

V. N. KARAZIN KHARKIV NATIONAL UNIVERSITY

Educational and Research Institute “Karazin Business School”

Department of Management and Administration

## MASTER’S THESIS

Title: «**Improvement of strategic approaches in managing the enterprise's cash flows**»

Completed by 2<sup>nd</sup> year student,

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**TASK  
TO MASTER THESIS**

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1. To explore theoretical foundations of enterprise cash flow management.


2. To evaluate cash flow management efficiency for LLC "Agrodetalservice".

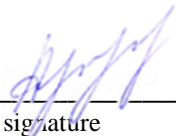
3. To improve the cash flow management strategy of LLC "Agrodetalservice".

#### 4. Work plan

| No | Stages of work  |
|----|---|
| 1  | Approval of the thesis content  |
| 2  | Preparation of the thesis' first section  |
| 3  | Completion of the first section according to the supervisor recommendations.<br>Writing the thesis' second section  |
| 4  | Completing of the second section according to the supervisor recommendations. Preparation of the thesis' third section  |
| 5  | Completing of the third section according to the supervisor recommendations.<br>Preparation of a report for a scientific conference with a presentation of the main results of the thesis |
| 6  | Writing of the introduction, conclusions of the thesis. Making references list  |
| 7  | Submission of the thesis to the Department of Management and Administration   |

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## INTRODUCTION

Fluctuations constantly affect the stability and predictability of income and expenses. In such circumstances, companies must have clear and adaptive financial management strategies.

Often, the main problem becomes the untimely receipt of funds from clients, high levels of debt, or unforeseen increases in expenses. This can lead to cash shortfalls and financial instability, even if the enterprise as a whole is operating successfully. Therefore, optimizing and improving cash flow management strategies enables timely identification and resolution of problems, ensuring the stability of the company's operations.

Furthermore, enhanced strategic approaches to cash flow management help companies more effectively utilize their financial resources, ensuring an optimal balance between expenditures and investments. This allows companies to gain flexibility in financing strategic projects, maintain solvency, and respond to financial challenges with minimal losses.

The relevance of the research topic is also associated with the possibility of long-term planning. A proper cash flow management strategy enables the forecasting of financial needs and risks, identification of key directions for expenditure optimization and investment, and creation of a financial safety net for unforeseen circumstances. All of this helps companies to effectively respond to market changes, remain competitive, and achieve strategic objectives.

Many scholars have explored the theoretical and methodological foundations of enterprise cash flow management, including: Bilenko D., Ihonina K., Shkolnik I., Kasich A., Tsygan R., Kharchenko V., Kovalenko S., Blank I., Stashchuk O., Lyhonenko L., and Sytnyk G.

The volatile nature of the development of the economy as a whole and of individual business entities necessitates the continuous improvement of existing strategic approaches to managing the cash flows of an enterprise, adapting them to

the specifics of the enterprise's functioning, and developing measures to optimize cash flows at the enterprise.

The aim of the study is to develop the theoretical and practical foundations for managing the cash flows of an enterprise and to devise recommendations for improving the cash flow management strategy at the enterprise. To achieve this goal, the following tasks are envisaged:

- clarify the essence and content of the concept of "cash flow" of the enterprise;
- generalize the classification of cash flows of the enterprise;
- conduct a comparative analysis of methodological approaches to the analysis and optimization of cash flows of the enterprise;
- analyze the financial activities of LLC "Agrodetalservice";
- evaluate the liquidity of LLC "Agrodetalservice";
- conduct an analysis of the effectiveness of the cash flow management strategy of LLC "Agrodetalservice";
- perform an integral evaluation of the effectiveness of the cash flow management strategy of the enterprise;
- propose operational measures to increase the efficiency of cash flow management of LLC "Agrodetalservice";
- develop recommendations for forming a cash flow management strategy for LLC "Agrodetalservice".

The object of the study is the process of managing the cash flows of an enterprise. The subject of the study involves the theoretical foundations and methodological recommendations for the analysis and optimization of cash flow management strategies at an enterprise.

To achieve the stated goal, the following research methods were used: systematization and generalization - for studying the essence and content of the concept of "cash flow" of the enterprise; classification - for studying the types of cash flows of the enterprise; analysis and synthesis - for forming conclusions about the financial condition of the enterprise, the effectiveness of the cash flow

management strategy of the enterprise; coefficient method - for analyzing the cash flows of the enterprise; integral method - for a comprehensive assessment of the effectiveness of cash flow management at the enterprise; tabular and graphical methods - for visual presentation of research results.

The informational basis of the study includes the financial statements of LLC "Agrodetalservice", legislative and regulatory acts of Ukraine, and scientific works of economists.

The practical significance of the obtained results lies in forming conclusions regarding the efficiency of cash flow management of LLC "Agrodetalservice" and developing recommendations for increasing efficiency.

# SECTION 1

## THEORETICAL FOUNDATIONS OF ENTERPRISE CASH FLOW MANAGEMENT

### 1.1 Essence and content of the concept of enterprise cash flow

Financial and economic activity of the enterprise is closely associated with the movement of cash, known as "cash flows," which serve the enterprise's operations in all directions. The balance between inflows and outflows is essential for the economic growth of the enterprise, and these inflows and outflows are reflected as cash flows. Therefore, the efficient organization of cash flows ensures the stable functioning of the enterprise [6].

Cash flow is an indicator that reflects the movement of cash within an enterprise over a specific period, with its main components being inflows and outflows. Inflows of cash occur through revenue from the sale of goods and services, other proceeds from asset sales, increase in registered capital through additional issuance, and receipt of loans and borrowings, as well as targeted financing.

Outflows of cash arise from covering current expenses, investment expenditures, payments to the budget, dividend payments, and interest payments.

Net cash flow is the difference between all inflows and outflows of cash for a given period.

Financial analysts conduct calculations on cash inflows and outflows at the enterprise based on the data they obtain. Managers then draw conclusions about the business's performance and its prospects based on these calculations. Therefore, the cash flow indicator holds informative significance for the enterprise [14].

The concept of "enterprise cash flow" originated in the United States, where it first appeared in the mid-20th century and was called Cash Flow. Over time, abroad, Cash was interpreted as "cash" or "funds," and Flow as "during" or "flow."

Due to diverse interpretations in economic literature, discussions have occurred and continue to occur regarding the unified meaning of Cash Flow.

Economists have not yet reached a consensus, resulting in various approaches to defining the concept of "cash flow," as outlined in Table 1.1 and depicted in Figure 1.1.

Table 1.1 - Approaches to Defining the Concept of "Enterprise Cash Flow"

| Researchers-Economists        | Interpretation   | Features  |
|-------------------------------|--|---|
| 1                             | 2  | 3   |
| Andiets V.S. [2]              | Cash flow - the movement of all cash that is not taken into account when calculating profit: capital investments, income taxes, fines, debt payments to creditors, loan and advance funds                                      | Cash flow   |
| Bilenko D.V. [6]              | Cash flow is the actual net cash that flows into or out of a firm over a specified period.   |   |
| Ihonina K. [20]               | Cash flow is a continuous flow of cash.  | Cash flow   |
| Illichova N.Yu. [21]          | Cash flow is the movement of funds, an element of the total cash management system.  | Cash flow   |
| Kasich A.O., Tsyhan R.M. [22] | Cash flow is an inflow of cash due to sales or an outflow of cash due to payment for resources involved.   | Cash flow, an element of total cash management              |
| Kovalenko S.O. [26]           | Cash flow is an indicator of the creditworthiness and solvency of any of the business entities, which assesses the ability of the enterprise to generate additional amounts of cash to repay obligations under loans received. | Ebb and flow  |
| Krushelnytskyi O.N. [27]      | Cash flow is the surplus of funds generated at the enterprise due to all operations related and not related to economic activity.  | Indicator of creditworthiness and solvency                  |
| Nadtochii S.I. [42]           | Cash flow is a reflection of the value of exchanged goods and services, as well as the movement of debt claims.  | Surplus funds   |
| Stashchuk O.V. [55]           | Cash flow is a set of incomes and disbursements distributed over time, generated by the enterprise's business activities.  | The cost of goods and services, the movement of debt claims |

Completion of Table 1.1

| 1                    | 2   | 3  |
|----------------------|---|--|
| Kharchenko V.A. [23] | Considers not all cash flow in the enterprise, but specifically capital flows, which depend on the level of cash flows. | Capital flows  |
| Shkolnik I.O. [52]   | Cash flow is an increase or decrease in the enterprise's current assets and liabilities.                                | Growth and reduction of current assets and current liabilities |

By considering the opinions of all economists, it can be concluded that the definition of 'cash flows' encompasses the movement of cash, capital flows, receipts and payments, indicators, increases and decreases in current assets and liabilities, the value of goods and services, movement of debt claims, cash movements, and elements of total management. To determine the most accurate statement regarding 'cash flows', let us examine the advantages and disadvantages of each approach.

