Current assets								
Inventories	841870	935411	781371	661563	-180307	-119808	-21,4	-15,3
Accounts receivable	925583	1028425	900619	740283	-185300	-160336	-20,0	-17,8
Current deferred tax assets	44510	49455	29137	0	-44510	-29137		-100,0
Cash and cash equivalents	391433	434925	485323	483855	92423	-1468		-0,3
Other current assets	95018	105575	93643	144967	49950	51324	52,6	
Total current assets	2298412	2553791	2290093	2030668	-267744	-259425	-11,6	-11,3
III. Assets of businesses held for sale	0	0	17008	587	587	-16421		-96,5
Total assets	3319668	3688520	3372302	3110686	-208982	-261616	-6,3	-7,8

The volume of assets of the company at the end of 2018 amounted to 3110686 th.usd, including non-current assets of 1079431 th.usd, and current ones to 2030668 th.usd. Describing the dynamics of non-current assets, we note that their volume during the 2016-2018 period has gradually grown. In general, for 2016-2018 years, non-current assets of the company increased by 58175 th.usd or by 5.7%. For 2018, non-current assets increased by 14230 th.usd or by 1.3%.

The volume of current assets fell sharply in 2016-2018 on 267744 th.usd. or by 11.6%. The decrease of current assets in 2018 was mainly due to the reduction of accounts receivable - by 185300 th.usd (-20.0%) and inventories on 180307 th.usd (-21.4%).

To analyze the volume of assets of the company, we will conduct a comparative analysis of them in the following section: dynamics of the ratio of growth rates of current assets and sales proceeds; the dynamics of the ratio of growth rates of revenues and net cash flow; the dynamics of the ratio of current assets and net profit of the enterprise.

The corresponding indicators are given in the table. 2.2.

Table 2.2

Dynamics of the ratio of current assets with earnings, net cash flow and net profit figures for “Dveri Bilorusii” Ltd for 2016-2018 years, usd

Indexes	Value for the period		
	2016 y.	2017 y.	2018 y.*
Current assets, th.usd	2 426 101,5	2 421 942,0	2 160 380,5
Revenues from sales, th.usd	6 790 438,0	5 988 605,0	3 401 946,0
Net cash flow, th.usd.	-67 964,0	55 946,0	-725,0
Net profit, th.usd.	115552	141634	54893
The ratio of growth rates of current assets to growth rates:			
- revenue from sales	-	1,13	1,57
- net cash flow	-	-1,21	-68,83
- net profit	-	0,81	2,30

According to the data of the table. 2.2, the growth rate of current assets in 2016-2017 has outpaced the growth rate of revenue from sales by 1.13 points and the growth rate of net cash flow by -1.21 points. This indicates that the funds of the company that it received from the sale of products, tended to subsidence in working capital. The volume of net income, on the contrary, grew slower than current assets, which is a negative trend in solvency management. During 2017-2018, there was a tendency to outperform growth in revenues over the growth rates of current assets. The growth rates of cash were negative, indicating a tendency to defrost in working capital. Due to the reduction of net profit, the importance of the ratio of growth rates of current assets to the growth rate of net financial results increased significantly.

Let's analyze the liquidity balance of the enterprise. To do this, all assets are divided into 4 groups by the degree of liquidity and all liabilities into 4 groups for the urgency of return. We compare them according to normative values (Table 2.3).

Table 2.3

Dynamics of assets of "Dveri Bilorusii" Ltd by liqudity for 2016-2018 years, usd

Показники	On the date:			
	31.12. 2015 y.	31.12. 2016 y.	31.12. 2017 y.	31.12. 2018 y.*
Assets by liquidity groups				
Cash and cash equivalents	391 433	434 925	485 323	483 855
Highly liquid assets	1 317 015	1 463 350	1 385 942	1 224 138
Liquid assets	2 158 885	2 398 761	2 167 313	1 885 701
Weakly liquid assets	1 021 256	1 134 729	1 065 201	1 079 431
Liabilities for the urgency of return				
Current liabilities are urgent	290	322	279 415	236 009
Current liabilities are delayed	300 569	333 966	34 465	3 704
Long-term liabilities	1 254 359	1 393 732	1 435 604	1 259 870
Own funds	1 213 732	1 348 591	1 319 350	1 363 462

As shown in the table. 2.3, in general, the volume of the enterprise's cash and cash equivalents was exactly higher than the amount of urgent current liabilities. This indicated a high level of ability of an enterprise to cover its urgent current liabilities on demand of creditors by cash and cash equivalents.

Highly liquid assets also exaggerated the amount of urgent current liabilities. To cover cover current liabilities the liquid activities are enough.

We need to evaluate the structure of the enterprise assets. To this end, we will define the specific of each type of assets in their total volume (Table 2.4). As can be seen from Table 2.4. non-current assets in the total assets structure during the period under study amounted to 31-35%, and this share was constantly increasing.

Table 2.4

Dynamics of asset structure "Dveri Bilorusii" Ltd for 2016-2018 years, usd

Indicators	On the date:				Absolute growth, %	
	31.12. 2015 y.	31.12. 2016 y.	31.12. 2017 y.	31.12. 2018 y.*	31.12.15 - 31.12.18	31.12.17 - 31.12.18
I. Noncurrent assets						
Goodwill	2	2	2	2	0	0
Construction in process	1	1	2	3	2	1
Property, plant and equipment:	24	24	24	26	2	2
Primary value	62	62	66	73	10	6
Less accumulated depreciation and amortization	38	38	42	47	9	5
Other assets	4	4	3	4	0	1
Total Noncurrent assets	31	31	32	35	4	3
II. Current assets						
Inventories	25	25	23	21	-4	-2
Accounts receivable	28	28	27	24	-4	-3
Current deferred tax assets	1	1	1	0	-1	-1
Cash and cash equivalents	12	12	14	16	4	1
Other current assets	3	3	3	5	2	2
Total current assets	69	69	68	65	-4	-3
III. Assets of businesses held for sale	0	0	1	0	0	0
Total assets	100	100	100	100	0	0

The largest portion of non-current assets are property, plant and equipment, and their share in total assets declined over the whole period under investigation, from 69% as of 31.12.15 to 65% as of 31.12.18.

For "Dveri Bilorusii" Ltd, as enterprises of the production profile, the dominant in the structure of current assets of commodity stocks of inventory, including finished products.

Throughout the analyzed period, we can note the increasing dynamics of the share of inventories on the balance sheet of the enterprise. So, if on 31.12.15 the share of inventories was 25%, then as of 31.12.18 it decreased and amounted to 21%.

As for accounts receivable during the investigated period it is possible to observe the decrease of its share in 2016-2018. Thus, as of 31.12.15, the share of accounts receivable in the structure of assets amounted to 28%, and as of 31.12.17 it decreased and amounted to 27%. In 2018 there was a decrease in the share of accounts receivable at the enterprise to 21%, which is explained by the constant work of the financial department to increase the level of timely payment of payments.

It is also worth noting that other current assets increased its share in the total current assets of the company during 2017-2018. As of 31.12.18, the volume of other current receivables amounted to 5%.

Thus, we analized general trend in company's assets during 2016-2018 years along. Towards the tendency of non-current assets we'd emphasize their constrait growth during 2016-2018 years. By the meantime current assets decreased. The volume of current assets fell sharply in 2016-2018 on 267744 th.usd. or by 11.6%. The decrease of current assets in 2018 was mainly due to the reduction of accounts receivable - by 185300 th.usd (-20.0%) and inventories on 180307 th.usd (-21.4%). Non-current assets in the total assets structure during the period under study amounted to 31-35%, and this share was constantly increasing. The largest portion of non-current assets are property, plant and equipment, and their share in total assets declined over the whole period under investigation, from 69% as of 1.01.14 to 65% as of 31.12.18. During 2017-2018, there was a tendency to outperform growth in revenues over the growth rates of current assets. The growth rates of cash were negative, indicating a tendency to defrost in working capital. Due to the reduction of net profit, the importance of the ratio of growth rates of current assets to the growth rate of net financial results increased significantly.

2.2. The analysis of liabilities dynamic and structure

Within the question we need to evaluate the volume and structure of the current liabilities of the investigated enterprise "Dveri Bilorusii" Ltd. The assessment implies the use of information from the financial statements of the enterprise, in particular Form No. 1 "Balance sheet" and " Income statement ". To study, we will use the method described in question 2.1.

First, we propose to consider the comparative analisis of the total volume at liabilities of the enterprise and its current liabilities (Table 2.5, Figure 2.2).

The liabilities of the enterprise (capital) tended to be similar to the trend of changes in total assets, which was analyzed in the previous issue. The growth of liabilities was conditioned by a revaluation of the cost of fixed assets on the balance due to the inflationary processes of 2016-2017, as well as the growth of the value of the stocks of the TMC also as a result of the revaluation.

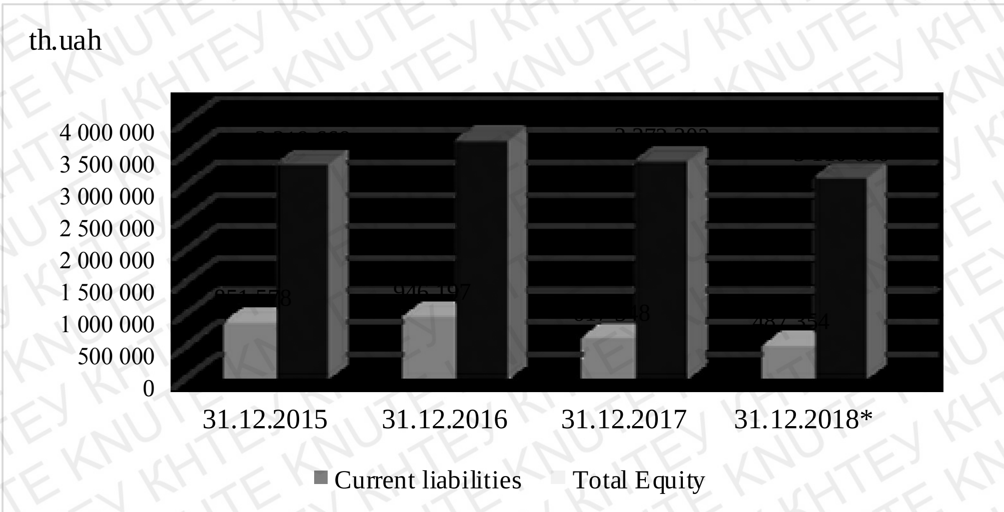

Fig. 2.2. The comparative dynamics of total capital and current liabilities of the company «Dveri Bilorusii» Ltd for 2016-2018 years, usd

Current commitments in 2016-2017 had the opposite trend in dynamics, compared with the dynamics of enterprise capital. During this period, the volume of current liabilities decreased from 851578 usd (31.12.15) to 487354 usd (31.12.18).

To determine the reasons for reducing the volume of current liabilities, we need to analyze the dynamics of the equity of the enterprise (Table 2.5)

Table 2.5

The dynamics of the capital stock of the company "Dveri Bilorusii" Ltd for 2016-2018* years, usd

Indicators	On the date:				Absolute growth, usd		Growth rate, %	
	31.12. 2015 y.	31.12. 2016 y.	31.12. 2017 y.	31.12. 2018*v	31.12.15 - 31.12.18	31.12.17 - 31.12.18	31.12.15 - 31.12.18	31.12.17 - 31.12.18
I. Stackholder equity								
Common stock	116	129	129	1290	1174	1161	1011,1	900,0
Additional paid-in capital	323404	359338	365863	355311	31907	-10552	9,9	-2,9
Accumulated other comprehensive loss	-17558	-19509	0	-12718	4840	-12718	-27,6	
Retained earnings	1103270	1225855	1311544	1386875	283606	75331	25,7	5,7
Less treasury stock	-196645	-218494	-245961	252993	449638	498954	-228,7	-202,9
Stockholders' equity attributable to no controlling interests	100	111	149	159	59	10	59,2	6,7
Total Stackholder equity	1213732	1348591	1319350	1363462	149730	44112	12,3	3,3
II. Long-term liabilities								
Deferred income taxes	500	556	55803	76340	75840	20537	15155,8	36,8
Other long-term liabilities	100921	112134	101919	115837	14916	13918	14,8	13,7
Long-term debt	1152938	1281042	1277882	1067693	-85245	-210189	-7,4	-16,4

Total long-term liabilities	1254359	1393732	1435604	1259870	5511	-175734	0,4	-12,2
Continue the tab 2.5								
III. Current liabilities								
Accounts payable	381426	423807	260984	235385	-146041	-25599	-38,3	-9,8
Accounts payable-documentary letters of credit	112548	125053	41473	1327	-111221	-40146	-98,8	-96,8
Accrued expenses and other payables	290	322	279415	236009	235719	-43406	81338,6	-15,5
Notes payable	11059	12288	2009	0	-11059	-2009	-100,0	-100,0
Current maturities long-term debt	7205	8005	1011	10929	3725	9918	51,7	981,0
Liabilities of businesses held for sale	289510	321678	32456	3704	-285806	-28752	-98,7	-88,6
Other liabilities	49540	55044			-49540	0	-100,0	-
Total current liabilities	851578	946197	617348	487354	-364224	-129994	-42,8	-21,1
Total equity	3319668	3688520	3372302	3110686	-208982	-261616	-6,3	-7,8

During 2016-2018 years the volume of current liabilities decreased from 851578 usd to 487354 usd, which was primarily due to the reduction of accounts payable and accounts payable-documentary letters of credit appropriately on -146041 and -111221 usd. Accrued expenses and other payables increased within 2016-2018 years to 235719 usd. But in 2018 they deceased a bit more to 43406 usd.

The decrease took place for liabilities of businesses held for sale. In 2018 their volume decreased by 285806 usd (-98.7%).

To assess the preconditions for solvency formation, it is important to compare the dynamics of current liabilities with the volumes of current assets (Figure 2.3)

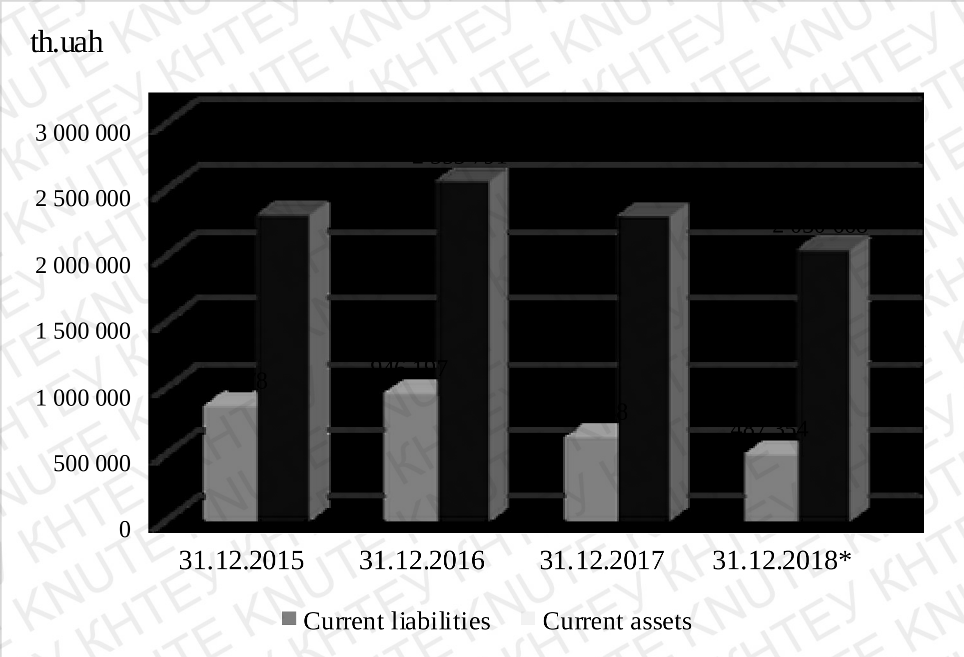

Fig. 2.3. The dynamics of the growth rates of current assets and current liabilities for 2016-2018 years, usd

Due to the fact that the volume of operational activity of the enterprise in usd value equivalent increased rapidly during this period, during the period of 2016 the growth rate of current assets was observed to the level of 2533791 usd. In 2017 year current assets decreased to 617348 usd, and current assets decreased to 2290093 usd.