Andiets V.S. [2], Bilenko D.V. [6], Ihonina K. [20] define cash flow as the movement of cash. The advantage of this definition is the assertion that cash flow is a continuous movement of funds, while the disadvantage lies in the authors' statement that cash flow is not considered in profit calculation. Such a statement is impractical because organized cash flow is the basis for profit generation.

Illichova N.Yu. [21] regards cash flow more as funds for creating total management. This statement is incomplete because total management is not the sole purpose for which cash flows are considered in a company.

In the definition by Kasich A.O., Tsyhan R.M. [22], Nadtochii S.I. [42], and Stashchuk O.V. [55], cash flow is only considered from the operational activities perspective of the enterprise, neglecting the investment and financial activities of the enterprise

Kovalenko S.O. [26] stated that cash flow is an indicator of the creditworthiness and solvency of any enterprise. Such a statement is accurate because indeed, through cash flows, the management of an enterprise is able to assess its current financial condition. However, this definition does not take into

account how cash flows themselves are formed, namely through receipts and expenditures.

The interpretation by Krushelnytskyi O.N. [27] is not quite appropriate because he emphasizes that cash flow is only the surplus of funds resulting from all operations. In our opinion, this surplus of funds is already the profit or loss of the enterprise itself, while cash flow refers to the movement of the enterprise's funds.

The definition by Kharchenko V.A. [55] and Shkolnik I.O. [52] understands cash flow as specifically the narrow sphere of capital flows and the increase or decrease of current assets and liabilities of the enterprise. Such an interpretation is inaccurate because cash flows are commonly regarded as a general concept, encompassing the overall movement of funds (Figure 1.1).

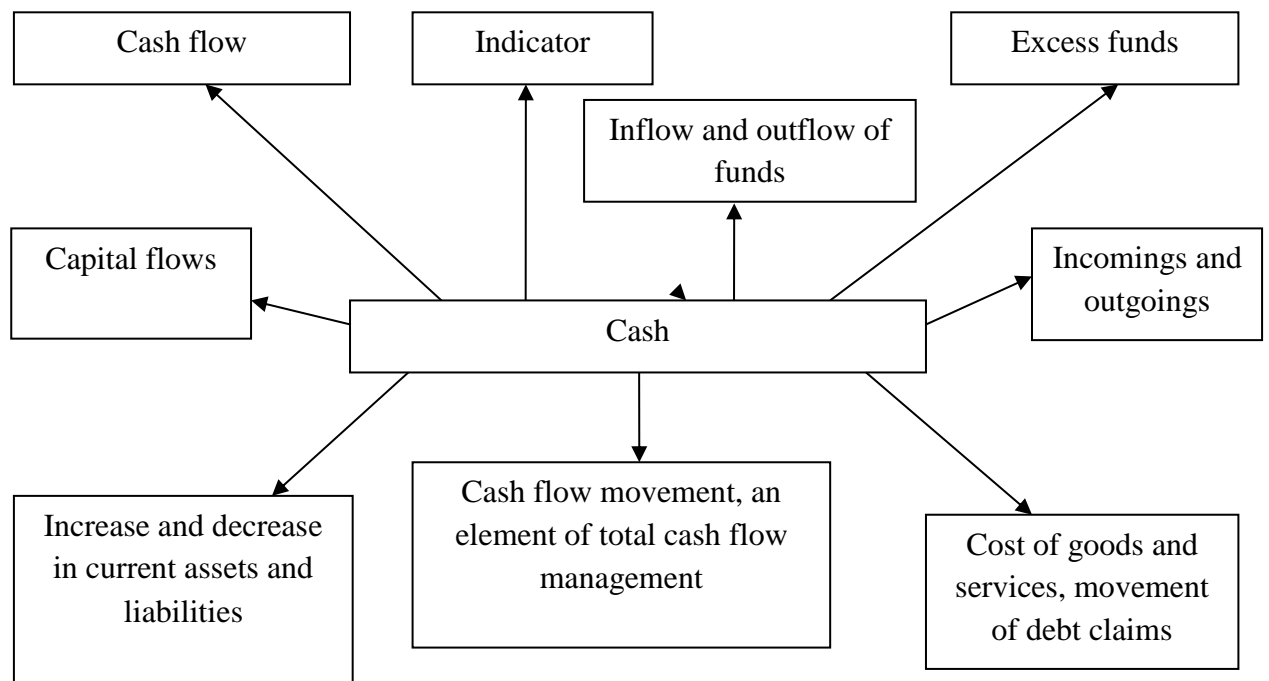


Figure 1.1 - Approaches to Defining the Concept of Cash Flow in an Enterprise

*Source: Constructed by the author based on [26, 27, 55]*

Analyzing the above, the question arises regarding the choice of the most appropriate definition of the enterprise's cash flow and its clarification. Cash flows are the movement of cash funds generated by receipts and payments from the

operational, investment, and financial activities of the enterprise, which have a continuous character, affect the entire economic activity, and serve as an indicator of the enterprise. The main information on the movement of cash funds in the enterprise is contained in Form 3, Cash Flow Statement. According to Form 3, the net cash flow of the enterprise is formed from investment, current, and financial activities (Figure 1.2).

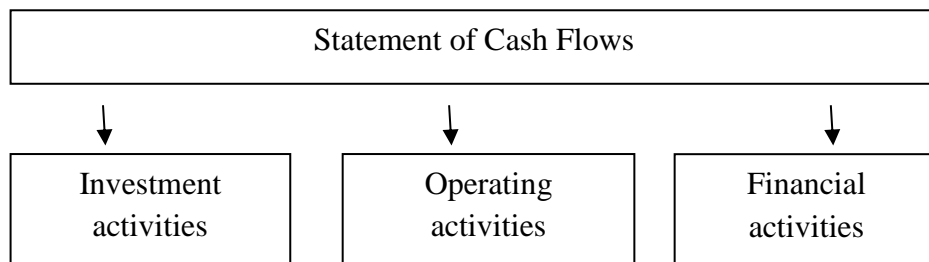


Figure 1.2 - Components of the enterprise's cash flow

*Source: Constructed by the author based on [62]*

According to the Law "On Investment Activity," investment activity encompasses the totality of practical actions by individuals, legal entities, and the state concerning the implementation of investments [46]. Investments include all types of material and intellectual assets invested in objects of entrepreneurial and other activities, resulting in profit generation and achieving social and environmental effects (Table 1.2).

Table 1.2 - Cash Flows from Investment Activities of the Enterprise

| Inflows   | Outflows                                       |
|---|--|
| 1   | 2  |
| Revenue from the sale of fixed assets and intangible assets | Purchase of fixed assets and intangible assets |
| Dividends, interest from long-term capital investments      | Capital investments                            |
| Return of other financial investments                       | Long-term financial investments                |

*Source: Constructed by the author based on [51]*

Current production activity - operational, core activity of the enterprise directly related to the production of goods, provision of services, and is not investment or financial activity. It is considered that the economic operations underlying the operational activities of the enterprise are of a regular nature, therefore it is in the process of operational activities that the main mass of profit and cash flows is formed (Table 1.3).

Table 1.3 - Cash Flows from Operational Activities of the Enterprise

| Inflows   | Outflows  |
|---|---|
| 1   | 2   |
| Revenue from the sale of goods, works, and services | Payment of supplier and contractor invoices       |
| Received advances from buyers                       | Payment of wages                                  |
| Repayment of receivables                            | Deductions to the budget and extrabudgetary funds |
| Proceeds from the redemption of barter              | Payment % on the loan                             |

*Source: Constructed by the author based on [24]*

Financial activity is the activity that leads to changes in the size and composition of the enterprise's own and borrowed capital. The Commercial Code of Ukraine [57] interprets this concept as the financial activity of economic entities, which includes monetary and other financial intermediation, insurance, as well as auxiliary activities in the field of finance and insurance. Thus, financial activity can be considered as a system of methods and forms that ensure the effective functioning of enterprises of various ownership forms, to achieve financial results and set goals (Table 1.4).