When analyzing the trend in the change of current liabilities of the enterprise, it should be noted that the reduction of current financing took place in 2017-2018 mainly due to current liabilities, which was caused by a decrease in the need for financing current assets by borrowing capital. This is evidenced by the relationship between the growth rates of the volume of current assets and current liabilities (Figure 2.4).

The coefficient of elasticity shows the extent of the decrease (growth) of current liabilities, depending on the change in current assets. The value of the coefficient of elasticity has a constant tendency to increase. So, if in 2016 it was -11.1% (growth of current assets by 100% was accompanied by a decrease in current liabilities), then in

2017 the value of this indicator was -34.8%. In 2018, the growth of current assets by 100% was accompanied by a reduction of current liabilities by 21.1%.

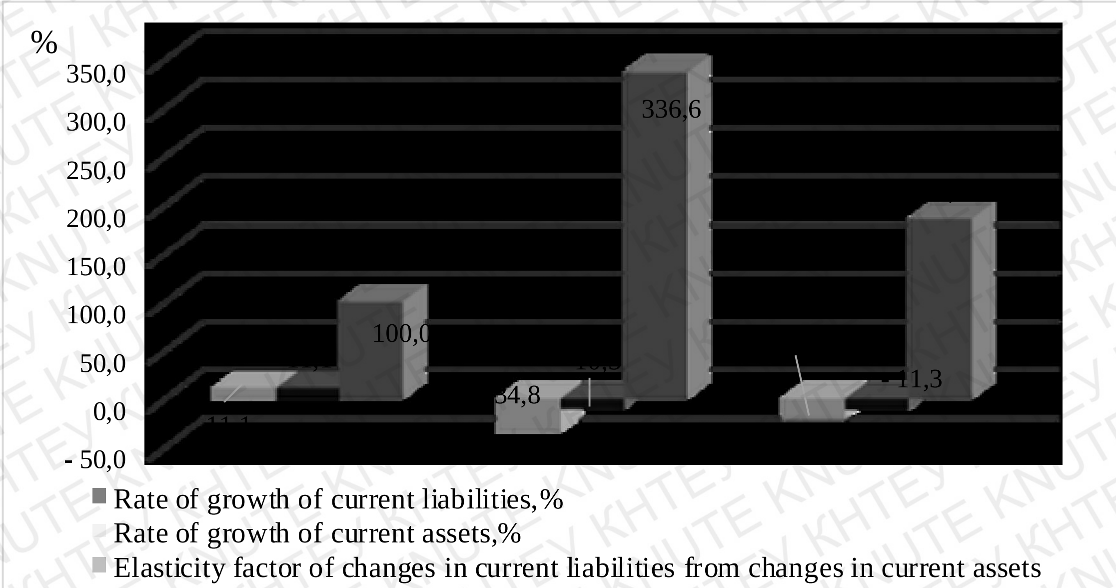

Fig. 2.4. Dynamics of the ratio of growth rates of growth of coupon assets and current obligations for 2016-2018,%

It is also advisable to follow the dynamics of the current obligations of the enterprise compared to the volume of its income. To do this, compare the growth rates of net income and the volume of current liabilities (Figure 2.5).

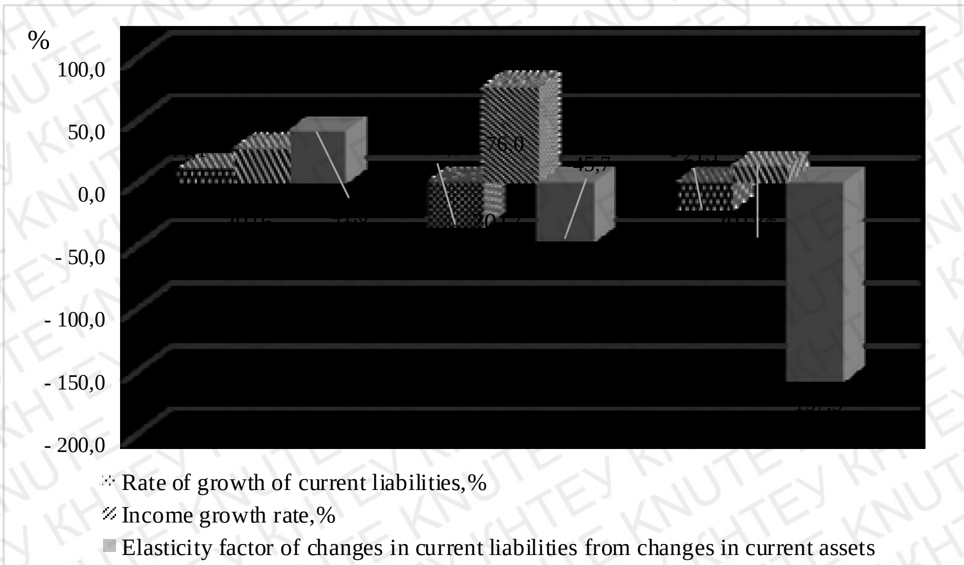

Fig. 2.5. Dynamics of growth rates of net income and volume of current liabilities for 2016-2018,%

As can be seen from Fig. 2.5, in general, the growth of net income significantly affected the growth of current liabilities, especially in 2018 - the impact cut by almost 368.8%.

It is worth noting again the clear relationship between net income, which expresses operational indicators, and the need for its financing.

However, a general assessment of the amount of current liabilities does not make it possible to determine at what expense the funds (own or borrowed) provide financing for the growth of activity. Therefore, it is further expedient to analyze the features of the structure of current liabilities of the enterprise (Table 2.6).

Table 2.6

Structure of current liabilities in the capital of the company "Dveri Bilorusii" Ltd for 2016-2018* years, usd

Indicators	On the date:				Absolute growth, %	
	31.12.2015	31.12.2016	31.12.2017	31.12.2018*	31.12.14 - 31.12.17	31.12.16 - 31.12.17
I. Stackholder equity						
Common stock	0	0	0	0	0	0
Additional paid-in capital	10	10	11	11	2	1
Accumulated other comprehensive loss	-1	-1	0	0	0	0
Retained earnings	33	33	39	45	11	6
Less treasury stock	-6	-6	-7	8	14	15
Stockholders' equity attributable to no controlling interests	0	0	0	0	0	0
Total Stackholder equity	37	37	39	44	7	5
II. Long-term liabilities						
Deferred income taxes	0	0	2	2	2	1
Other long-term liabilities	3	3	3	4	1	1

Long-term debt	35	35	38	34	0	-4
Continue the tab 2.6						
Total long-term liabilities	38	38	43	41	3	-2
III. Current liabilities						
Accounts payable	11	11	8	8	-4	0
Accounts payable-documentary letters of credit	3	3	1	0	-3	-1
Accrued expenses and other payables	0	0	8	8	8	-1
Notes payable	0	0	0	0	0	0
Current maturities long-term debt	0	0	0	0	0	0
Liabilities of businesses held for sale	9	9	1	0	-9	-1
Other liabilities	1	1	0	0	-1	0
Total current liabilities	26	26	18	16	-10	-3
Total equity	100	100	100	100	0	0

As the data in Table 2.6 show, in general, the share of current liabilities in the equity of the enterprise was declining in 2016-2018. Thus, as of 31.12.2016, current liabilities share amounted to 26%. In subsequent periods, this share gradually decreased, reaching 18% in the 31.12.2018. During 2018, the share of current liabilities in the capital structure slightly decreased by 2% and amounted to 16%. Company has a dominant share in the current liabilities structure of accounts payable for goods, works and services. Accounts payable of the enterprise were formed from debts to suppliers for the delivered products and services rendered.

Current payables to suppliers for goods, works, services as of 31.12.2018 it amounted to 8%.

Other current liabilities - accounts payable-documentary letters of credit and accrued expenses and other payables occupy a small portion of the financial resources. Enterprise does not accumulate tax debts. Also, in 2018, the share of liabilities of businesses held for sale sharply increased, which amounted to 1% as on

31.12.2018. They included the amount of interest-free financial assistance from the partner company, which was returned to the end by 2018.

Thus, the analysis of the volumes and structure of liabilities of the company "Dveri Bilorusii" Ltd indicates a tendency towards its reduction during 2016-2017, and a slight increase in 2018. The main factors behind the decrease in the volume of financial resources of the enterprise was the reduction of the need for financing current assets. In the structure of current liabilities, the share of payables for goods and services is prevailing - it forms the principal amount of the borrowed capital of the enterprise.

2.3. The analysis of the level of enterprise's solvency and influence the main factors on it

The research of the solvency ratios of the enterprise will be based on the methodology proposed in the 1st section of the study. Information support for solvency analysis of the investigated enterprise will be based on the financial statements (Balance shhet, Income Statement, Cash-flow statement).

Firstly, we need to analyze the dynamics of indicators of static solvency (liquidity) of the investigated enterprise. The main indicators of liquidity are given in Table 2.7. and on figure 2.6.

According to the data of the table. 2.7, in general, all the indicators of static solvency as of 31.12.2016 had the significance of coefficients that were significantly lower than their critical values. That is, at this date the enterprise can be considered actually insolvent. However, the dynamics of the coefficients of static solvency has constantly changed during 2016-2018, which can be seen from Fig. 2.7.

The value of the Coefficient of General Coverage (General Solvency) indicator tended to gradually increase over the entire observation period. Thus, as of 31.12.2016 this indicator was 2,691, as of 31.12.2017 - 2,699, as of January 1, 2018 - 3,710, as of January 1, 2018 - 4,167. The intermediate liquidity ratio (calculated solvency) and Absolute liquidity ratio (cash solvency) in their tendency were quite the same as the dynamics of the Coefficient of general coverage dynamics.

Table 2.7

Dynamics of the static solvency (liquidity) indicators of the company "Dveri Bilorusii" Ltd during 2016-2018* years

Balance Articles	Critical value	On the Date:				Abs. growth %	
		31.12. 2015 y.	31.12. 2016 y.	31.12. 2017 y.	31.12. 2018* y.	31.12. 14 - 31.12. 17	31.12. 16 - 31.12. 17
Coefficient of general coverage (general solvency)	1-1,5	2,691	2,699	3,710	4,167	1,468	0,457
Intermediate liquidity ratio (calculated solvency)	0,7-0,8	1,702	1,710	2,444	2,809	1,099	0,365
Absolute liquidity ratio (cash solvency)	0,2-0,35	0,453	0,460	0,786	0,993	0,533	0,207
Debtor and payables ratio	1	1,865	1,874	2,978	3,127	1,254	0,150
Coverage ratio of current liabilities at own expense (usd)	0,1	0,428	0,436	0,496	0,496	0,060	0,000

Considering the dynamics of all indicators of static solvency, we note that they grew during 2016-2017. As of January 1, 2018, they reached their peak for the entire period under investigation and were within the critical limits.

That is, we can conclude that the level of static solvency of the company has improved over the analyzed period. This may be explained by an increase in the volume of income and the receipt of positive financial results by the enterprise. This allowed the company to increase the level of financing of circulating assets at the expense of its own financial resources.

This is also evidenced by epy figure. 2.7, which reflects the dynamics of its working capital.

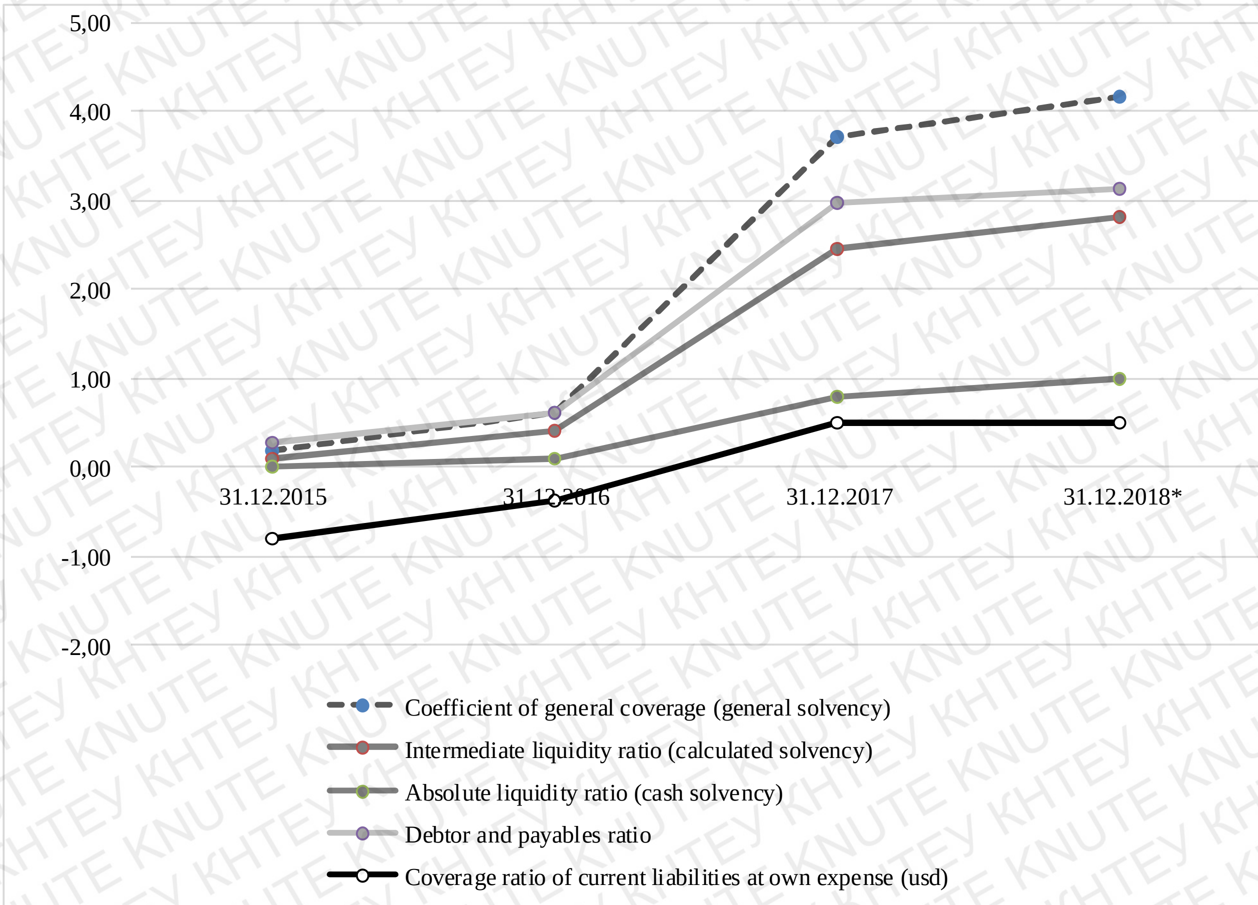

Fig. 2.6. Liquidity indicators of the investigated enterprise "Dveri Bilorusii" Ltd during 2016-2018 years*

As shown in Fig. 2.7, the amount of own working capital grew in 2016-2017. If as of 31.12.2016 it amounted to 1446834 usd (current assets of 1446834 exceeded the volume of current liabilities), then as of 31.12.2018 this indicator already amounted to 1672745 usd. (current assets at 1672745 exceeded the amount of current liabilities).

In 2018, the deteriorating situation in the financing of current assets - as of 31.12.2018, the amount of its working capital has decreased to 1543314 usd. by reducing inventories and receivables. It is worth noting that current liabilities decreased less rapidly than the rates of decline in current assets. Therefore, the decline in current assets led to a decrease in the amount of its working capital. Such a trend, however, did not affect the overall solvency of the enterprise.

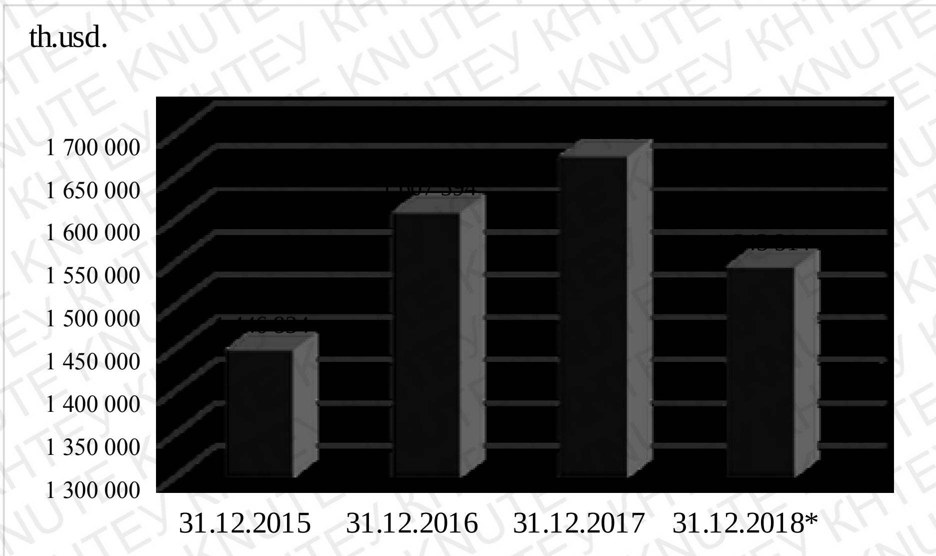

*Fig. 2.7. The dynamics of Dveri Bilorusii Ltd's own working capital for the period 2016-2018*years*

In the following, we consider the dynamics of liquidity ratios of current assets and the quality of payables, which are presented in Table 2.8. and on figure 2.8.

Table 2.8

Dynamics of current assets liquidity and quality of accounts payable «Dveri Bilorusii» Ltd during 2016-2018* years

Balance Articles	The best tendency	Value by years			Absolute growth	
		2016	2017	2018*	2016-2017	2017-2018
Average period of inventory turnover (in days) (POS), days	decreasing	47,1	51,6	76,3	4,5	24,7
Average period of turnover of receivables (POD), days	decreasing	51,8	58,0	86,8	6,2	28,8
Payback Period (POK), days	decreasing	27,6	25,6	28,5	-2,1	2,9
Operating cycle period (TOC), days	decreasing	98,9	109,6	163,2	10,7	53,6
Financial Cycle Period (TFC), days	decreasing	71,3	84,0	134,6	12,7	50,6

Considering the dynamics of relative solvency ratios, we note that their analysis is not enough to get the full picture. Therefore, in continuation of this issue we propose to consider the dynamics of indicators of liquidity of current assets and the quality of accounts payable.

As can be seen from Table 2.8, in 2016 the value of the indicator of the duration of the operating cycle was 98.9 days, including the period of turnover of inventories was 47.1 days, and the period of repayment of accounts receivable – 51.8 days. In 2017, the increase in the duration of the operating cycle was 10.7 days due to the growth of inventory turnover by 4.5 days and the average maturity of the receivable by 6.2 days. In 2018, the duration of the financial cycle changed significantlyby 12.7, also the length of its components changed - the period of the inventory turnover increased by 24.7 days, and the period of repayment of receivables - increased by 28.8 days. Payback Period (POK) in 2017 decreased by 2.1 days in 2018 increased by 2.9 days. In 2018 Financial Cycle Period (TFC) was increased by 50.6 days and amounted to 134.6 days.

As shown in Fig. 2.8, the reduction of the average payback period of the enterprise's debt affected the increase in the duration of the financial cycle. That is, this is confirmed by the fact that the growth of the level of financing of current assets increased at the expense of its own working capital.

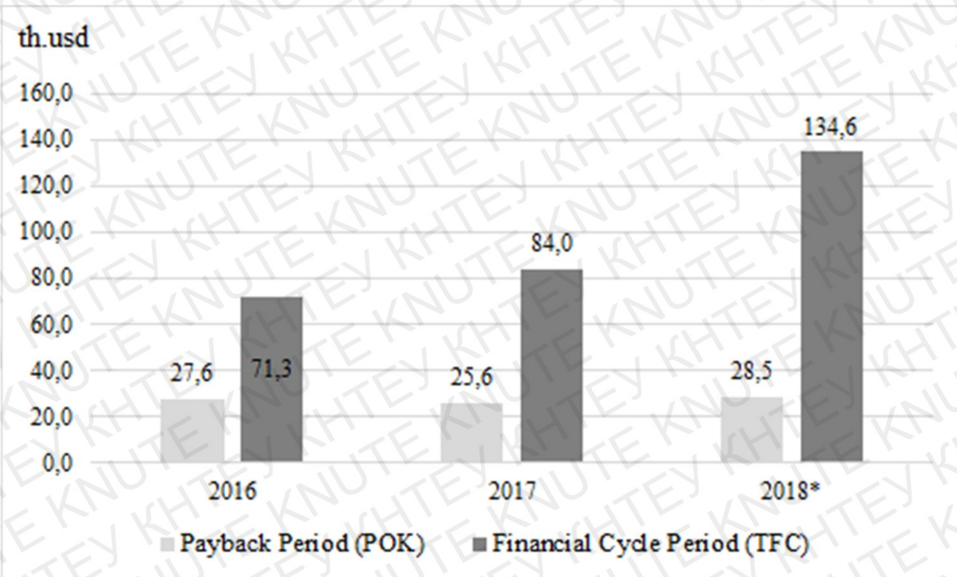

Fig. 2.8. The comparative dynamics of the pay-as-you-go period and the duration of the financial cycle Dveri Bilorusii Ltd during 2016-2018 years, days

In the future we calculate the value of the integral indicator of solvency of the enterprise. To do this we will use the method of multiplying all partial static solvency ratios, which are given in Table. 2.7.

The calculation results are shown in Fig. 2.9.

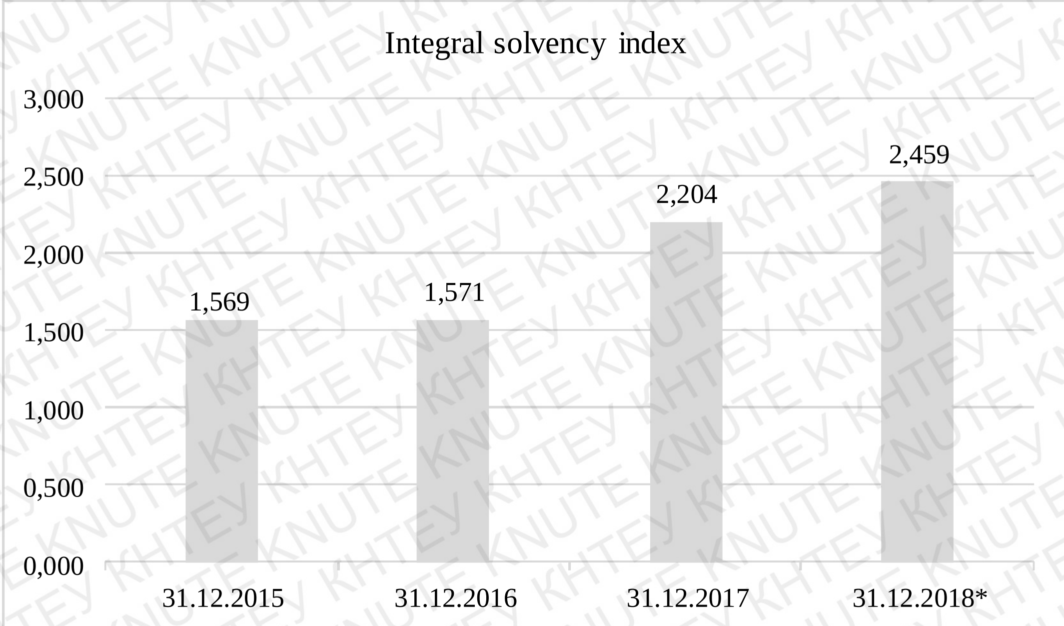

Fig. 2.9. Dynamics of the integral index of solvency of "Dveri Bilorusii" Ltd for 2016-2018 years

Also note that for determining the integral coefficient of solvency for each partial coefficient was assigned the appropriate level of significance:

-Coefficient of general coverage (general solvency) – 0.4;

-Intermediate liquidity ratio (calculated solvency) – 0.1;

-Absolute liquidity ratio (cash solvency) – 0.1;

-Debtor and payables ratio – 0.1;

- Coverage ratio of current liabilities at own expense (usd) – 0.2.

The most significant is the overall coverage rate of 0.4. The second highest level of significance is the Coverage ratio of current liabilities at own expense - 0,2. The remaining indicators account for 0.1 points.

According to the calculations conducted, the dynamics of the integral solvency ratio confirms the tendency for its improvement in 2016-2018.

Consequently, the analysis of the indicators of solvency shows that the company did not effectively affect the optimization of distribution of financial resources. Considering the dynamics of all indicators of static solvency, we note that they grew during 2016-2017. As of January 1, 2018, they reached their peak for the entire period under investigation and were within the critical limits. That is, we can conclude that the level of static solvency of the company has improved over the analyzed period. This may be explained by an increase in the volume of income and the receipt of positive financial results by the enterprise. This allowed the company to increase the level of financing of circulating assets at the expense of its own financial resources. Reductions in the average period of payback of the company's debt had an effect on the growth of the duration of the financial cycle. That is, this is confirmed by the fact that the growth of the level of financing of circulating assets increased at the expense of its own working capital. In 2018 there was a deterioration in the situation in the financing of current assets - as of 31.12.2018, the amount of its working capital has decreased to -1656 usd. due to the growth of stocks and receivables on the one hand, and the decline in net profit (which was going to refinance) on the other hand.

The study of solvency indicators would be incomplete without an assessment of the company's cash flows. it is necessary to consider the main trends in the change of cash flows of the company «Dveri Bilorusii» Ltd, in particular, the dynamics of solvency indicators, which are calculated on the basis of cash flows.

First, let's consider the general dynamics of cash flows (Table 2.9).

Table 2.9

Total Dynamics of Cash Flows «Dveri Bilorusii» Ltd in 2016-2018* years, usd

Стаття	Value by years			Absolute growth, usd		Growth rate, %	
	2016 y.	2017 y.	2018* y.	2016-2017	2017-2018	2016-2017	2017-2018
Cash flows from operating activities:							
Net earnings	115552	141634	54893	26082	-86741	22,6	-61,2
Adjustment of net earnings to cash flows from operating activities:							
Depreciation and amortization	136004	132779	95423	-3225	-37356	-2,4	-28,1
Provision for losses on receivables net	-176	3481	3748	3657	267	-2077,8	7,7
Share-based compensation	18051	23484	19889	5433	-3595	30,1	-15,3
Amortization	-7597	-7597	-5698	0	1899	0,0	-25,0
Loss on debt extinguishment (dead debts)			1148	0	1148		
Deferred income taxes	32348	23291	9744	-9057	-13547	-28,0	-58,2
Tax expense from	4426	1213	-666	-3213	-1879	-72,6	-154,9
Net gain on sale of assets	-31356	-8489	-1802	22867	6687	-72,9	-78,8
Write-down of inventory	4	15935	9567	15931	-6368	398275,0	-40,0
Asset impairments	3498	1461	15842	-2037	14381	-58,2	984,3
Changes in operating assets and liabilities net of acquisitions:							
Accounts receivable	-143397	206633	146166	350030	-60467	-244,1	-29,3
Advance payments on sale of accounts receivable	120957	-117753	1473	-238710	119226	-197,4	-101,3
Inventories	-177331	50747	205717	228078	154970	-128,6	305,4
Other assets	-20516	23674	-6729	44190	-30403	-215,4	-128,4
Accounts payable accrued expenses and other payables	90604	-180517	-64676	-271121	115841	-299,2	-64,2
Other long-term liabilities	-6543	-9664	12497	-3121	22161	47,7	-229,3
Net cash flows from operating activities	*13694*	*313461*	*506868*	*299767*	*193407*	*2189,0*	*61,7*
Cash flows from (used by) investing activities:							
Capital expenditures	-101749	-11958	-104481	89791	-92523	-88,2	773,7
Proceeds from the sale of property plant and equipment and other	17572	14925	347	-2647	-14578	-15,1	-97,7

Continue the tab 2.9

Proceeds from the sale of subsidiaries	52609	27831		-24778	-27831	-47,1	-100,0
Acquisitions net of cash acquired	-15693		-49094	15693	-49094	-100,0	
Net cash flows used by investing activities	*-47261*	*-76824*	*-150105*	*-29563*	*-73281*	*62,6*	*95,4*
Cash flows from (used by) financing activities:							
Continue the tab 2.9							
Increase (decrease) in documentary letters of credit net	11753	-80482	-40145	-92235	40337	-784,8	-50,1
Short-term borrowings net change	6315	7802	-2009	1487	-9811	23,5	-125,7
Repayments on long-term debt	-7677	-11335	-208605	-3658	-197270	47,6	1740,4
Payments for debt issuance costs	-431			431		-100,0	
Debt extinguishment costs			-11127	0	-11127		
Decrease (increase) in restricted cash	18	3742	1	3724	-3741	20688,9	-100,0
Stock issued under incentive and purchase plans net of forfeitures	-1488	-1492	-6036	-4	-4544	0,3	304,6
Treasury stock acquired		-41806	-30595	-41806	11211		-26,8
Cash dividends	-56428	-55945	-41586	483	14359	-0,9	-25,7
Tax expense from stock-based plans	-4426	-1213	666	3213	1879	-72,6	-154,9
Contribution from (purchase of) non-controlling interests	-15	38	29	53	-9	-353,3	-23,7
Net cash flows from financing activities	*-34397*	*-180691*	*-357488*	*-146294*	*-176797*	*425,3*	*97,8*
Effect of exchange rate changes on cash	873	-5548	-743	-6421	4805	-735,5	-86,6

According to the data of the table. 2.9, the net cash flow from operating activities for the enterprise was increased in the process of forming its solvency, as a significant role played by the change in cash flows from operation activity. In 2016-2017, the net cash flow from operating activities grew by 299767 usd, including an increase in revenue from net sales of products at 26082 usd, while expenditures on the purchase of goods, works, services, wages and salaries from deductions and other expenses increased.

In 2017-2018 there was a increase in cash flow from operating activities due to a fairly significant increase in advance payments on sale of accounts receivable, inventories and other assets.

We will analyze the indicators of liquidity of cash flows of the enterprise (Table 2.10).