Table 1.4 - Cash Flows from Financial Activities of the Enterprise

| Inflows                           | Outflows                               |
|-----------------------------------|--|
| 1                                 | 2                                      |
| Short-term credits and loans      | Return of short-term credits and loans |
| Long-term credits and loans       | Return of long-term credits and loans  |
| Proceeds from the issue of shares | Payment of dividends                   |
|                                   | Redemption of bills                    |

*Source: Constructed by the author based on [4]*

Therefore, by analyzing the essence of the concept of cash flow, advantages and disadvantages were identified in each definition of "cash flow," and after the analysis, a general concept was proposed that fully reflects the essence of cash flow and takes into account the opinions of all the authors mentioned above. It was noted that cash flows in the enterprise are formed by receipts and payments from investment, operational, and financial activities, so cash flows for each type of enterprise activity were considered.

Overall, the analysis underscores the importance of considering the concept of "cash flows," which ensures stability in the operation of the enterprise. In other words, it can be concluded that the organization of cash flows is always relevant and significantly influences the level of efficiency of the business entity.

## **1.2 Classification of cash flows at the enterprise**

Classification is the process of distributing objects into groups according to defined features. Thus, classification is a systematic process of investigating the essence of objects.

Classification of cash flows is important in the activities of an enterprise. It reveals the essence of the concept of cash flow, determines the characteristics of individual cash flows that affect the enterprise's activities. Classification of cash flows involves grouping them according to relevant features. The purpose for which cash flows are classified determines the need for more precise grouping of cash flows.

Economists evaluate differently the necessity and significance of grouping cash flows according to some classification feature. To date, there is no single approach to forming classification features of cash flows for their distribution. Classifications of cash flows in scientific studies by different authors according to certain features are similar, but there are also differences, and there is a different

assessment of the necessity of classifying cash flows according to one feature or another.

M.D. Bilyk classifies cash flows by the determinacy of the cash flow structure and the sources of its formation in terms of types of activities [7]. According to Vasiuk N.V., for the purposes of creditworthiness analysis, it is advisable to use the distribution of cash flows existing in international practice, namely, priority, discretionary, and financial [59]. Holovko T. has developed a classification of cash flows based on 12 features [17]. Krylova O.V. classifies cash flows according to 10 features [28]. Nahaichuk V.V. proposes 14 classification features which, according to the author, are the most appropriate for effective targeted management of enterprise cash flows [43].

I apologize for the oversight. Here's the complete translation:

The classification proposed by I.A. Blank deserves special attention, as this author identifies 19 classification features of cash flows (Table 1.5) [9].

Table 1.5 - Classification of cash flows proposed by I.A. Blank

| Classification sign  | Types of cash flows              | Characteristics of cash flow  |
|--|----------------------------------|---|
| 1  | 2                                | 3   |
| According to the direction of movement of cash flows               | Positive                         | Cash receipts from various activities   |
|  | Negative                         | Expenditures of funds from various types of activities                                    |
| By type of economic activity                                       | Operating;                       | Cash flows according to the main activity of the enterprise                               |
|  | Investment;                      | Cash flows that serve investment activities   |
|  | Financial                        | Income and expenses are related to obtaining equity capital, loans, and paying dividends. |
| By currency  | Cash flows in national currency; | Cash flow that is serviced by the national currency                                       |
|  | Cash flows in foreign currency.  | Cash flow serviced by foreign currency  |
| According to the criterion of distribution of cash flows over time | Current (current);               | Cash flow that is current at a point in time  |
|  | Expected (future)                | Cash flow, the value of which is brought to a future point in time                        |

Completion of Table 1.5

| 1   | 2   | 3   |
|---|---|---|
| By the scale of servicing financial and economic activities             | Cash flow of the enterprise as a whole;       | All types of cash flows in the enterprise   |
|   | Cash flow of a separate structural division;  | Evaluates the effectiveness of the units  |
|   | Cash flow of a separate business transaction. | Movement of funds under a separate agreement  |
| By continuity of formation in the analyzed period                       | Regular cash flows;                           | Cash flow that is carried out constantly  |
|   | Irregular cash flows.                         | Cash flow associated with the implementation of single business operations  |
| According to the form of implementation                                 | Cash flow;                                    | Cash flow that is serviced by cash  |
|   | Cashless;                                     | Cash flow served by loans, deposits, checks, and more   |
| According to the method of calculating the amount of cash flow          | Gross cash flow;                              | Total income and expenses   |
|   | Net cash flow;                                | The difference between positive and negative cash flow  |
| According to the variability of the direction of the movement of funds  | Standard cash flow;                           | A cash flow whose direction changes no more than once   |
|   | Non-standard cash flow                        | A cash flow whose direction changes more than once  |
| By the nature of the cash flow about the enterprise                     | Internal cash flow;                           | Receipts and expenditures of funds within the framework of one enterprise   |
|   | External cash flow                            | The cash flow is related to the business partners of the enterprise   |
| By the level of balance of the volume of cash flow                      | Balanced cash flow;                           | Balance between the volumes of positive and negative cash flows   |
|   | Unbalanced cash flow                          | Deficit or excess aggregate cash flow   |
| Significance in the formation of the final results of economic activity | Priority cash flow;                           | Cash flow associated with the sale of products, implementation of highly profitable investment operations                             |
|   | Secondary cash flow.                          | A cash flow that does not have a significant impact on the formation of the final results of economic activity                        |
| According to the sufficiency of the amount of cash flow                 | Excess cash flow;                             | Cash receipts exceed the company's natural need to spend them   |
|   | Deficient cash flow                           | Cash receipts are lower than the real needs of the enterprise to spend them   |
| By period   | Short-term cash flow;                         | A cash flow in which the period from the beginning of cash receipts or payments to their complete completion does not exceed one year |

Completion of Table 1.5

| 1  | 2   | 3  |
|--|---|--|
|  | Long-term cash flow                             | A cash flow for which the period from start to finish exceeds one year   |
| According to the predictability of occurrence                        | Fully predictable cash flow;                    | Amortization flow, cash flow for service, and return of received credit funds  |
|  | Insufficiently predictable cash flow            | Receipt of cash from sales of products, receipt of dividends on shares   |
|  | Unpredictable cash flow                         | Cash flow associated with extraordinary events in the course of operational, investment, or financial activities       |
| According to the possibility of regulation in the management process | Regulated cash flow;                            | Cash flow, which can be changed in time or volume at the will of managers  |
|  | Cash flow that is not amenable to regulation    | A cash flow that cannot be altered without adverse consequences, such as tax payments                                  |
| On the possibility of ensuring solvency                              | Liquid cash flow;                               | A cash flow in which the ratio of its positive and negative types is equal to or greater than one                      |
|  | Illiquid cash flow                              | A cash flow in which the ratio of its positive and negative types is less than one                                     |
| According to the legality of implementation                          | Legal cash flow;                                | Receipts and payments of funds that fully comply with the legal norms in force in the country                          |
|  | Illegal cash flow                               | Receipts and payments of funds made in violation of the legal norms in force in the country and related to tax evasion |
| According to the stability of time intervals of formation            | Regular cash flow with regular time intervals;  | A cash flow that is like an annuity  |
|  | Regular cash flow with irregular time intervals | Cash flow, with irregular time intervals of its implementation   |

*Source: Constructed by the author based on [9]*

The classification of cash flows provided above is comprehensive, as it includes 19 classification features, but despite this, it is not perfect. In our opinion, it would be appropriate to introduce a classification feature based on the form of execution, not only cash and non-cash cash flows, but also cash equivalents, as the movement of cash flows involves both inflows and outflows of money and their equivalents, thus attention should be focused on this. Cash equivalents are short-term highly liquid financial investments that can be readily converted into known amounts of cash and which are characterized by minimal risk of value change [18].

Additionally, a classification feature based on international practice, which divides cash flows into priority, discretionary, and financial, can be introduced into this classification. Introducing this feature allows for analyzing the creditworthiness of the enterprise.

I.A. Blank, based on the legality of execution, divides cash flows into legal, which comply with the legislation, and shadow, which are carried out in violation of the existing legal norms in the country and are associated with tax evasion [9]. Such grouping of cash flows, in our view, is only possible from a management perspective, as including the feature of illegal cash flow in accounting classification of cash flows contradicts the nature of accounting, the main task of which, according to the law, is to provide complete, truthful, and unbiased information about the enterprise's activities.

Let's consider the classification by Yasishena V.V. [61], which takes into account the need for strategic management and modern approaches to defining enterprise cash flows (Table 1.6).

The provided classification, in our opinion, is insufficiently appropriate because it does not encompass all the main features of cash flows. It is necessary to expand this classification and introduce the following characteristics of cash flows: by type of economic activity, by form of execution, and depending on the direction of cash flow.

The classifications by Blank and Yasishena V.V. share some similarities. Yasishena V.V. distinguishes characteristics by formation duration, by time evaluation method [61], while Blank distinguishes them by time period and by the criterion of cash flow distribution over time; these characteristics are identical [9].

They differ in the characteristic of predictability level. Yasishena V.V. distinguishes between planned and unplanned levels of predictability of enterprise cash flows [61], while Blank distinguishes between completely predictable, insufficiently predictable, and unpredictable cash flows [9].

Table 1.6 - Classification of cash flows proposed by Yasishena V.V.

| Classification sign              | Types of cash flows                 | Characteristics of cash flow  |
|----------------------------------|-------------------------------------|---|
| By priority                      | Strategic;                          | A system of monetary expenditures that implement the company's strategy                               |
|                                  | Mandatory;                          | Mandatory payments made by the enterprise   |
|                                  | Minor                               | Expenses that are not related to the strategic needs of the enterprise, for example, payment of fines |
| By the duration of the formation | Short-term;                         | Does not exceed one year  |
|                                  | Long-term                           | More than one year  |
| With the time evaluation method  | Current;                            | Today   |
|                                  | Future                              | In future   |
| By the level of predictability   | Planned;                            | Planned estimated cash flows  |
|                                  | Casual                              | Cash flows that arose as a result of unpredictable, risky events                                      |
| By the scale of service          | Cash flow in the enterprise;        | All types of cash flows in the enterprise   |
|                                  | Cash flow by division;              | Evaluates the effectiveness of the units  |
|                                  | Cash flow of the type of activity;  | consideration of cash flow in terms of individual types and areas of activity                         |
|                                  | Cash flow of a separate transaction | Movement of funds under a separate agreement  |

*Source: Constructed by the author based on [61]*

In terms of the scale of servicing, Blank's classification has three divisions: cash flow for the entire enterprise, for a subdivision, and for a specific operation [9]. Yasishena V.V. expanded this classification by including cash flow by type of activity, which he considers an important aspect in this classification because it examines cash flows in terms of specific types of enterprise activities [61].

Having considered various classifications presented in the literature, it can be argued that there is no perfect classification. Therefore, we propose consolidating all the thoughts of economists into a unified classification and identifying the main characteristics of such classification (Figure 1.3).

Therefore, cash flows are a multifaceted economic category that encompasses various types. The discussed classification allows for systematic accounting, analysis, and planning of different types of cash flows within the enterprise and

requires the disclosure of existing methodological approaches for their analysis and management.

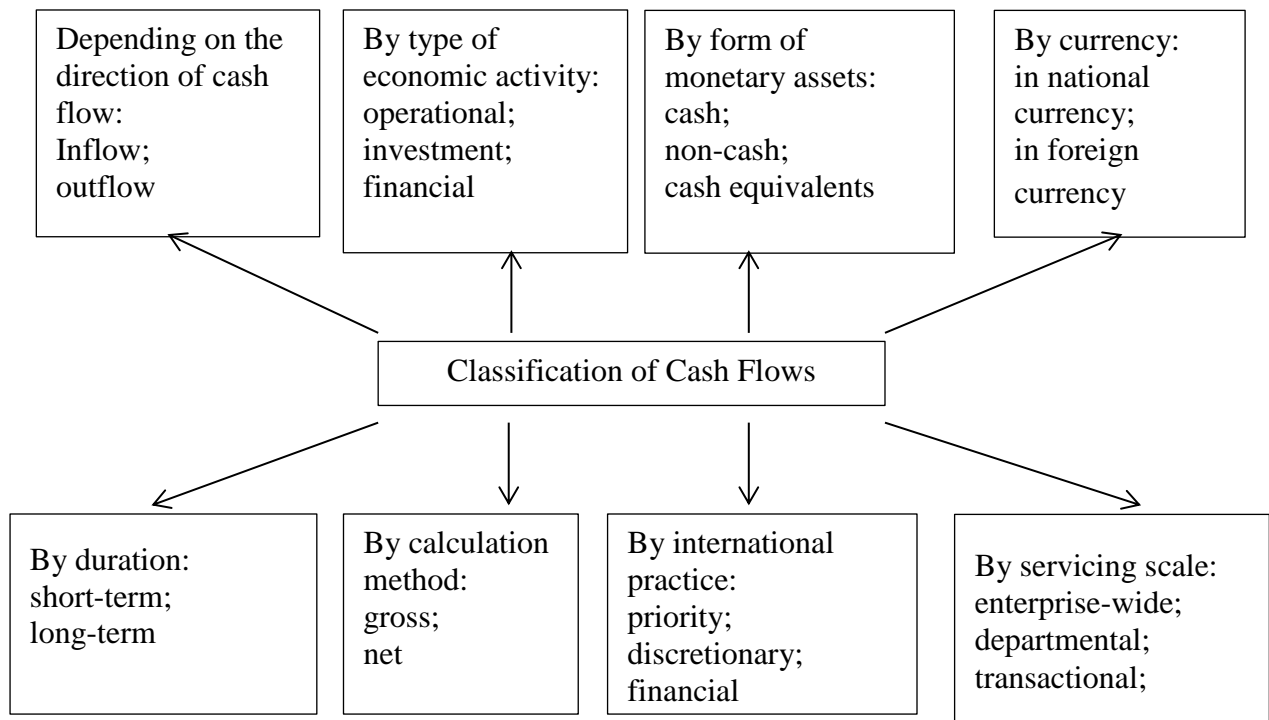


Figure 1.3 - Classification of cash flows

*Source: Constructed by the author based on [7, 9, 17, 28, 43, 59, 61]*

The importance of classifying enterprise cash flows is determined by their function in serving the enterprise's economic activities. Analyzing existing methodological approaches to classifying enterprise cash flows has revealed the advantages and disadvantages of each methodology, determining the appropriateness of its use.

Thus, we have summarized the classification of cash flows, identified the main characteristics of cash flows, and highlighted their essence. In other words, the classification of cash flows is an integral part of the theoretical foundations and practical aspects of enterprise activities, knowledge of which enables the evaluation of the state of cash flows within the enterprise based on specific characteristics and identifies negative factors affecting enterprise operations.

### **1.3 Methods of analysis and optimization of cash flows at the enterprise**

In the conditions of a market economy, the analysis of a company's cash flows is one of the tools ensuring its successful economic activity. This direction of analysis helps to assess the financial condition and solvency of the enterprise, providing an opportunity to characterize the liquidity of the business entity more objectively in inflationary conditions, and to more accurately determine the movement of funds by types of enterprise activities. Additionally, the effectiveness and profitability of the enterprise's economic activity depend on the balance of cash flows. The necessity of conducting cash flow analysis lies in the limitation of financial resources at the enterprise and is determined by the goal of increasing the efficiency of cash flow organization. All of the above underlines the relevance of studying existing methods and techniques for cash flow analysis.

Literature review has shown that the following methods can be used for studying cash flows based on the use of the Statement of Cash Flows and other forms of financial reporting [70]:

- Horizontal analysis;
- Vertical analysis;
- Comparative analysis;
- Analysis of financial ratios.

Horizontal analysis of cash flows involves studying the dynamics of the formation volume of positive and negative net cash flow of the enterprise in terms of individual sources, calculating the rates of their growth and increase, and determining the general trends in changes in their volume [52].

Vertical (structural) analysis of cash flows involves studying the structure of positive, negative, and net cash flows by types of economic activities, by individual internal structural subdivisions (responsibility centers), by individual sources of inflows, and directions of expenditure [48].

Comparative (spatial) analysis is the comparison of consolidated reporting indicators by specific indicators of the enterprise, subsidiaries, divisions, workshops as internal economic analysis, as well as the comparison of indicators of this enterprise with indicators of competitors, with industry averages, and average overall economic data as intereconomic analysis [41].

Ratio analysis is an integral part of cash flow analysis. It involves examining the values of various relative indicators and their deviations from planned and base values that characterize cash flows, as well as calculating coefficients of the efficiency of the enterprise's use of funds [37] (Figure 1.4).