Table 2.10

"Dveri Bilorusii" Ltd. Cash Flow Liquidity Indicators in 2016-2018 years

Indicator	Value by years			Absolute growth	
	2016 y.	2017 y.	2018* y.	2016-2017	2017-2018
Cash flow rate	0,829	1,145	0,327	0,316	-0,818
Net cash flow adequacy ratio	0,825	1,139	0,314	0,314	-0,825
Cash flow rate	0,239	1,481	1,327	1,242	-0,154

Cash flow ratio characterizes the ability of an enterprise to cover the necessary cash expenses by a positive cash flow in the reporting period. According to the data of the table. 2.10, the value of cash flow for the enterprise amounted to 0.829 points in 2016. In 2017, it insignificantly increased by 0.316 foul and amounted to 1,145 points. In 2018 there was a decrease in the level of liquidity of the cash flow to the level of 0,327 points. This year, the liquidity ratio of the cash flow is lower than 1, which indicates a declining tendency in the solvency of the enterprise - the value of the cash flow in this year exceeded the value of profitable cash flow.

The level of sufficiency of spending money gives a generic characteristic of the balance of cash flows. It shows the definition of the adequacy of the net cash flow of the enterprise from the position of ensuring the financial needs of the enterprise. In 2016-2017, the company had the opportunity to make the necessary payments, while not spending the deferred cash (that is, in 2016-2017, the company increased the amount of cash balances on the balance sheet). In 2018, the level of sufficiency of cash flow dropped sharply, but the company continued to increase the balance of funds without spending their deferred spending.

In general, it should be noted that during 2016-2018 there was an increase in the level of cash flow efficiency. This indicator expresses the effectiveness of management decisions regarding the cash flows of the enterprise and their impact on the state of financial equilibrium and ensuring sustainable economic growth. We see from the results that the performance increased.

Also, consider other characteristics of the company's cash flow, which determine its solvency (Table 2.12).

Table 2.12

Dynamics of indicators characterizing liquidity of cash flows in 2016-2018 years

Indicator	Value by years			Absolute growth	
	2 015 y.	2017 y.	2018* y.	2016-2017	2017-2018
Net Growth (CHPC)	368851,6	-316218,0	-261616,0	-685069,6	54602,0
Static power factor (KSTP)	0,36	1,11	0,21	0,74	-0,89
Cash flow ratio (Kgk)	0,27	0,29	0,11	0,03	-0,18
Cash Flow Rate (CU)	0,73	0,26	0,53	-0,47	0,27
Turnover rate of cash (OGK)	0,19	0,07	0,13	-0,12	0,06

Based on the indicators given in Table. 2.12 we can state that the level of liquidity of the company's cash flow in 2016-2017 was sufficient to ensure its solvency. The value of static power and net cash inflow tended to increase. The rate of turnover of money in 2016-2017 decreased due to the growth of their spending.

Thus, we can conclude that the level of static solvency of the company has improved over the analyzed period. This may be explained by an increase in the volume of income and the receipt of positive financial results by the enterprise. This allowed the company to increase the level of financing of circulating assets at the expense of its own financial resources. Reductions in the average period of payback of the company's debt had an effect on the growth of the duration of the financial cycle. That is, this is confirmed by the fact that the growth of the level of financing of circulating assets increased at the expense of its own working capital. In 2018 there was a deterioration in the situation in the financing of current assets - as of 31.12.2018, the amount of its working capital has decreased to -1656 usd. due to the growth of stocks and receivables on the one hand, and the decline in net profit (which was going to refinance) on the other hand. In 2016-2017, the the net cash flow from operating activities grew by 299767 usd, including an increase in revenue from net sales of products at 26082 usd, while expenditures on the purchase of goods, works, services, wages and salaries from deductions and other expenses increased. In 2017-2018 there was a decrease in net cash flow from operating activities due to a fairly significant increase in costs for the acquisition of commodity and material assets of the enterprise. In general, it should be noted that during 2016-2018 there was an increase in the level of cash flow efficiency. This indicator expresses the effectiveness of management decisions regarding the cash flows of the enterprise and their impact on the state of financial equilibrium and ensuring sustainable economic growth. We see from the results that the performance increased.

CHAPTER 3
THE MAIN DIRECTIONS OF IMPROVEMENTS SOLVENCY MANAGEMENT OF ENTERPRISE «DVERI BILORUSII» LTD

3.1. The proposals of creation informational and methodological improvement solvency management of enterprise

Research of literary sources and analysis of practical experience of the company "Dveri Bilorusii" Ltd in the field of solvency management made it possible to identify a number of directions that would optimize the solvency management system.

First of all, it is important to improve information and methodological support for identifying and analyzing insolvency risks. Also, the growth of the solvency of the enterprise is possible due to the growth of financing of assets due to its own financial resources. The generalization of the main directions for improving the information and methodological principles of solvency management is given in Fig. 3.1.

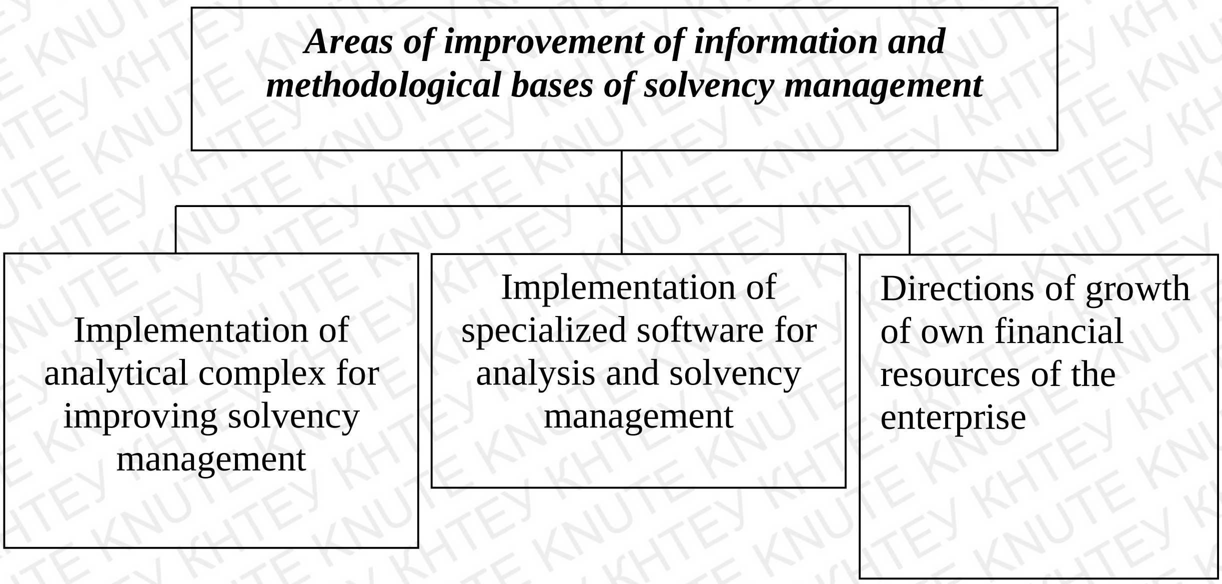

Fig. 3.1. Directions of improvement of improvement of informational and methodical principles of solvency management

Consider each of the following directions in more detail.

1. Implementation of analytical complex for improving solvency management

For the diagnostics of solvency at the company LLC "Dveri Bilorusii" it is proposed to use differentiated components of its components: valuation of assets, capital, ability of the company to respond to claims of creditors. It is necessary to determine the peculiarities of the interaction of individual components of solvency management in order to assess the overall synergistic effect of each of them. A conditionally improved model for analyzing solvency management indicators (analytical solvency assessment) is presented in Fig. 3.2.

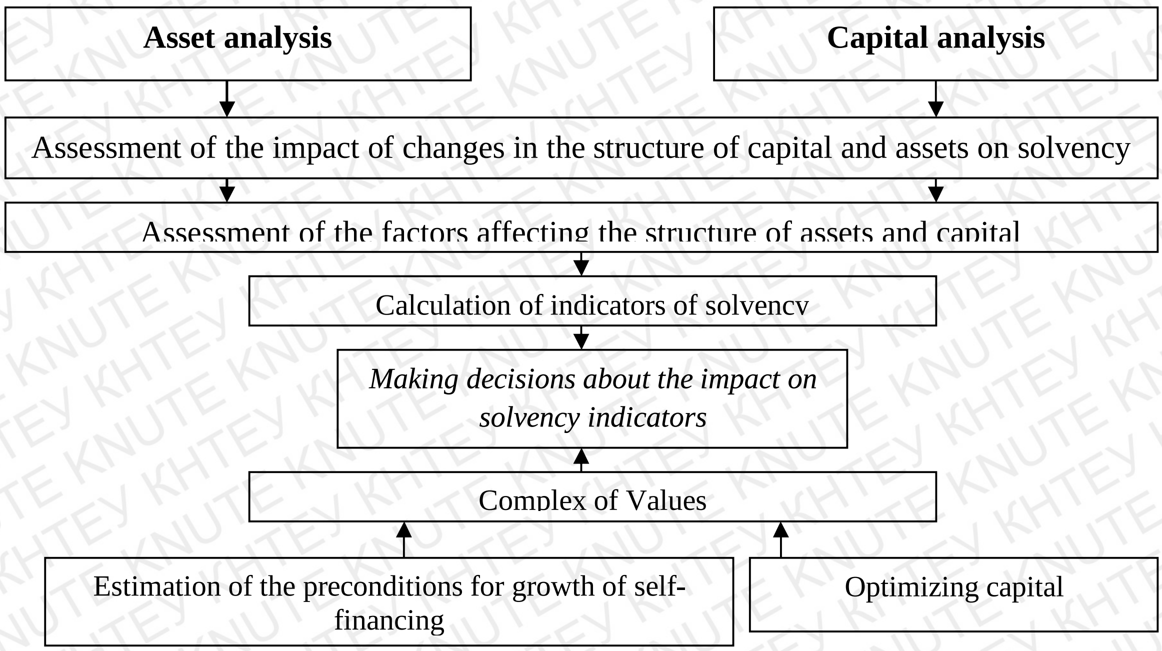

Fig. 3.2. Model of formation of the analytical complex on solvency management at the enterprise of LLC "Dveri Bilorusii"

Thus, the proposed model for the formation of a solvency management analytical complex at the enterprise "Dveri Bilorusii" LLC should indicate the target orientation of management actions for changing the existing solvency parameters and timely prevention of the risks of its reduction. Determining the directions of these changes will allow to timely identify the need for managerial influence on the formation of solvency parameters (Table 3.1).

Table 3.1

Identification of directions of managerial influence on the change of the main indicators of solvency of LLC "Dveri Bilorusii" with the help of the proposed analytical complex.

Indicators	Direction of change			
Volume of current assets	↑	↓	↑	↓
Amount of loan financing sources	↑	↓	↓	↑
The content of the directions of changing the parameters of solvent-free	Under conditions of expansion of activity	Implementation of savings measures	Growth of investment in current assets (reserves) while simultaneously optimizing sources of financing	Expansion of loan financing while simultaneously optimizing current assets

2. Implementation of specialized solvency management software

The given analytical complex will have insignificant practical value for the investigated enterprise, if it is not combined with the tools of information technology. To this end, we propose the implementation of Framework Analitics software on the enterprise, which allows you to build a statistical analysis package based on customized scenarios based on existing enterprise databases for the ability to make managerial decisions in time to change the key indicators of solvency management.

The advantage of this tool is that it enables:

- connect to the database with the information on sales and balance of goods from 1C;

- to set up scenarios of statistical analysis in accordance with the logic of the analytical complex, which is shown in Fig. 3.2 and in the table. 3.1;

- to form a model of dynamic data;

- Generate a PerformanceDashboard kit for leadership, a web page with a variety of tailored Tablet Scripts, charts and other analytics objects that can be opened from both a PC and a mobile phone.

An example of the dialog of this PerformanceDashboard is shown in Fig. 3.3.

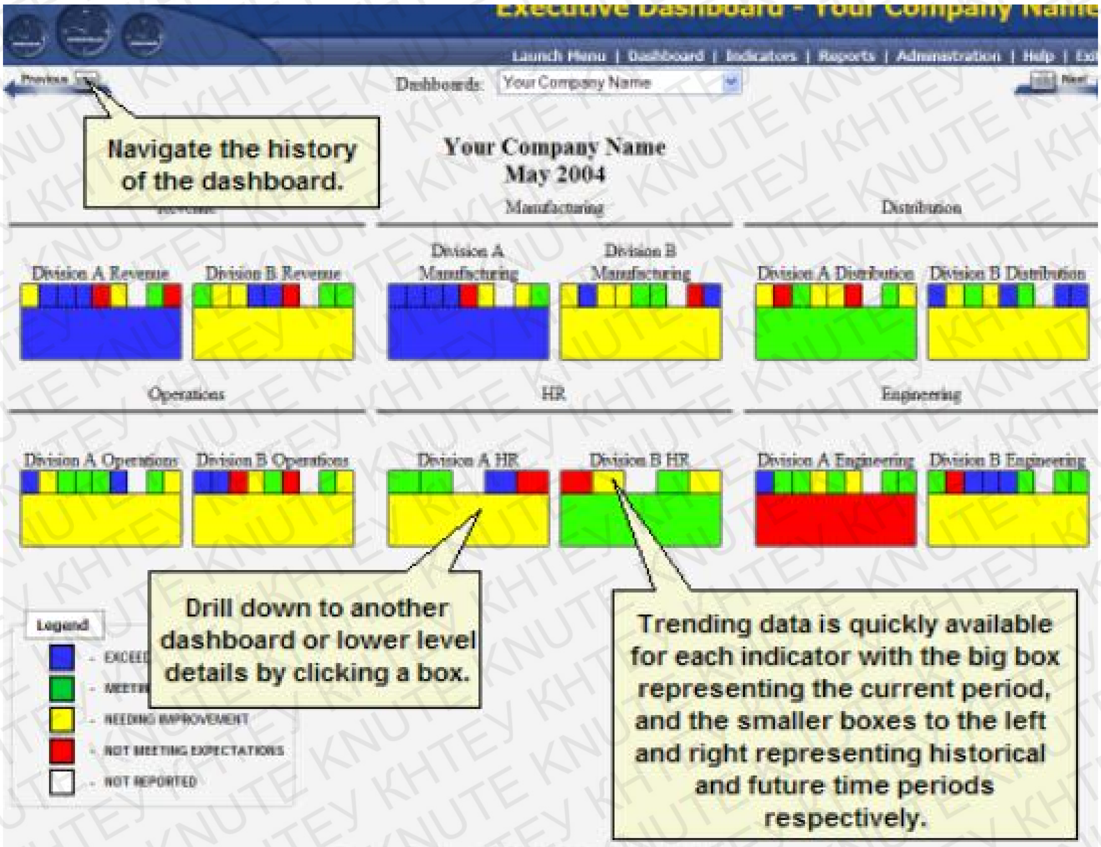

Fig. 3.3. An example of the PerformanceDashboard dialog box in Framework Analitics

The advantage of this product is its ease of administration - it does not require separate servers, and the data it uses is cached through a web-based api in the cloud. Also, the cost of information is formed on the model SAAS, that is, on the terms of its lease. The essence of this model is the monthly payment (subscription) of the subscription for using the software. For the company «Dveri Bilorusii» LLC it is possible to provide access to the 3rd user to the system - the CFO, the financier and the Deputy Director. The cost of one user per month is 1250 UAH.

However, the lack of this software is the lack of direct contact with the 1C database. Therefore, it will be necessary for the enterprise to configure the appropriate integration between 1C and an intermediate database to which Framework Analitics has access. To create databases, you can use two types of platforms that are intrusive with Framework Analitics - Oracle or SQL Server. Due to the high cost of Oracle support, we suggest you select SQL Server and configure the database on the server of Dveri Bilorusii Ltd (SQL ASP.NET 04 software environment).