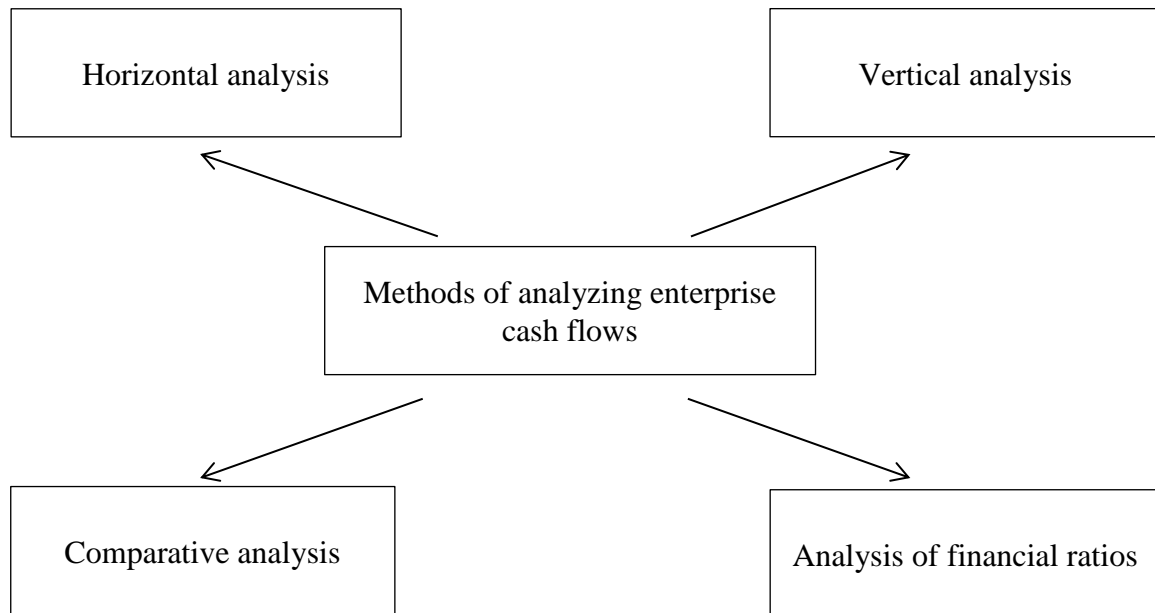


Figure 1.4 - Methods of Analysis of Enterprise Cash Flows

*Source: Constructed by the author based on [37, 41, 48, 52, 70]*

Using horizontal, vertical, and comparative analysis, as well as financial ratio analysis, we identify the weaknesses of the enterprise, and with the aim of improving them, we apply optimization.

Optimization of cash flows involves selecting the best forms of their organization within the enterprise, taking into account the conditions and peculiarities of conducting economic activities.

The main objectives of optimizing enterprise cash flows are [48]:

- Ensuring the balance of cash flow volumes;
- Ensuring synchronicity of cash flow formation over time;
- Ensuring growth of the enterprise's net cash flow.

The main objects of optimization are [33]:

- Positive cash flow;
- Negative cash flow;
- Cash asset balance;
- Net cash flow.

Balancing and optimization occur through the identification of reserves that reduce the dependence of the enterprise on external sources of funds, ensuring uniformity of cash expenditure over time and volumes, increasing the amount and quality of net cash flow, and influencing the financial cycle of the enterprise [32].

An important prerequisite for cash flow optimization is their determination according to the main types of enterprise activities, studying the factors influencing their volume, and methods of optimization.

Table 1.7 provides optimization of cash flows according to the types of enterprise activities.

Table 1.7 - Methods of Cash Flow Optimization

| Cash flow from operating activities | Influencing factors  | Optimization method   |
|-------------------------------------|--|---|
| 1                                   | 2  | 3   |
| Operational activity                | Economic (life) cycle; duration of the operating cycle; seasonality of production; depreciation policy | Time optimization method; the method of optimization of current inventory - Wilson's model; the technique of liquidity management (the balance of funds on the current account) is the Baumol-Tobin model |
| Financial activity                  | A conjuncture of commodity and financial markets;  | The method of maximizing net cash flow; the technique of optimizing the average balance of monetary assets - the Miller-Orr model   |
| Investment activity                 | taxation system; lending conditions;   | Volume optimization method: the method of determining the optimization of the balance of monetary assets - Stone's model  |

*Source: Constructed by the author based on [31]*

Let's consider each method of cash flow optimization mentioned in Table 1.7.

Time optimization method. Balancing cash flows over time is crucial in the enterprise's cash flow optimization system. Two main methods are used in this optimization process: smoothing and synchronization [34].

Smoothing of cash flows aims to even out their volumes over intervals within the considered time period. This method of optimization helps to mitigate seasonal and cyclical deviations in cash flow formation (both positive and negative), simultaneously optimizing average cash balances and increasing the level of absolute liquidity. The results of this method of cash flow optimization over time are evaluated using the standard deviation or coefficient of variation, which should decrease during optimization.

Synchronization of cash flows is based on the covariance of positive and negative cash flows. In the synchronization process, an increase in the correlation between these two types of cash flows should be ensured. The results of this method of cash flow optimization over time are evaluated using the correlation coefficient, which should strive for a value of "+1" during optimization.

The Wilson model is the simplest inventory management model and describes the situation of purchasing products from an external supplier, characterized by the following assumptions [34]:

- The consumption intensity is known in advance and remains constant.
- Orders are delivered from a warehouse where previously made goods are stored.
- The delivery time of orders is known and constant.
- Each order is delivered in the form of one batch.
- Order costs are independent of the order size.
- Inventory holding costs are proportional to its size.
- Stockout (shortage) is unacceptable.

The main difficulty in solving inventory management problems lies in correctly determining the input parameters of the problem since not always their numerical values are explicitly given in the conditions.

When using the formulas of the inventory management model, it is necessary to carefully ensure that all numerical values used in the formula are consistent in terms of units of measurement.

The Wilson model has the following disadvantages [34]:

- It does not take into account the costs associated with tying up financial capital invested in inventory.
- The total costs during inventory formation should additionally include the costs associated with losses from unrealized income.

The Baumol-Tobin model is a model of money demand, according to which depositors determine the required amount of cash based on the trade-off between the loss of interest income on this amount and the value of the time saved from infrequent bank visits (Fig. 1.5.).

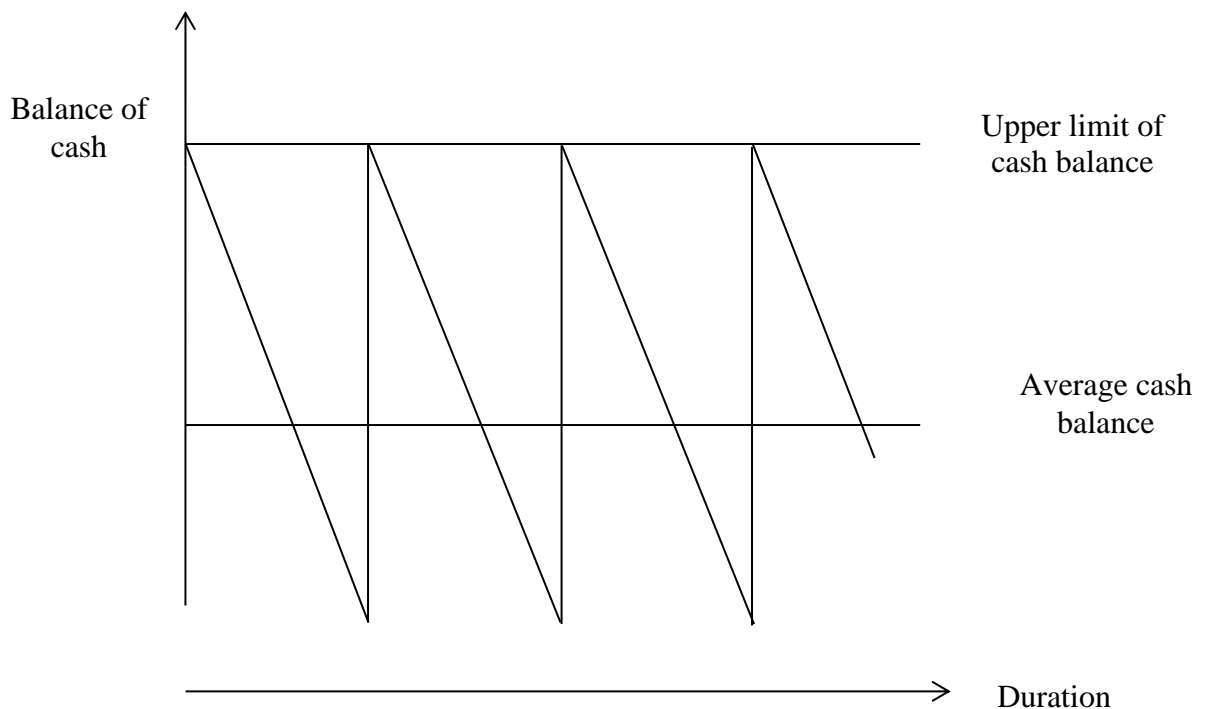


Figure 1.5 - Baumol-Tobin Model, Change in Cash Balance in Checking Account [34]

It assumes that the enterprise starts operating with its maximum level of cash and gradually spends it. All funds received from the sale of goods and services are invested in short-term securities. Once the cash reserve is depleted, reaching zero or

a certain predetermined safety level, the enterprise sells some of the securities, thereby replenishing the cash reserve to its initial level.

Their main advantage lies in convenience: individuals are freed from the need to constantly visit the bank. However, they may incur losses by foregoing the interest they could have earned by depositing the corresponding amount into a bank account. The practical significance of the Baumol-Tobin cash management model also lies in its potential use as a theory of money velocity.

The Miller-Orr model helps to manage the cash balance of the enterprise correctly and rationally, especially in conditions where the daily inflow and outflow of cash are unpredictable. Sometimes referred to as an enhanced Baumol model, the cash balance fluctuates randomly until it reaches the upper limit. Once this happens, the enterprise starts purchasing securities to return the cash reserve to a certain normal level (the return point). If the cash reserve falls to the lower limit, the enterprise sells its securities to replenish the cash reserve to the normal level (Figure 1.6) [34].

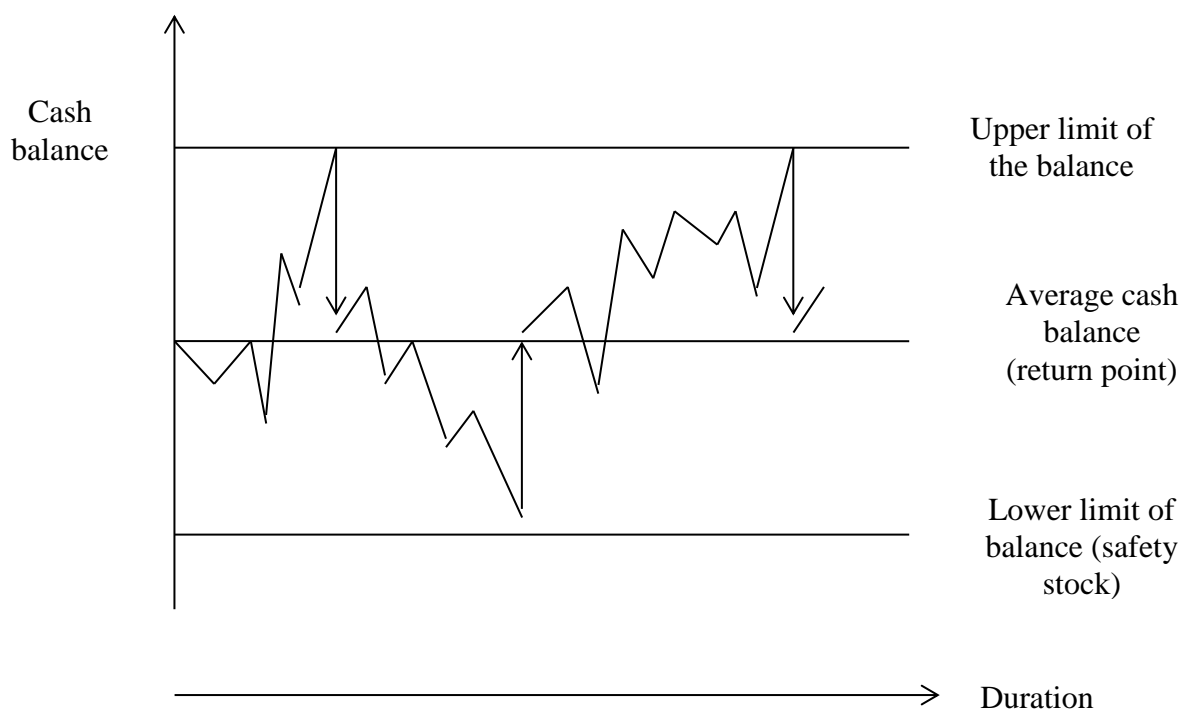


Figure 1.6 - Miller-Orr Model, Change in Cash Balance in Checking Account [34]

The stages of implementing the Miller-Orr model are as follows [34]:

1. Determine the minimum amount of cash that will be kept in the checking account.
2. Determine the variation of daily inflows to the checking account.
3. Calculate the holding costs of funds in the checking account and the costs of converting cash into marketable securities.
4. Calculate the range of variation in the cash balance in the checking account.
5. Calculate the upper limit of cash in the checking account, beyond which it is necessary to convert a portion of the cash into short-term marketable securities.

Determine the return point, which is the cash balance in the checking account that needs to be maintained if the actual balance falls outside the interval boundaries (upper limit; lower limit).

Experience with the described model has shown its advantages over purely intuitive cash management. The Miller-Orr Model helps determine the cash management policy on the enterprise's checking account.

The Stone model complements the Miller-Orr model and is based on forecasts of cash flow in the near future. Reaching the upper limit of the cash balance in the checking account will not trigger their immediate transfer into securities if relatively high payments are expected in the organization in the coming days, according to forecasts. This minimizes the number of conversion transactions and thus reduces associated costs. It is considered that the discussed cash flow management mechanism is quite effective, and its implementation will help maintain the financial balance of the enterprise during its production and economic activities, as well as increase the level of financial and production flexibility [52].

The discussed optimization models - timing optimization, the Wilson model, Baumol-Tobin model, Miller-Orr model, and Stone model are considered classical models for cash flow optimization, but there are also modern models - economic-mathematical modeling.

The essence of this methodology lies in replacing the original object with its "image" - a mathematical model - and then studying (researching) the model based

on analytical methods and computational-logical algorithms, which are implemented using computer programs. Working not with the object itself (phenomenon, process), but with its model, allows relatively quick and painless investigation of its main (essential) properties and behavior under any probable circumstances (this is the advantage of the theory). At the same time, computational (computer, simulation, and imitation) experiments with models of objects allow, relying on the power of modern mathematical and computational methods and the technical toolkit of informatics, to study the object in sufficient detail, which is inaccessible to purely theoretical approaches. It is not surprising that the methodology of mathematical modeling is rapidly developing, encompassing the analysis of extremely complex economic and social processes [34, 52].

Thus, it is necessary to note that for each enterprise, the model of cash flow optimization is individual, as it takes into account the specifics of the type of economic activity and the organizational-legal form of management, as well as the specific conditions of the external and internal operating environment.

Therefore, having considered the methods of analysis and optimization of cash flows, it can be concluded that all the proposed analysis methods will be used in the work, namely, horizontal, vertical, coefficient, and comparative analysis, to identify problems and weaknesses in the enterprise. From the discussed methods of optimizing cash flows, the method of economic-mathematical modeling will be used in the future, as it is the most modern and adapted to the optimization activities of enterprises, capable of more detailed research of the object than the previously mentioned methods, which is a significant advantage for optimization purposes.

## **Conclusions for section 1**

After analyzing the essence of the concept of cash flow, the advantages and disadvantages of each definition of "cash flow" were identified. Following the

analysis, a general concept was proposed that fully reflects the essence of cash flow and takes into account the opinions of all the authors mentioned above. It was noted that cash flows in an enterprise are formed by receipts and payments for investment, operating, and financing activities, so cash flows for each type of enterprise activity were considered.

It was determined that cash flows are a multi-dimensional economic category that includes various types. The classification discussed allows for systematic accounting, analysis, and planning of various types of cash flows within the enterprise and requires the disclosure of existing methodological approaches for their analysis and management. The classification of cash flows was summarized, the main features of cash flows were identified, and their essence was highlighted.

Methods of analysis and optimization of cash flows were investigated. It was determined that for the study of cash flows, horizontal analysis, vertical analysis, comparative analysis, and analysis of financial ratios can be used. The methods of cash flow optimization include the method of optimization over time, the method of optimizing current inventory levels - the Wilson model, liquidity management method (balance of cash on the current account) - the Baumol-Tobin model, net cash flow maximization method, optimization method for average cash asset balance - the Miller-Orr model, volume optimization method, method for determining optimization of cash asset balance - the Stone model.

## **SECTION 2**

### **EVALUATION OF CASH FLOW MANAGEMENT EFFICIENCY FOR LLC "AGRODETALSERVICE"**

#### **2.1 General overview and financial performance analysis of LLC "Agrodetalservice"**

LLC "Agrodetalservice" is a company engaged in the production of machinery and equipment for agriculture and forestry. The enterprise is located in the city of Kropyvnytskyi in the Kirovohrad region.

The company is oriented towards meeting the needs of the agricultural and forestry sectors of the economy. Its activities are based on a deep understanding of technological processes in the industry and close cooperation with clients. The company specializes in the production of machinery and equipment used in agriculture and forestry, including planters, mowers, irrigation systems, sprayers, logging machines, as well as specialized devices for soil processing and harvesting.