In order to implement this software product we offer the following schedule of tasks for its implementation:

Table 3.2

Program of measures for the implementation of the analytical and informational complex Framework Analitics for improving solvency management at the enterprise of LLC "Dveri Bilorusii"

№	Task	Responsible	Deadline
1	Specification, deployment of IT infrastructure, installation and initial testing of Framework Analitics	-	30/01/2019
1.1	Formation of a technical task for the implementation of a software product	IT Director of Dveri Bilorusii LLC, Financial Director of Dveri Bilorusii Ltd.	30/01/2019
1.2	Conduct business analysis and formulate a project database structure for solvency management	Financial Director of Dveri Bilorusii Ltd.	30/01/2019
1.3	Installing SQL ASP.NET 04	IT Director of Dveri Bilorusii Ltd.	30/01/2019
1.4	Deploying Framework Analitics	IT staff of the Framework Analitics vendor	28/02/2019
1.5	Configure the Framework Analitics Primary Configuration		28/02/2019
1.6	Testing Framework Analitics with a set of test data (you can use the built-in Excel spreadsheet)		28/02/2019
2	Develop integration with 1C	-	30/03/2019

2.1	Business analysis of integration opportunities with 1C	IT staff of the company serving 1C - LLC Foxima	28/02/2019

continue the tab. 3.2

2.2	Formation of the technical task for progarists 1C	IT Director of Dveri Bilorusii LLC, Financial Director of Dveri Bilorusii Ltd.	28/02/2019
2.3	Writing scripts (procedures) for data transfer from 1C to SQL ASP.NET 04	IT staff of the company serving 1C - LLC Foxima	28/02/2019
2.4	Formation of an intermediate Table configuration for storing data	IT staff of the company serving 1C - LLC Foxima	30/03/2019
2.5	Writing Web Services for Data Transfer from ASP.NET 04 to Framework Analitics	IT staff of the Framework Analitics vendor	30/03/2019
3	Configure the data model, scale the system, and launch Framework Analitics	IT staff of the Framework Analitics vendor	30/04/2019
3.1	Setting up the reporting scenarios in Framework Analitics in accordance with the algorithm of the analytical complex	IT staff of the Framework Analitics vendor	30/03/2019
3.2	Set up a web analytics module	IT staff of the Framework Analitics vendor	30/04/2019
3.3	Setting up the terms and conditions that the system will use to analyze solvency	IT staff of the Framework Analitics vendor	30/04/2019
3.4	Initial testing and running Framework Analitics	IT personnel of the Microsoft seller BI company, IT director of Dveri Bilorusii LLC, financial director of Dveri Bilorusii Ltd.	30/04/2019

The total duration of the project for implementing the information system for improving solvency management at "Dveri Bilorusii" LLC is 4 months (from January to 30/04/2019). The project will involve the staff of 3 companies: Dveri Bilorusii LLC, Microsoft's representative office in Ukraine (Framework Analitics software vendor and integrator), Foxima LLC, a company serving 1C at the Dveri Bilorusii LLC.

Estimates of the introduction of the new information system are shown in the table. 3.3.

Table 3.3

Budget for implementing the Framework Analitics analytical and informational complex to improve solvency management at Dveri Bilorusii LLC

№	Task	Cost of work, th.usd
1	Specification, deployment of IT infrastructure, installation and initial testing of Framework Analitics	75
1.1	Formation of a technical task for the implementation of a software product	15
1.2	Conduct business analysis and formulate a project database structure for solvency management	25
1.3	Installing SQL ASP.NET 04	30
1.4	Deploying Framework Analitics	-
1.5	Configure the Framework Analitics Primary Configuration	5
1.6	Testing Framework Analitics with a set of test data (you can use the built-in Excel spreadsheet)	-
2	Develop integration with 1C	44
2.1	Business analysis of integration opportunities with 1C	12
2.2	Formation of the technical task for prorammers of 1C	10
2.3	Writing scripts (procedures) for data transfer from 1C to SQL ASP.NET 04	12
2.4	Formation of an intermediate Table configuration for storing data	5
2.5	Writing Web Services for Data Transfer from ASP.NET 04 to Framework Analitics	5
3	Configure the data model, scale the system, and launch Framework Analitics	20
3.1	Setting up the reporting scenarios in Framework Analitics in accordance with the algorithm of the analytical complex	10
3.2	Set up a web analytics module	5

3.3	Setting up the terms and conditions that the system will use to analyze solvency	5
3.4	Initial testing and running Framework Analitics	-
4.	The cost of licenses for the use of the system	120
-	Together	259

3. Growth of the company's own financial resources

To increase the volume of own financial resources, it is necessary to develop the directions of increasing the volume of income of the enterprise, increase its profitability. To this end, we propose the implementation of the measures outlined in Table. 3.4.

Table 3.4

A set of measures to increase due to solvency increasing for LLC "Dveri Bilorusii" in 2019

Actions	Employees monitoring the implementation of measures	Implementation Schedule 2019			
		1 q	2 q	3 q	4 q
1. Creation of a new representative office for the sale of the enterprise's products	-	**X**	**X**	**X**	
1.1 Finding a room and renting it	Head of the enterprise	x			
1.2 Recruitment, process organization	Head of the enterprise	x			
1.3 Organization of the process of supplying goods	Director of commercial work		x	x	
1.4 Organization of the document circulation system, financial accounting and reporting	Chief Accountant	x	x	x	x
2. Optimization of warehouse logistics management processes, procurement and organization of delivery of goods	-		**X**	**X**	
2.1 Development of a technical task for a project to improve logistics management	IT Administrator, Commercial Director	x	x		

2.2 Attractiveness of IT personnel outsourcing for the introduction of a new logistics system	IT administrator		x		
2.3 Testing and running the system	IT administrator			x	
Continue the tab. 3.4					
3. Improvement of marketing policy of product promotion, growth of communication activity of the enterprise		**X**	**X**	**X**	**X**
3.1 Development of the program of marketing communications	**Director of commercial work**	**x**	**x**		
3.2 Organization of measures for the optimization of the product range	Director of commercial work	x	x		
3.3 Development of a product promotion program	Director of commercial work		x	x	x
3.4 Monitoring the implementation of marking events	Director of commercial work		x	x	

The creation of a new sales office for the plant "Dveri Bilorusii" LLC implies an increase in sales revenue. The new representation will be created on the rights of the unit, since all property values will remain on the balance sheet of Dveri Bilorusii Ltd. It is planned to attract additional commercial personnel to manage the new branch of the company. The management of the commodity supply, accounting and document management processes remains under the financial department of Dveri Bilorusii Ltd.

An important direction is the improvement of the warehouse logistics management system, the purchase and organization of delivery of goods involves monitoring the market of relevant information systems. To this end, it is advisable to introduce a new software for analyzing logistics operations and optimizing transport routes when delivering products from the plant to the representative offices of Dveri Bilorusii Ltd in the regions of Ukraine. Also, the importance of this direction lies in the fact that the new logistics system can be integrated with the software analytical complex Framework Analitics.

An important direction in increasing the growth of its own financial resources and increasing the solvency of the enterprise is to improve the complex of promotion of the company's products to the market. It is advisable to formulate a special program for the development of sales policy, which will ensure the growth of market share and increase the income from the main activities.

The budget for financing measures for implementation of measures to increase solvency in 2019 is given in the table. 3.5.

Table 3.5

Estimated volumes of financing of expenditures for increasing solvency in 2019

Actions	Category of expenses	Responsible for controlling the costs of financing activities	Schedule of funding 2019				Total budget, th.usd
			1 q	2 q	3 q	4 q	
1. Creation of a new representative office for the sale of the enterprise's products	-	-	**565**	**250**	**210**	**350**	**1375**
1.1 Finding a room and renting it	Selling expenses	Director of commercial work	15	-	-	-	15
1.2 Recruitment, process organization	Selling expenses	Head of the enterprise	550	250	-	-	800
1.3 Organization of the process of supplying goods	Selling expenses	Director of commercial work	-	-	210	300	510
1.4 Organization of the document circulation system, financial accounting and reporting	Administrative expenses	Chief Accountant	-	-	-	50	50
2. Optimization of warehouse logistics management processes, procurement and organization of delivery of goods	-	-	**165**	**325**	**25**	-	**515**
2.1 Development of a technical task for a project to improve logistics management	Fixed assets (Group 4)	CFO	15	-	-	-	15

2.2 Attractiveness of IT personnel outsourcing for the introduction of a new logistics system	Fixed assets (Group 4)	CFO	150	300	-	-	450
Continue the tab. 3.5							
2.3 Testing and running the system	Fixed Assets (Group 4)	CFO		25	25		50
3. Improvement of marketing policy of product promotion, growth of communication activity of the enterprise	-	-	**35**	**27**	**27**	**27**	**116**
3.1 Development of the program of marketing communications	Selling expenses	Director of commercial work	15	-	-	-	15
3.2 Organization of measures for the optimization of the product range	Selling expenses	Director of commercial work	20	-	-	-	20
3.3 Development of a product promotion program	Selling expenses	Director of commercial work	-	15	15	15	45
3.4 Monitoring the implementation of marking events	Selling expenses	Director of commercial work	-	12	12	12	36
TOTALS	**-**		**765**	**602**	**262**	**377**	**2006**

Consequently, in this issue, proposals were made regarding the implementation of the main directions of improvement of information and methodological support for improving the efficiency of the solvency management of the enterprise LLC Dveri Bilorusii. These areas include: the introduction of an analytical complex for improving solvency management, the introduction of specialized software for analysis and solvency management, the direction of growth of its own financial resources of the enterprise. The proposed model for forming an analytical complex on solvency management at the enterprise "Dveri Bilorusii" LLC should indicate the target orientation of managerial actions in relation to changes in existing solvency parameters and timely prevention of risks of its reduction. Determining the directions of these changes will allow to timely identify the need for managerial influence on the formation of solvency parameters. The given analytical complex will have insignificant practical value for the investigated enterprise, if it is not combined with the tools of information technology. To this end, it is proposed to introduce in the enterprise software product Framework Analitics, which allows, based on the existing database in the enterprise, to generate a statistical analysis package according to the configured scenarios for the ability to timely make managerial decisions regarding the change of key indicators of solvency management. To increase the volume of own financial resources, it is necessary to develop the directions of increasing the volume of income of the enterprise, increase its profitability. The creation of a new sales office for the plant "Dveri Bilorusii" LLC implies an increase in sales revenue. The new representation will be created on the rights of the unit, since all property values will remain on the balance sheet of Dveri Bilorusii Ltd. It is planned to attract additional commercial personnel to manage the new branch of the company. The management of the commodity supply, accounting and document management processes remains under the financial department of Dveri Bilorusii Ltd. An important direction is the improvement of the warehouse logistics management system, the purchase and organization of delivery of goods involves monitoring the market of relevant information systems. To this end, it is advisable to introduce a new software for analyzing logistics operations and optimizing transport routes when delivering products from the plant to the representative offices of Dveri Bilorusii Ltd in the regions of Ukraine. Also, the importance of this direction lies in the fact that the new logistics system can be integrated with the software analytical complex Framework Analitics. An important direction in increasing the growth of its own financial resources and increasing the solvency of the enterprise is to improve the complex of promotion of the company's products to the market. It is advisable to formulate a special program for the development of sales policy, which will ensure the growth of market share and increase the income from the main activities.

3.2. Creation the financial plan of enterprise

In this issue, we substantiate the main stages of creating a financial plan of the company, taking into account the introduction of a program to improve the efficiency of the solvency management of LLC Dveri Bilorusii in 2019.

Development of the financial plan for 2019 LLC Dveri Bilorusii provides the following stages:

- planning requirements for non-current assets;
- income planning;
- Planning financial results;
- current assets planning;
- Determination of the need for sources of financing of the enterprise, taking into account investments for 2019;
- drawing up a forecast balance sheet;
- forecasting of cash flows.

Planning of non-current assets of the enterprise is based on the justification of the need for their development in the planning period. To this end, it is necessary to determine: what non-current assets the enterprise plans to acquire (create) and put into operation; which non-current assets are planned for retirement; determine the planned standard for depreciation of non-current assets based on the chosen accounting policy.

The list of fixed assets that are planned to be purchased (created) within the framework of the development of the company's solvency management system in 2019 was defined in question 3.1. The total increase in fixed assets is planned at the level of 774 usd (software for solvency analysis - 259 usd and progarmne support for logistics management - 515 usd).

In the planned year, no disposal (write-off) of fixed assets is planned. In accordance with accounting policies, the straight-line depreciation method is used in the enterprise, taking into account the commissioning and disposal of non-current assets and their useful lives, the amount of depreciation on property, plant and equipment and intangible assets, according to the financial statements (based on actual depreciation in 2018) will be 41883 usd. The change in intangible assets in the planned period is not planned. The expected depreciation (on a straight-line basis) will be 6 usd. Also, the acquisition of fixed assets for the warehouse in the amount of 1052 usd is planned.

Thus, the planned volume of non-current assets will be 2019 (Table 3.6).

Table 3.6

Planning of non-current assets of LLC "Dveri Bilorusii" for 2019, usd.

I. Noncurrent assets	On the date:	Changes in assets		On the date:
	01.01.2019	Increase	Decrease	
Goodwill	66333			66333
Construction in process	82532			82532
Property, plant and equipment:	807553			766722
Primary value	2260368	1052		2261420
Less accumulated depreciation and amortization	1452815		41883	1494698
Other assets	123013	774		123787
Total Non-current assets	1079431	1826	41883	1039374

The planning of the standard of current assets will be based on the actual turnover of individual components and the planning of activities in 2019.

We forecast the income indexes of the investigated enterprise for 2019, as well as its financial results on the basis of factor analysis method using the GDP multiplier indicator.

The multiplier is calculated:

$$M_{i/gdp} = \frac{GRi}{GRgdp} \tag{3.1}$$

where, GR_i – average annual growth rate of net income, GR_{GDP} – GDP growth rate, average annual.

Accordingly, the forecast growth rate of net revenues from sales of Dveri Bilorusii LLC to 2019 (given that the World Bank's projections suggest GDP growth of 3.5%, with inflation up to 15%.

The planned growth rate of net income is calculated as follows:

$$GRi= M^* GRgdp \qquad (3.2)$$

where, GRgdp – the planned GDP growth rate according to the World Bank forecast.

Calculations of the projected net income are shown in Table. 3.7.

Table 3.7

Output data for activity forecasting

Dveri Bilorusii Ltd.

Indicator	2016 year	2017 year	2018 year
1	2	3	4
Volume of nominal GDP, th.uah.	1988544	2385367	2982920
GDP growth rate, average,%	1,2248		
Volume of net income (proceeds from sales of products), usd.	3401946	5988605	6790438
The growth rate of net income (sales revenue), average,%	1,4128		
Multiplier TrwW / TrwW	1,154		
Projected GDP growth rate for 2019 *	1,035		
Projected rate of growth (growth) of net income	1,194		
Estimated net income in 2019, usd	8107185,8		

We also note that the introduction of proposals to improve solvency, including expansion of the sales area and the opening of a new representative office, can increase the income of the company to 10% (according to the company's management).

Thus, the final forecast of net income of the company for 2019 will be:

R2019 = 8107185.8* (1+10%) = 8917904,3 usd

Forecast of the cost of goods sales (extrapolation of the average cost of production for the forecast period).

$$\overline{R_{COGs.}} = \frac{\sum COGs.}{\sum \mathrm{Re}\,venue} \qquad (3.3)$$

Similarly, on the basis of the average level of expenses to net income, we forecast the volume of Selling general and administrative expenses. We also note that indicators such as other income, financial costs and other costs are the result of non-operational activities and are influenced by factors that can not be predicted. Therefore, the given indicators in the planned period are taken at the level of 2018 year.