The main clients of the company are farms, agricultural companies, forestry enterprises, and specialized distributors of agricultural machinery. The company has a developed network of distributors and dealers who ensure the sale and support of equipment in various regions of the country.

The company is involved in environmental and social responsibility issues by implementing environmentally friendly technologies in its production and participating in programs to support the local community.

Financial analysis of LLC "Agrodetalservice" was conducted in the following areas [52]:

- Evaluation of the company's asset condition;
- Liquidity analysis;
- Business activity analysis;

- Solvency analysis (financial stability);
- Profitability analysis.

Let's assess the asset condition of the enterprise. The Commercial Code defines that the assets of an enterprise include production and non-production funds, as well as other assets, the value of which is reflected in the independent balance sheet of the enterprise [57]. Thus, evaluating the asset condition allows us to assess the dynamics of the economic resources of the enterprise, as shown in Table 2.1.

Table 2.1 - Indicators of the property condition of LLC "Agrodetalservice" for 2021-2023

| Indicators                                   | Normative value | Calculated value |        |       |
|--|-----------------|------------------|--------|-------|
|  |                 | 2021             | 2022   | 2023  |
| Coefficient of depreciation of main features | Reduction       | 0,95             | 0,96   | 0,96  |
| Index of permanent assets                    | <1              | 0,45             | 0,49   | 0,48  |
| Real value coefficient                       | 0,5 Increase    | 0,49             | 0,52   | 0,51  |
| Profitability of the enterprise, %           | Increase        | -0,01            | -0,009 | -0,01 |

The depreciation coefficient of fixed assets reflects the degree of wear and tear of fixed assets to their initial cost. The dynamics of this coefficient show that at the LLC "Agrodetalservice," the depreciation of fixed assets is almost 1 and increases every year. This situation indicates that new wagons and repair equipment for them have not been updated, and the depreciation rate in 2023 was 0.96. The high value of the indicator is due to the long service life of the wagons, 40 years, according to the provisions for railway transport.

The fixed asset index reflects the amount of non-current assets per unit of equity capital. In 2021, the fixed asset index is 0.45, indicating that 45 cents of non-current assets correspond to 1 UAH of equity capital. The indicator tends to increase, indicating an increase in the volume of non-current assets financed by equity capital.

The real estate value coefficient shows the proportion of the property value represented by production assets. This coefficient determines the level of the company's production potential, the adequacy of its operational activities, and the sufficient volume of production funds. The normative value of the coefficient is

considered to be 0.5. In 2021, the indicator reached 0.49, indicating sufficient production potential. In 2022-2023, the coefficient fluctuated between 0.51 and 0.52, which is considered normal.

The profitability of the company's assets characterizes the efficiency of using fixed assets and reflects the amount of net profit (loss) per unit of property. During the analyzed period of 2021-2023, the profitability of the company's assets was negative due to the loss incurred from the company's operational activities.

Overall, the assessment of the property status showed that the real value of the company's assets, according to the norm, is within the normal range, indicating a normal production potential. However, the fixed assets are rarely renewed or introduced, and during 2021-2023, there were no introductions at all. Therefore, there is a risk of decreasing production potential at the enterprise due to insufficient funding. The profitability of the company's assets is negative, indicating the unprofitability of the analyzed enterprise and inefficient use of its assets.

Next, let's analyze the business activity of the LLC "Agrodetalservice". Business activity determines the efficiency of the company's core activities, characterized by the speed of turnover of the company's financial resources. Let's calculate the indicators of business activity, represented by turnover ratios and turnover periods of the enterprise (Table 2.2, Figure 2.1).

Table 2.2 - Business Activity Indicators of LLC "Agrodetalservice" for 2021-2023

| Indicators                                     | Normative value | Calculated value |        |        |
|--|-----------------|------------------|--------|--------|
|  |                 | 2021             | 2022   | 2023   |
| Asset turnover ratio                           | Increase        | 1,75             | 1,07   | 0,81   |
| Accounts Payable Turnover Ratio                | Increase        | 27,66            | 20,71  | 18,54  |
| Accounts receivable turnover ratio             | Increase        | 4,43             | 2,36   | 1,89   |
| Repayment period of receivables, days          | Reduction       | 81,22            | 152,52 | 189,86 |
| Payable debt repayment term, days              | Reduction       | 13,01            | 17,37  | 19,40  |
| Inventory turnover ratio                       | Increase        | 10,75            | 10,61  | 7,94   |
| Fixed asset turnover ratio (return on capital) | Increase        | 0,17             | 0,10   | 0,06   |
| Equity turnover ratio                          | Increase        | 1,93             | 1,15   | 0,85   |

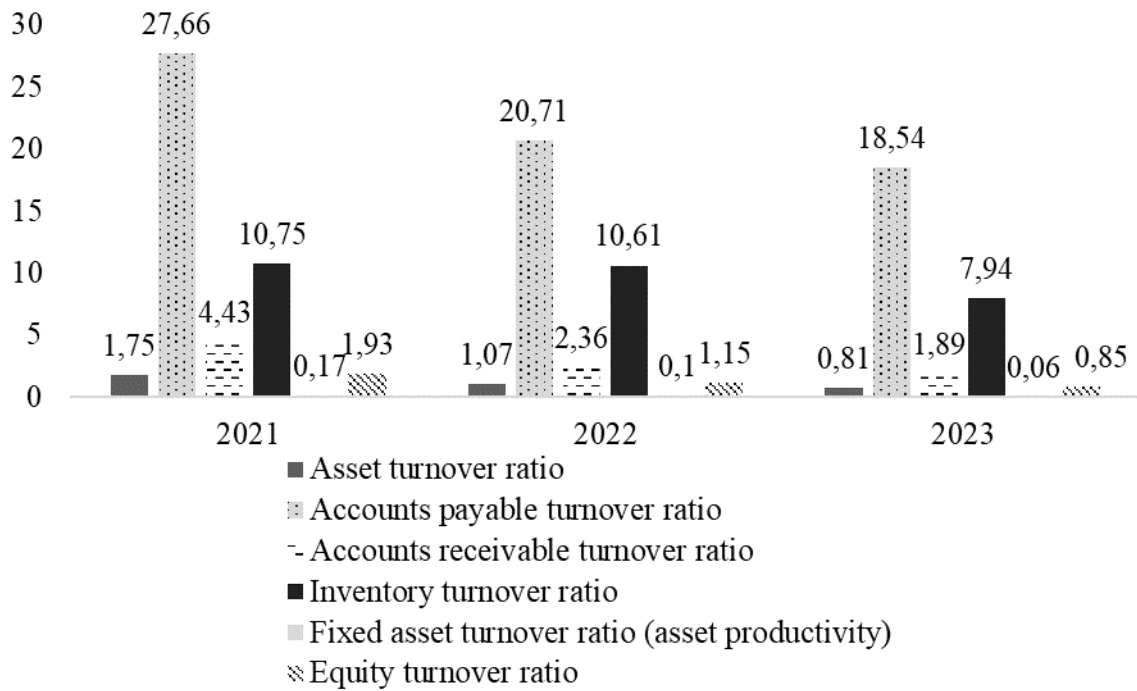


Figure 2.1 - Business Activity Indicators of LLC "Agrodetalservice" for 2021-2023

The coefficient of asset turnover reflects the efficiency of using all of the enterprise's assets and indicates how many asset turnovers occur within a period, or how much net income is earned per 1 UAH invested in assets. In 2023, there was a decrease to 81 kopecks of profit per 1 UAH invested in assets, whereas in 2021, it was 1.75 UAH of profit. Such a decreasing trend is negative and indicates inefficient use of assets.

The accounts payable turnover ratio shows the speed of accounts payable turnover for the analyzed period, the expansion or reduction of commercial credit extended to the enterprise. There is a tendency towards a decrease in this indicator. In 2023, the ratio was 18.54, whereas in 2021, it was 27.66. This trend indicates a reduction in the speed of payment of the company's liabilities.

The accounts receivable turnover ratio shows the speed of accounts receivable turnover for the period, the expansion or reduction of commercial credit extended by the enterprise. By 2023, this coefficient had decreased to 1.89, whereas in 2021, it was 4.43. This dynamic suggests an increase in the collection period of accounts receivable, which is a negative phenomenon.

The average collection period of accounts receivable and accounts payable shows the average period for the payment of the company's accounts receivable and accounts payable. During the analyzed period, the terms of payment for accounts receivable and accounts payable constantly increased. In 2021, the accounts receivable collection period was 81 days, whereas in 2023, it increased to 189 days. A similar situation occurred with the accounts payable period, which was 13 days in 2021 and increased to 19 days in 2023. Increasing the turnover period of accounts payable may be beneficial for the company in certain cases. However, an increase in the accounts receivable collection period means that the repayment period for borrowed funds has increased, which is a negative trend and may lead to a decline in the company's business development.