The forecast of the net financial result (profit) in each forecast period is carried out by determining the financial result before taxation and reducing its result by the amount of tax on profit (tax rate on profit from 01.01.2019 - 18% to the object of taxation (Table 3.8) .

Table 3.8

Forecasting financial results of LLC "Dveri Bilorusii" for 2019 year

Indicators	FACT			Data for forecasting		Forecast
				Rate of growth	Level to Net Income	
(in thousands except share data)	**2016 year**	**2017 year**	**2018 year**			**2019 year**
Net sales	3401946	5988605	6790438	1,04	-	8917904
Costs and expenses:	-	-	-	-	-	
Cost of goods sold	2934028	5213203	6109338	-	0,85	7580219
Selling general and administrative expenses	310667	443275	448943	-	0,09132038	589598

Loss on debt extinguishment	1148			-	0,000337454	0
Impairment of assets		9839	3305	-	-	
						continue the tab. 3.8
Interest expense	49666	7776	77037	Taken avarage to 2016-2018		44826
Financial Results from operating activity	**106437**	**314512**	**151815**			**703261**
Earnings from continuing operations before income taxes	96105	244528	151815	-	0,028	199379,1
Income taxes	24512	83206	42724	Taken 18% to Earnings from continuing operations before income taxes		17998
Financial Results from other operating activity	**71593**	**161322**	**109091**	**-**	**-**	**163490,9**
Earnings (loss) from discontinued operations before income taxes	-16803	-20124	15005	has not accoounted as nonpredicted		-16803
Income taxes (benefit)	-103	-436	8544	has not accoounted as nonpredicted		-103
Other losses	-89325	-293080	-192452			-192452
Earnings (loss) from other activities	**-106231**	**-313640**	**-168903**	**has not accoounted as nonpredicted**		**-106231,0**
Net earnings	*54893*	*141634*	*115552*	-	-	*697849*

Current assets are the balance sheet, which has a high degree of sensitivity to the amount of activity (revenue from sales). Therefore, forecasting of current assets of the enterprise is most appropriate to proceed on the basis of forecast volumes of income from sales and cost of sold products.

Now, using the actual periods of the turnover of the components of current assets and the planned value of revenue from sales for 2019, we can determine the planned volumes of the following components of current assets (Table 3.9):

- stocks;
- receivables for goods, works, services;
- money and their equivalents.

Let's turn to the definition of the needs of the enterprise in monetary assets for 2019 year (Table 3.9).

Table 3.9

Material stocks and trade receivables

Dveri Bilorusii LLC for 2019 year

Indicators	Average value for 2018	Forecast for 2019
Net sales	6790438	8917904
Cost of goods sold	6109338	7580219
Inventories	721467	-
Accounts receivable	820451	-
Cash and cash equivalents	484589	
Period of inventory turnover	43	-
Turnover of accounts receivable	43	-
Period of money turnover	26	-
Forecast		
Stocks	-	895167

Trade receivables of a commercial nature	-	1077501
Money and their equivalents	-	636412

Consequently, the calculations made allowed us to determine the planned volume of assets of LLC Dveri Bilorusii, as well as the planned needs for the formation of each type of current assets, which can be presented in the form of a table. 3.10.

Table 3.10

Estimated volumes of current assets of LLC "Dveri Bilorusii" for 2019 year

Asset item	Explanation	Forecast for 2019 year
Stocks	from tabl. 3.9	895167
Trade receivables of a commercial nature	from tabl. 3.9	1077501
Current deferred tax assets	at the 2018 level	0
Money and their equivalents	from tabl. 3.9	636412
Other current assets	at the 2018 level	144967
Total current assets	-	**2754047**

The substantiation of sources of financing of assets of an enterprise in the planned period is a rather important stage at the level with the definition of the planned need for certain types of assets.

When planning sources of financing the most appropriate use of the method of balance link.

For the application of this method, it is necessary to determine the following articles:

VOCN - availability of own working capital at the beginning of the period;

VOCpr - replenishment of own working capital at the expense of net profit of the enterprise during the planned period;

JV - planned volume of constant liabilities;

PC - planned amount of payables (borrowed capital).

In accordance with the method of balance adjustment, the total amount of borrowed funds necessary to finance working capital of an enterprise will be determined as follows:

$$PC = CApotr - VOCN \tag{3.7}$$

where, PC - the size of the loan resources needed to finance the need for asset formation;

CAPotr - the need for the formation of current assets in the planned period.

Conditional will assume that stable liabilities in the planned period are absent.

Since the process of financing current assets is considered throughout the planning period, as well as the calculation of indicators in the formula of the balance sheet is carried out for a period, then the justification of the need for sources of financing of assets will be made for a period.

We now define the volume of own working capital in the planned period (Table 3.11).

Table 3.11

Planned volume of own working capital by 2019 year

№	Indicator	Formula	Value, usd
1	Stackholder equity на кінець 2018 року, usd	SE, х балансу	1363462
2	Net earnings, який реінвестується у підприємство, usd	NE, з табл. 3.10	697849
3	Stackholder equity на 2019 рік, usd	SE2019 = SE + NE	2061311
4	Noncurrent assets прогнозні,	NA	1039374

	usd		
5	long-term liabilities, usd	LTL	1259870
6	Own working capital, usd	SE – NA + LTL	2281807

In order to determine the size of the IOC, it is appropriate for us to use the average planned equity, non-current assets and future expenses.

So, knowing the need for the formation of non-current and current assets in 2019 - respectively 1039374 usd and 2754047 usd, respectively, and with more advanced indicators, we can determine the need for attracting borrowed resources (Table 3.12).

Table 3.12

Calculation of the planned amount of borrowed funds for the financing of current assets in 2019 year

№	Indicator	2019 year
1	Need for the formation of current assets, usd	2754047
2	Own working capital, usd	2281807
3	Loan funds, usd	472240

Thus, the need for borrowing funds to finance the assets of LLC Dveri Bilorusii is 472240 usd.

Also, consider the financing of the assets of the company in 2019. Typically, non-current assets are funded primarily through equity, and then at the expense of other long-term financing sources (long-term loans). Since the company plans to increase its equity capital by 697849 usd in 2019 at the expense of net profit, the financing of the growth of non-current assets may be carried out at the expense of its own financial resources. The growth of its own financial resources at the level of 697849 usd will fully cover the need for financing non-current assets, the volume of which will be reduced (taking into account investment costs for the creation of non-current assets, excluding amortization in 2019).

We will construct a consolidated balance sheet of assets financing in 2019 in order to identify the need for (or identify the need for, bank credits).

Thus, based on the above balance sheet, we can say that the additional need for an increase in assets (including non-current assets due to expansion of activities) in 2019 may be partially covered by its own financial resources.

The amount of borrowing required is:

$$\Delta CL = 2754047 - 1838612 = 967773 \text{ usd.}$$

Table 3.13

The consolidated balance sheet of the assets financing of Dveri Bilorusii Ltd., taking into account extected fact of 2018 year and the results of the implementation of investment projects for 2019 year

Assets	Fact 2018 year	Forecast 2019 year	Equity	Fact 2018 year	Forecast 2019 year
Noncurrent assets	1079431	1039374	Stackholder equity	1363462	2061311
Current assets	2030668	2754047	Long-term liabilities	1259870	1259870
Assets of businesses held for sale	587	587,0	Current liabilities	487354	472827
Total	3110686	3794008	Разом	3110686	3794008

The given volume of borrowed resources is planned to attract due to Accounts payable, the volume of which as of 01.01.2019 is 235385 usd. Growth in commodity lending is possible through additional negotiations with suppliers and harmonization of terms of growth of deferral of payments.

The current average delay in payment delays is 28.5 days (see question 2.3). The estimated delay in payment delay for vendors should be 38.3 days ([235385 + 89295] / 3052591 * 360). That is, it is necessary to arrange suppliers for an additional deferral of payments for 10 days in order to be able to finance current assets without attracting loans from the bank.

In the future we will forecast cash flows for 2019. To do this, we use the elasticity method to change the individual items of the cash flow to the amount of proceeds from sales. The planned growth rate of revenue will be extrapolated to 2019 for separate items of cash flow. For this purpose, we forecast a net cash flow indirectly (Table 3.14):

Table 3.14

The forecast of the net cash flow of "Dveri Bilorusii" LLC indirectly for 2019 year

Indicators	Formula	2019 year
Net Earnings	NE	697849
Amortization	A	41883
Changes in Stockholder Equity	ΔSE	-697849
Investments into Nncurrent assets	I	1826
Changes in Long Term Liabilities	ΔLTL	-
Net cash Flow	NCF = NE+A-ΔSE-I+ΔLTL	43709

Thus, in this issue, the underlying components of the finnas plan were permeated. The main results of development of "Dveri Bilorusii" Ltd. in 2019 are determined, as well as the need for sources of their financing is determined. Estimated revenue from sales will be 8917904 usd. The volume of net profit in the planned period will grow up to 697849 usd. The planned volume of assets of the enterprise, taking into account investment development activities for 2019, will be 3794008 usd. Since the company plans to increase its equity capital by 697849 usd in 2019 due to net profit, the financing of the growth of non-current assets may be made at the expense of its own financial resources and partly due to accounts receivable of 235385 usd. The projected net cash flow will be 43,709 usd.

3.3. Evaluation the future solvency of enterprise

To evaluate the predictive indicators of solvency, we will use the methodology used for the study in question 2.3. We forecast and assess the dynamics of the main indicators of solvency based on the financial plan data, which was calculated in question 3.2.

Firstly, we need to make a forecast the dynamics of indicators of static solvency (liquidity) of the investigated enterprise. The main indicators of liquidity are given in Table 3.15. and on figure 3.4.

Table 3.15

Dynamic of fact 2017-2018 years and forecast of the static solvency (liquidity) indicators of the company "Dveri Bilorusii" Ltd on 2019

Balance Articles	Critical value	FACT		Forecast	Abs. growth	
		01.01.2018 y	01.01.2019 y	01.01.2020 y	01.19 / 01.18	01.20 / 01.19
Coefficient of general coverage (general solvency)	1-1,5	3,710	4,167	5,825	0,457	1,658
Intermediate liquidity ratio (calculated solvency)	0,7-0,8	2,444	2,809	3,931	0,365	1,122

Absolute liquidity ratio (cash solvency)	0,2-0,35	0,786	0,993	1,346	0,207	0,353
Debtor and payables ratio	1	2,978	3,127	4,879	0,149	1,752
Coverage ratio of current liabilities at own expense (usd)	0,1	0,496	0,496	0,828	0,0000	0,332

According to the data of the table. 3.15, in general, all the indicators of static solvency as of 01.01.2019 will the significance of coefficients that will be higher than their critical values. That is, at this date the enterprise will be considered actually solvent. The dynamics of the coefficients of static solvency will constantly change to some decrease durig 2018-2019 yy., which can be seen from Fig. 3.4.

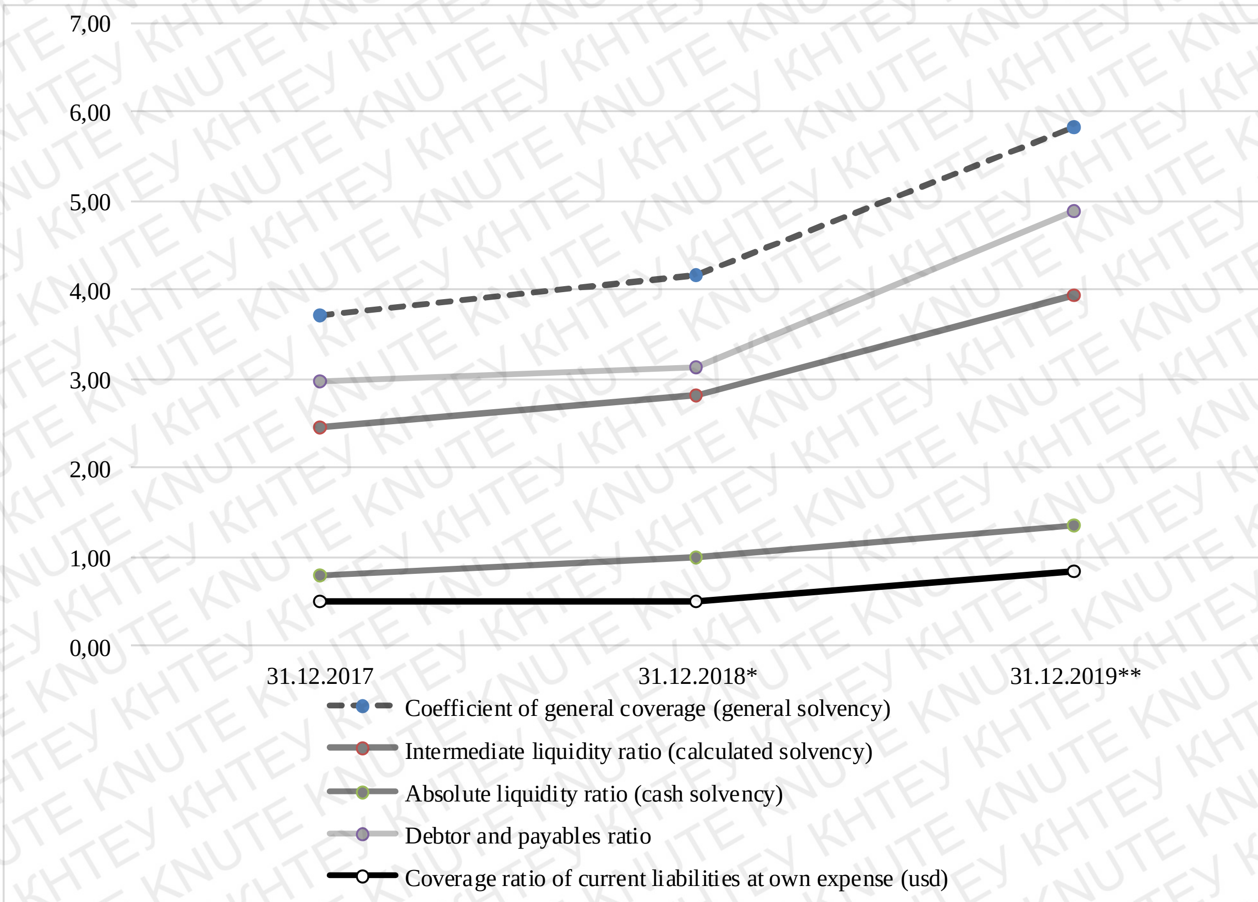

Fig. 3.5. Liquidity indicators of the investigated enterprise "Dveri Bilorusii" Ltd during 2018-2019 years (fact with forecast)

The value of the Coefficient of General Coverage (General Solvency) indicator will tend to gradually decrease over the period of 2018-2019. Thus, as of 31/12/2018 this indicator is on 4.167, as of 31/12/2019 – it will grow up to 5.825. The intermediate liquidity ratio (calculated solvency) and Absolute liquidity ratio (cash solvency) in their tendency will quite the same as the dynamics of the Coefficient of general coverage dynamics.

Considering the dynamics of all indicators of static solvency, we note that they will decrease a bit in 2019. The main factors that have impact to the state solvency decrease are the current liabilities grows which is planned to 2019 due to the need of extra capital for actives increase.

That is, we can conclude that the level of static solvency of the company will be normal over the forecast period. This may be explained by an increase in the volume of income and the receipt of positive financial results by the enterprise. This allowed the company to increase the level of financing of current assets at the expense of its own financial resources.

This is also evidenced by the figure. 3.6, which reflects the dynamics of the company’s working capital.

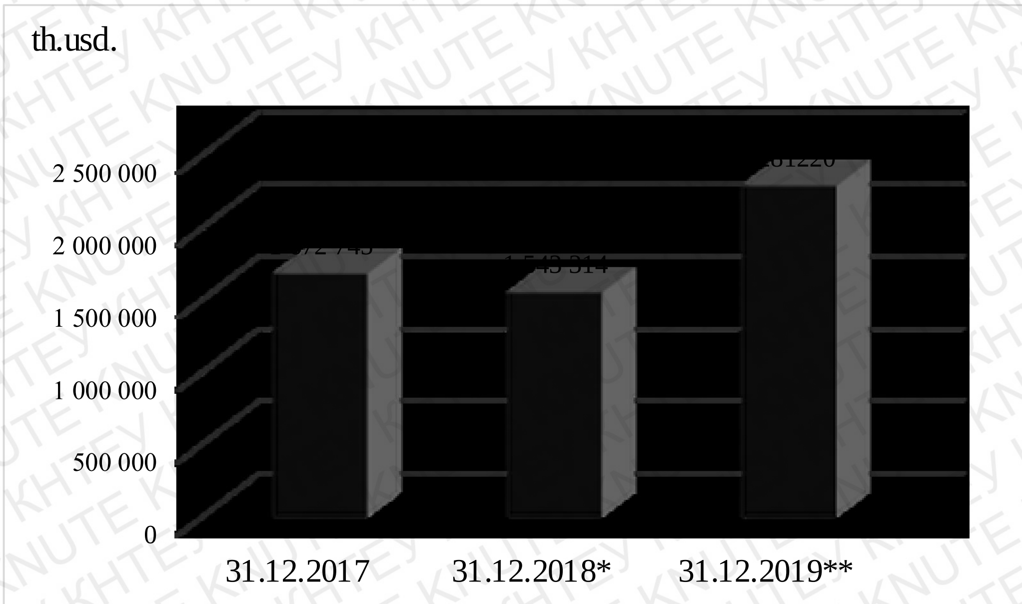

Fig. 3.6. The forecast of Dveri Bilorusii Ltd's own working capital for the period 2018-2019 years

As shown in Fig. 3.6, the amount of own working capital will increase in 2019. When it is amounted to 1543314 on the 31.12. (current assets of 1543314 exceeded the volume of current liabilities), then on the 31.12.19 this indicator will be amounted to 1676715 usd. (current assets at 2281220 will exceed the amount of current liabilities).

Own working capital increase may be explained by the tendency of own financial resources growth in 2019 due to the company net earnings increase. All the profits the Company will earn in 2019 will be used for reinvestment into the working capital.

Considering the dynamics of relative solvency ratios, we note that their analysis is not enough to get the full picture. Therefore, in continuation of this issue we propose to consider the dynamics of indicators of liquidity of current assets and the quality of accounts payable.

In the following, we define the forecast of the dynamics of liquidity ratios of current assets and the quality of payables, which are presented in Table 3.16. and on figure 3.7.

Table 3.16

Dynamic of fact 2017-2018 years and forecast of current assets liquidity and quality of accounts payable «Dveri Bilorusii» Ltd in 2019 year

Indicators	The best tendency	Value by years			Absolute growth	
		2017 year	2018* year	2019** year Forecast	2017-2018*	2018*-2019**
Average period of inventory turnover (in days) (POS)	decreasing	51,6	76,3	42,5	24,7	-33,8
Average period of turnover of receivables (POD)	decreasing	58	86,8	43,5	28,8	-43,3
Payback Period (POK)	decreasing	25,6	28,5	10,5	2,9	-18,0
Operating cycle	decreasing	109,6	163,2	86,0	53,6	-77,2

period (TOC)						
Financial Cycle Period (TFC)	decreasing	84	134,6	75,5	50,6	-59,1

As can be seen from Table 3.16, in 2018 the value of the indicator of the duration of the operating cycle will be 163,2 days, including the period of turnover of inventories will be 76.3 days, and the period of repayment of accounts receivable – 86.8 days. In 2019, the decrease in the duration of the operating cycle will be to 77.2 days due to the decrease of inventory turnover by 33.8 days and decrease the period of repayment of accounts receivable – 43.3 days. The average maturity of the receivable will be in according to forecast on 2019. The duration of the financial cycle will change to decrease by 59.1.

Also payback period (POK) in 2019 will decrease by 18.0 days in 2019.

As shown in Fig. 3.7, the reduction of the average payback period of the enterprise's debt affected the increase in the duration of the financial cycle. That is, this is confirmed by the fact that the growth of the level of financing of current assets increased at the expense of its own working capital.

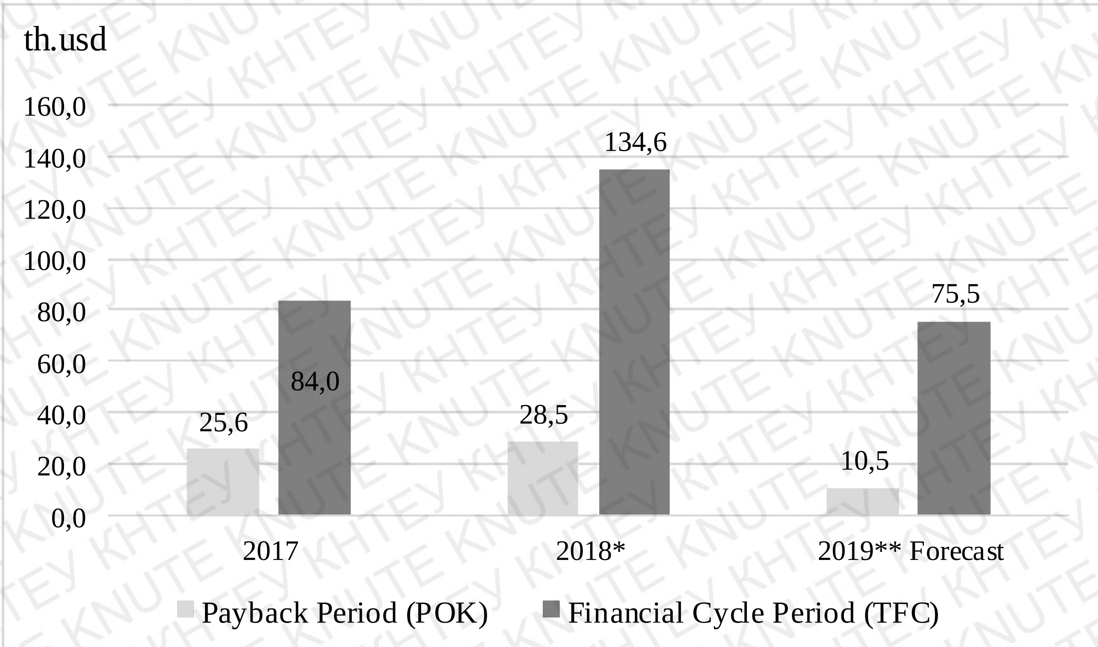

Fig. 3.7. Dynamic of fact 2017-2018 years and forecast of the dynamics of the pay-as-you-go period and the duration of the financial cycle Dveri Bilorusii Ltd in 2019 year

In the future we calculate the value of the integral indicator of solvency of the enterprise. To do this we will use the method of multiplying all partial static solvency ratios, which are given below.

The calculation results are shown in Fig. 3.8.

Also note that for determining the integral coefficient of solvency for each partial coefficient was assigned the appropriate level of significance:

-Coefficient of general coverage (general solvency) – 5.825;

-Intermediate liquidity ratio (calculated solvency) – 3.931;

-Absolute liquidity ratio (cash solvency) – 1.346;

-Debtor and payables ratio – 4.879;

- Coverage ratio of current liabilities at own expense (usd) – 0.828.

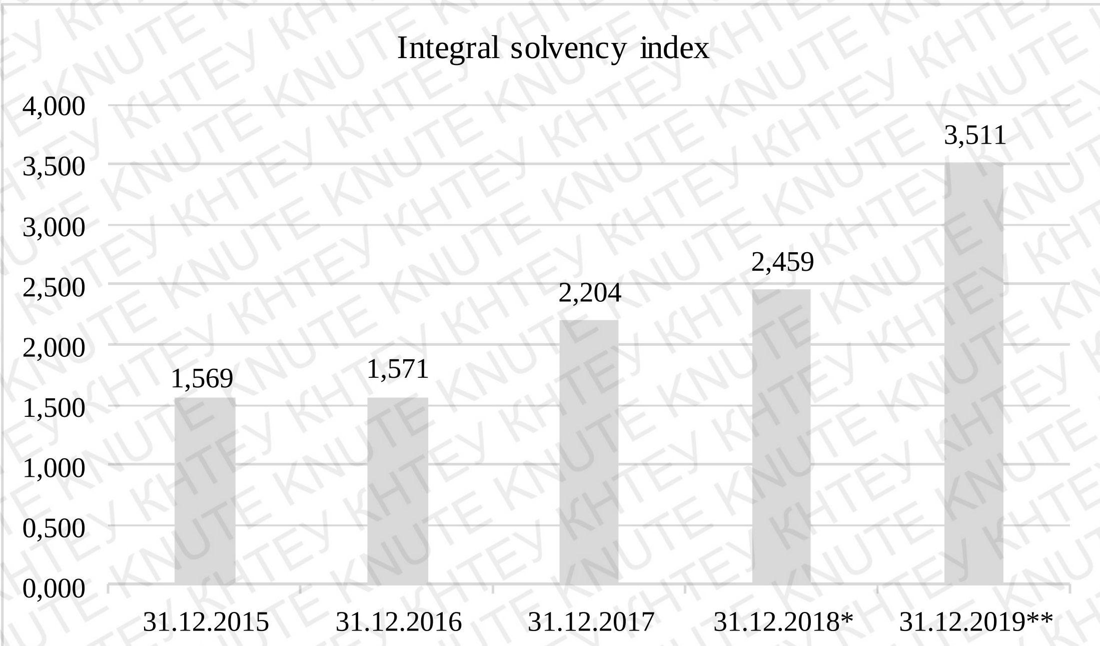

Fig. 3.8. Dynamics of the integral index of solvency of "Dveri Bilorusii" Ltd for 2016-2019* year

The most significant is the overall coverage rate of 5.825. The second highest level of significance is the Coverage ratio of current liabilities at own expense – 0.828. The remaining indicators account for 0.1 points.

According to the calculations conducted, the dynamics of the integral solvency ratio confirms the tendency for its decrease in 2019 due to increasing the current liabilities for financing the current assets increase.

Consequently, the analysis of the indicators of solvency shows that the company wiil not effectively affect the optimization of distribution of financial resources. Considering the forecast of all indicators of static solvency, we note that they will decrease a little in 2019.

In connection with the foregoing, the company needs to look for ways to optimize the volume and structure of current assets, that is, reducing the current level of their financing. The main direction in this regard is the introduction of a financial controlling mechanism in the company's activity, which will allow to identify surplus commodity stocks and excessive receivables, to reduce them. This should lead to a reduction in the amount of current financing of the assets of the enterprise.

We substantiate the basis of the steps before introducing the system of financial control in the enterprise.

We propose for "Dveri Bilorusii" Ltd. not a separate department of financial control in terms of economic impracticability of such an option. The most accepted option is the formation of a financial controller in the structure of the financial service, which will carry out a complete set of tasks on financial controlling in the enterprise.

The peculiarity of the author's proposed scheme for the system of financial control is that the financial controller should be accountable not only to the financial director within the financial service, but also to the head of the enterprise. This makes the position of controller more meaningful and responsible, and also allows you to overcome some of the negative organizational nuances in the capabilities of requests and information received from the rest of the services.

This approach is based on the fact that the controlling service in the preparation of materials for the first manager uses the data of the activities of all services, including financial, economic service (their leaders); accountants and so on. Thus, the possibility of a biased assessment of the state of the enterprise by the individual managers (deputy heads of the enterprise, management) is excluded. Therefore, at the investigated enterprise the controller will direct the director about the results of his work.

For efficient operation, the controlling service should integrate its system with the activities of other subsystems of the internal economic mechanism - the accounting and reporting system. To this end, the Controlling Service develops a system of internal reporting with the definition of the centers of information collection, the indicators to be collected, the timing of submission of the report and the methods for its compilation, the purpose of which the data are collected, the addressee of the information.

Consider the main responsibilities of the financial controller at Dveri Bilorusii Ltd.

The financial controller must meet certain conditions: to know the components of controlling - accounting, analysis, audit, enterprise economics, marketing, planning, well-managed functions.

At the enterprise of LLC "Dveri Bilorusii" the initial framework conditions for selecting a person for the post of controller should be created. One of them is a specific means of thinking of a controller specialist, which is characterized by:

-clear definition and constant work towards the implementation of the agreed overall objectives of the enterprise;

-governance management in the context of multilateral cooperation and team cooperation;

-accounting of the adverse factors of influence on the management process;

- understanding of the enterprise as an open-to-school system;

-the focus on the cycle of tasks.

The controller should provide support accompanying management in the management process, aimed at achieving the set goals. This means that in the course of its activities:

The controller should take care of the transparency of the results of activities, finances, processes and strategies, thus contributing to improving the efficiency of the enterprise;

The controller must coordinate individual goals and plans within a single system and develop future-oriented reporting;

The controller must organize the process of controlling in such a way that each of the carriers of management decisions can act purposefully;

-controller must guarantee the prompt delivery of the necessary information;

The controller must develop and maintain a control system at the investigated enterprise.

The next stage of implementation of the controlling system at the investigated enterprise is the formation of a controller's job description, which should include the following points:

1. General provisions

The controller is appointed by the head of the company on the basis of an order.

The controller submits directly to the head of the enterprise.

The regulations of the controller are: the statute, the company's founding documents, the current legislation and regulations, as well as this job description.

A person with professional knowledge in the field of accounting, analysis, control, planning, and practical skills of mastering modern methods of assessing the efficiency and solvency of an enterprise is appointed to the post of controller.

The controller can not be assigned duties related to direct material liability for cash and property.

The controller has no right to violate the principle of confidentiality, to disclose or transfer to anyone information that is the property of the enterprise.

2. Duties of the controller.

- Promptly carry out organizational work with employees to ensure the continuous flow of information flows.

- Ensure proper workflow in terms of cost savings and revenue generation in the company's information flow system.

- To collect, process and analyze accounting information.

- To formulate in due time the necessary forms of internal reporting, determined by accounting and economic policy of the enterprise.

- To work on optimizing the accounting process in accounting from the point of view of analytical positions, that is, the possibility of consistent use of accounting data for monitoring and analysis.

- Provide, as appropriate, organizational and methodological assistance to employees of the enterprise in the implementation of the collection and processing of controlled information.

- Conduct analytical calculations of the main controlled indicators.

- To promptly identify and analyze information on the causes and perpetrators of the deviations of actual implementation from the specified parameters in order to develop and take action on the situation.

- Detect and promptly provide the management of the company with information about the deviations that take place to make sound management decisions.

- To carry out analytical calculations of the degree of influence of the resulting deviations on the magnitude of the expected profit.

- Coordinate and provide cost-effective managerial decisions to optimize costs, increase profitability and profitability.

- Provide the necessary information for planning.

Thus, the strong question was predicted by the main indicators of the development of solvency.

To increase solvency in the planned period, it is proposed to introduce a system of financial control. According to the calculations conducted, the dynamics of the integral solvency ratio confirms the tendency for its decrease in 2019 due to increasing the current liabilities for financing the current assets increase. Consequently, the analysis of the indicators of solvency shows that the company wiil not effectively affect the optimization of distribution of financial resources. Considering the forecast of all indicators of static solvency, we note that they will decrease a little in 2019. In connection with the foregoing, the company needs to look for ways to optimize the volume and structure of current assets, that is, reducing the current level of their financing. The main direction in this regard is the introduction of a financial controlling mechanism in the company's activity, which will allow to identify surplus commodity stocks and excessive receivables, to reduce them. This should lead to a reduction in the amount of current financing of the assets of the enterprise. We substantiate the basis of the steps before introducing the system of financial control in the enterprise. For this purpose, an organizational mechanism for financial control is predicted, which will reduce the volume of current assets financing and increase solvency.

CONCLUSIONS

Based under the search results it is possible to define the next conclusions and proposals:

Synthesis of represented in the economic literature definitions of solvency management allowes to formulate the following definition: the process of operating with different financial resources, characterizing the performance of their formation, placement and use, which ensured the continuity of the process of production and sales, and financing costs for expansion company that guarantees its solvency, financial independence and investment attractiveness in the long ne rspektyvi within the acceptable level of risk. Solvency represents a company’s ability to meet long-term obligations, liquidity represents a company's ability to meet its short-term obligations. In order for funds to be considered liquid, they must be either immediately accessible or easily converted into usable funds. Cash is considered the most liquid payment vehicle. A company that lacks liquidity can be forced to enter bankruptcy even if it is solvent if it cannot convert its assets into funds that can be used to meet financial obligations.

Solvency management can be represented as a system of business goals in solvency of different relationships. Mechanism of solvency management is an integral part of the mechanism for financing businesses. As part of the solvency management consisting solvency certain financial relations on the engagement, distribution and use of financial assets, payments to state organizations, employees and other partners. Solvency management helps to mobilize and allocate financial assets necessary to operate businesses in key areas and to ensure the stability provided external factors, including tax and credit and banking. The instruments of solvency management include conditions and sources of financial assets, methods of forming used in determining revenues and costs.

Solvency assessment should be performed in the following stages: horizontal and vertical analysis of the dynamics, composition and structure of assets sources of their formation; assessment of the conditions of the now modified "Golden Rule economy"; determine the level of coverage as a part of current assets sources of their formation; calculating solvency ratios, assess their dynamics and comparing them with normative values; calculation integral indicator of solvency; stock financial strength.

General trend in company's assets was analized during 2016-2018 years along. Towards the tendency of non-current assets we'd emphasize their constrait growth during 2016-2018 years. By the meantime current assets decreased. The volume of current assets fell sharply in 2016-2018 on 267744 th.usd. or by 11.6%. The decrease of current assets in 2018 was mainly due to the reduction of accounts receivable - by 185300 th.usd (-20.0%) and inventories on 180307 th.usd (-21.4%). Non-current assets in the total assets structure during the period under study amounted to 31-35%, and this share was constantly increasing. The largest portion of non-current assets are property, plant and equipment, and their share in total assets declined over the whole period under investigation, from 69% as of 1.01.14 to 65% as of 31.12.18. During 2017-2018, there was a tendency to outperform growth in revenues over the growth rates of current assets. The growth rates of cash were negative, indicating a tendency to defrost in working capital. Due to the reduction of net profit, the importance of the ratio of growth rates of current assets to the growth rate of net financial results increased significantly.

Analysis of the volumes and structure of liabilities of the company "Dveri Bilorusii" Ltd indicates a tendency towards its reduction during 2016-2017, and a slight increase in 2018. The main factors behind the decrease in the volume of financial resources of the enterprise was the reduction of the need for financing current assets. In the structure of current liabilities, the share of payables for goods and services is prevailing - it forms the principal amount of the borrowed capital of the enterprise.

The level of static solvency of the company has improved over the analyzed period. This may be explained by an increase in the volume of income and the receipt of positive financial results by the enterprise. This allowed the company to increase the level of financing of circulating assets at the expense of its own financial resources. Reductions in the average period of payback of the company's debt had an effect on the growth of the duration of the financial cycle. That is, this is confirmed by the fact that the growth of the level of financing of circulating assets increased at the expense of its own working capital. In 2018 there was a deterioration in the situation in the financing of current assets - as of 31.12.2018, the amount of its working capital has decreased to -1656 usd. due to the growth of stocks and receivables on the one hand, and the decline in net profit (which was going to refinance) on the other hand. In 2016-2017, the the net cash flow from operating activities grew by 299767 usd, including an increase in revenue from net sales of products at 26082 usd, while expenditures on the purchase of goods, works, services, wages and salaries from deductions and other expenses increased. In 2017-2018 there was a decrease in net cash flow from operating activities due to a fairly significant increase in costs for the acquisition of commodity and material assets of the enterprise. In general, it should be noted that during 2016-2018 there was an increase in the level of cash flow efficiency. This indicator expresses the effectiveness of management decisions regarding the cash flows of the enterprise and their impact on the state of financial equilibrium and ensuring sustainable economic growth. We see from the results that the performance increased.

Proposals were made regarding the implementation of the main directions of improvement of information and methodological support for improving the efficiency of the solvency management of the enterprise LLC Dveri Bilorusii. These areas include: the introduction of an analytical complex for improving solvency management, the introduction of specialized software for analysis and solvency management, the direction of growth of its own financial resources of the enterprise. The proposed model for forming an analytical complex on solvency management at the enterprise "Dveri Bilorusii" LLC should indicate the target orientation of managerial actions in relation to changes in existing solvency parameters and timely prevention of risks of its reduction. Determining the directions of these changes will allow to timely identify the need for managerial influence on the formation of solvency parameters. The given analytical complex will have insignificant practical value for the investigated enterprise, if it is not combined with the tools of information technology. To this end, it is proposed to introduce in the enterprise software product Framework Analitics, which allows, based on the existing database in the enterprise, to generate a statistical analysis package according to the configured scenarios for the ability to timely make managerial decisions regarding the change of key indicators of solvency management. To increase the volume of own financial resources, it is necessary to develop the directions of increasing the volume of income of the enterprise, increase its profitability. The creation of a new sales office for the plant "Dveri Bilorusii" LLC implies an increase in sales revenue. The new representation will be created on the rights of the unit, since all property values will remain on the balance sheet of Dveri Bilorusii Ltd. It is planned to attract additional commercial personnel to manage the new branch of the company. The management of the commodity supply, accounting and document management processes remains under the financial department of Dveri Bilorusii Ltd. An important direction is the improvement of the warehouse logistics management system, the purchase and organization of delivery of goods involves monitoring the market of relevant information systems. To this end, it is advisable to introduce a new software for analyzing logistics operations and optimizing transport routes when delivering products from the plant to the representative offices of Dveri Bilorusii Ltd in the regions of Ukraine. Also, the importance of this direction lies in the fact that the new logistics system can be integrated with the software analytical complex Framework Analitics. An important direction in increasing the growth of its own financial resources and increasing the solvency of the enterprise is to improve the complex of promotion of the company's products to the market. It is advisable to formulate a special program for the development of sales policy, which will ensure the growth of market share and increase the income from the main activities.

Underlying components of the finnas plan were permeated. The main results of development of "Dveri Bilorusii" Ltd. in 2019 are determined, as well as the need for sources of their financing is determined. Estimated revenue from sales will be 8917904 usd. The volume of net profit in the planned period will grow up to 697849 usd. The planned volume of assets of the enterprise, taking into account investment development activities for 2019, will be 3794008 usd. Since the company plans to increase its equity capital by 697849 usd in 2019 due to net profit, the financing of the growth of non-current assets may be made at the expense of its own financial resources and partly due to accounts receivable of 235385 usd. The projected net cash flow will be 43,709 usd.

To increase solvency in the planned period, it is proposed to introduce a system of financial control. According to the calculations conducted, the dynamics of the integral solvency ratio confirms the tendency for its decrease in 2019 due to increasing the current liabilities for financing the current assets increase. Consequently, the analysis of the indicators of solvency shows that the company wiil not effectively affect the optimization of distribution of financial resources. Considering the forecast of all indicators of static solvency, we note that they will decrease a little in 2019. In connection with the foregoing, the company needs to look for ways to optimize the volume and structure of current assets, that is, reducing the current level of their financing. The main direction in this regard is the introduction of a financial controlling mechanism in the company's activity, which will allow to identify surplus commodity stocks and excessive receivables, to reduce them. This should lead to a reduction in the amount of current financing of the assets of the enterprise. We substantiate the basis of the steps before introducing the system of financial control in the enterprise. For this purpose, an organizational mechanism for financial control is predicted, which will reduce the volume of current assets financing and increase solvency.

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APPENDICES

APPENDIX A

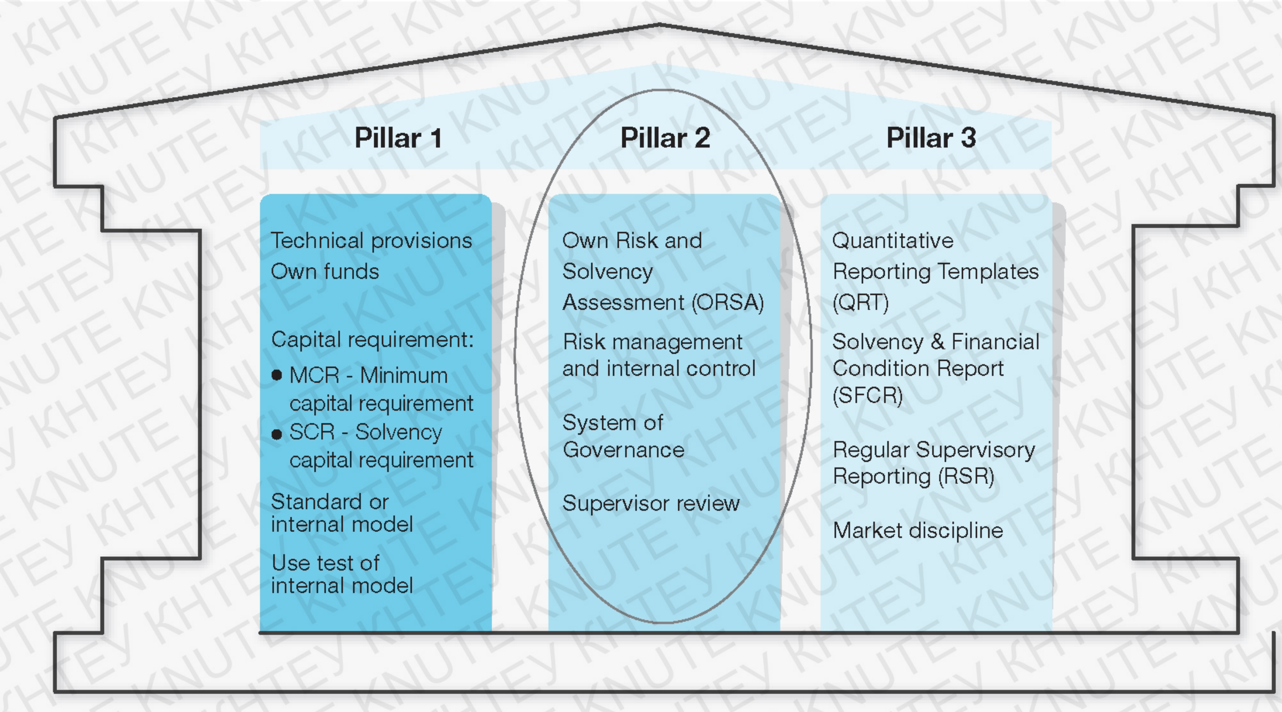

Fig. System of solvency management of the enterprise

APPENDEX B

BALANCE SHEETS of DVERY BELUROSII				
	at the END of the Year (December 31st)			
(in thousands except share data)	**2015**	**2016**	**2017**	**2018* (Excpected)**
Assets				
Current assets:				
Cash and cash equivalents	391432,5	434925	485323	483855
Accounts receivable	925582,5	1028425	900619	740283
Inventories	841869,9	935411	781371	661563
Current deferred tax assets	44509,5	49455	29137	-
Other current assets	95017,5	105575	93643	144967
Assets of businesses held for sale			17008	587
Total current assets	2298411,9	2553791	2307101	2031255
Property plant and equipment:				
Land	71365,5	79295	75086	74999
Buildings and improvements	445357,8	494842	4895	504712
Equipment	1555582,5	1728425	1670755	1680657
Construction in process	27531,9	30591	59241	82532
Less accumulated depreciation and amortization	-1267249,5	-1408055	-1410932	-1452815
Goodwill	66887,1	74319	66383	66333
Other assets	121780,8	135312	115168	123013
Total assets	3319668	3688520	3372302	3110686
Liabilities and stockholders' equity				
Current liabilities:				
Accounts payable	381426,3	423807	260984	235385
Accounts payable-documentary letters of credit	112547,7	125053	41473	1327
Accrued expenses and other payables	289,8	322	279415	236009
Notes payable	11059,2	12288	2009	
Current maturities long-term debt	7204,5	8005	1011	10929
Liabilities of businesses held for sale	289510,2	321678	32456	3704
Total current liabilities	802037,7	891153	617348	487354
Deferred income taxes	500,4	556	55803	76340
Other long-term liabilities	100920,6	112134	101919	115837
Long-term debt	1152937,8	1281042	1277882	1067693
Total liabilities	2105936,1	2339929	2052952	1747224
Commitments and contingencies (Note 18)				
Stockholders' equity:				
Common stock par value $0.01 per share; authorized 200000 shares; issued 129000 shares; outstanding 71000 shares	116,1	129	129	1290

Additional paid-in capital	323404,2	359338	365863	355311
Accumulated other comprehensive loss	-17558,1	-19509		-12718
Retained earnings	1103269,5	1225855	1311544	1386875
Less treasury stock 13425326 and 11231402 shares at cost	-196644,6	-218494	-245961	252993
Stockholders' equity attributable	1213632	1348480	1319201	1363303
Stockholders' equity attributable to no controlling interests	99,9	111	149	159
Total equity	1213731,9	1348591	1319350	1363462
Total liabilities and stockholders' equity	3319668	3688520	3372302	3110686

APPENDEX C

(in thousands, except share data)	2018*	2017	2016
Net sales	$ 3,401,946	$ 5,988,605	$ 6,790,438
Costs and expenses:			
Cost of goods sold	2,934,028	5,213,203	6,109,338
Selling, general and administrative expenses	310,667	443,275	448,943
Loss on debt extinguishment	11,480	----	----
Impairment of assets	----	9,839	3,305
Interest expense	49,666	77,760	77,037
Gain on sale of cost method investment	----	----	----
	3,305,841	5,744,077	6,638,623
Earnings from continuing operations before income taxes	96,105	244,528	151,815
Income taxes	24,512	83,206	42,724
Earnings from continuing operations	71,593	161,322	109,091
Earnings (loss) from discontinued operations before income taxes	(16,803)	(20,124)	15,005
Income taxes (benefit)	(103)	(436)	8,544
Earnings (loss) from discontinued operations	(16,700)	(19,688)	6,461
Net earnings	54,893	141,634	115,552
Less net earnings attributable to non-controlling interests	----	----	1
Net earnings attributable	$ 54,893	$ 141,634	$ 115,551
Basic earnings (loss) per share attributable:			
Earnings from continuing operations	$ 0.62	$ 1.39	$ 0.93
Earnings (loss) from discontinued operations	(0.14)	(0.17)	0.05
Net earnings	$ 0.48	$ 1.22	$ 0.98
Diluted earnings (loss) per share attributable:			
Earnings from continuing operations	$ 0.61	$ 1.37	$ 0.92
Earnings (loss) from discontinued operations	(0.14)	(0.17)	0.05
Net earnings	$ 0.47	$ 1.20	$ 0.97