The inventory turnover ratio reflects the speed of inventory turnover at the company. A higher inventory turnover indicates more efficient production and less need for working capital to organize it. In 2021, the coefficient was 11.17, while in 2023, it decreased to 8.04, indicating an increase in the accumulation of production inventories and a decrease in production efficiency.

The fixed asset turnover ratio demonstrates the efficiency of using the company's fixed assets. Starting from 2021, this coefficient was 0.17, and it decreased during the analyzed period to 0.06 in 2023. This decline was caused by a decrease in net income from product sales, indicating a decrease in the efficiency of fixed asset utilization.

The equity turnover ratio indicates the efficiency of using the company's equity, showing to what extent the scale of the company's activities is provided by its own capital. In 2023, the indicator was 0.85, while in 2021, it was 1.92. The decreasing trend in this indicator is negative and indicates the inefficiency of using the company's own capital.

Thus, the business activity of LLC "Agrodetalservice" decreased during the analyzed period, which was due to a decrease in the company's income. Therefore, the company's resources are being used much less efficiently.

Let's conduct an analysis of the company's profitability. With its help, we can determine the effectiveness of investing funds in the company and the rationality of their use. The company is considered profitable if the revenues from product sales cover the production costs and, moreover, provide a profit sufficient for its normal functioning.

Let's consider the profitability ratios provided in Table 2.3.

Table 2.3 - Profitability indicators of LLC "Agrodetalservice" for 2021-2023

| Indicators                                       | Normative value | Calculated value, % |       |       |
|--|-----------------|---------------------|-------|-------|
|  |                 | 2021                | 2022  | 2023  |
| Rate of return on assets                         | > 0 Increase    | -2,28               | -1,01 | -1,54 |
| Return on equity ratio                           | > 0 Increase    | -1,78               | -1,03 | -1,64 |
| The coefficient of profitability of the activity | > 0 Increase    | -1,30               | -0,93 | -1,89 |
| Product profitability ratio                      | > 0 Increase    | -7,29               | -3,77 | -5,16 |

The coefficient of assets profitability characterizes the efficiency of the company's asset utilization. From the calculated data, it is evident that asset profitability is negative, attributed to incurring losses throughout the years 2021 to 2023 because the cost of services nearly equaled the net income from service provision, leaving insufficient residual difference to cover all expenses.

The return on equity ratio indicates the efficiency of investing funds into the enterprise. Throughout 2021 to 2023, profitability was negative.

The activity profitability ratio indicates the efficiency of the company's business operations. A negative value of this indicator points to inefficient company operations.

The product profitability coefficient characterizes the profitability of the main business activity. The primary activity of the enterprise is providing ground transportation services, which, according to calculations, is not profitable or efficient.

Thus, the profitability analysis of the enterprise indicates that "LLC Agrodetalservice" is a loss-making enterprise, signaling its overall inefficiency and the need for measures aimed at cost optimization and revenue growth.

Overall, each stage of the conducted financial analysis of "LLC Agrodetservice" based on the chosen methodology allows for the conclusion that the company has weaknesses such as the lack of updating fixed assets, inefficient structure of current assets, and ineffective cash flow management, along with a decrease in the turnover speed of all types of indebtedness and a low level of operational efficiency. On the positive side, high financial stability of the company can be noted, formed due to the absence of creditors and investors.

## **2.2 Assessment of the company's cash adequacy**

An important component of studying cash flow management of the enterprise is assessing the company's cash adequacy, for which liquidity and solvency indicators are used.

Liquidity analysis helps understand the company's ability to cover its short-term obligations, while solvency analysis allows evaluating the company's long-term financial stability. These data help understand how capable the company is in meeting its financial obligations over different time horizons.

Assessing liquidity and solvency helps identify potential risks and issues in cash flow management. This allows developing measures to improve financial management and avoid possible defaults or cash shortages.

Understanding the level of liquidity and solvency helps determine optimal strategies for investments, financing, and operational cost management. This contributes to the efficient use of available resources and enables long-term investment planning.

Knowledge of liquidity and solvency helps management anticipate the impact of financial changes on the company's ability to sustain its operations, enabling timely measures to enhance resilience to financial risks.

High liquidity and solvency indicators increase the trust of investors, creditors, and partners, creating favorable conditions for attracting additional funding and strengthening partnerships.

Assessing these indicators within the context of the topic allows understanding which aspects of financial management need improvement to ensure effective use of cash and maintain stable operation of the enterprise.

Liquidity is defined as the ratio of the amount of debt to the assets that can be used to repay it [52].

Overall, the analysis of a company's liquidity reflects its ability to settle current liabilities using liquid assets such as cash, accounts receivable, and securities within a certain period of time. The analysis of liquidity ratios of the company is provided in Table 2.4.

Table 2.4 - Liquidity indicators of LLC "Agrodetalservice" for 2021-2023

| Indicators                         | Normative value | Calculated value |        |        |
|------------------------------------|-----------------|------------------|--------|--------|
|                                    |                 | 2021             | 2022   | 2023   |
| Coverage ratio                     | >1              | 6,77             | 10,71  | 10,81  |
| Quick liquidity ratio              | 0,6 - 0,8       | 5,40             | 8,98   | 8,45   |
| Absolute liquidity ratio           | > 0 Increase    | 0,0003           | 0,0044 | 0,0003 |
| Net working capital, thousand UAH. | > 0 Increase    | 34891            | 35354  | 35562  |

The coverage ratio indicates the portion of current liabilities a company can settle using its most liquid current assets. Over the analyzed period, the ratio significantly exceeded the normative value, reaching 10.81 in 2023, with a tendency to increase. From the creditors' perspective, this excess is positive, indicating the company's sufficient liquid current assets to cover its current liabilities. However, from the company's standpoint, such a trend is negative, suggesting an inefficient asset structure and unnecessary current assets.

The quick (intermediate) liquidity ratio is calculated as the ratio of cash, inventory, and biological assets to short-term liabilities. In 2023, this ratio showed significant excess over the norm, with 8.45 UAH of liquid assets per UAH of current

liabilities. This is justified by the predominance of accounts receivable, which are challenging to collect promptly.

The absolute liquidity ratio shows the portion of short-term liabilities that can be immediately settled using the most liquid assets. Over the analyzed period, this ratio was low, indicating difficulties in settling current liabilities promptly.

The net working capital demonstrates how much the current assets exceed current liabilities. At LLC "Agrodetalservice," the net working capital remained at a sufficient level over three years, reaching 35,562 UAH in 2023. This indicates the adequacy of current assets to cover current liabilities and the company's ability to expand its operations.

Thus, liquidity analysis indicates that the company has an inefficient structure of current assets in terms of their utilization efficiency, with a significant volume of accounts receivable. Overall, it requires the development of methods to accelerate cash turnover and expedite the collection of accounts receivable.

Let's conduct solvency analysis to determine the financial stability and independence of the company from external sources of financing (see Table 2.5).

Table 2.5 - Solvency indicators of of LLC "Agrodetalservice" for 2021-2023

| Indicators                                      | Normative value | Calculated |       |       |
|---|-----------------|------------|-------|-------|
|   |                 | 2021       | 2022  | 2023  |
| Solvency ratio (autonomy)                       | > 0,5           | 0,91       | 0,95  | 0,95  |
| Funding ratio                                   | < 1 Reduction   | 0,09       | 0,05  | 0,05  |
| Coefficient of provision of own working capital | > 0,1           | 0,85       | 0,906 | 0,907 |
| Equity maneuverability coefficient              | > 0 Increase    | 0,54       | 0,50  | 0,51  |

The solvency ratio (autonomy, concentration of equity) characterizes the share of the company's equity in the total amount of funds. The normative value is 0.5. Over the analyzed period, the indicator tended to increase and reached 0.95 in 2022, indicating the stability and independence of the company from creditors.

The financing ratio shows how much borrowed funds the company LLC "Agrodetalservice" has attracted per 1 UAH of its own funds. Thus, this coefficient characterizes the company's dependence on borrowed funds. The analysis showed

that the company is not dependent on borrowed funds. In 2021, the coefficient was 0.09, showing a decreasing trend, and by 2023, the indicator had decreased to 0.05. Such dynamics indicate an increase in the share of own funds and a decrease in borrowed ones.

The dynamics of the solvency ratios of the company for 2021-2023 are presented in Figure 2.2.

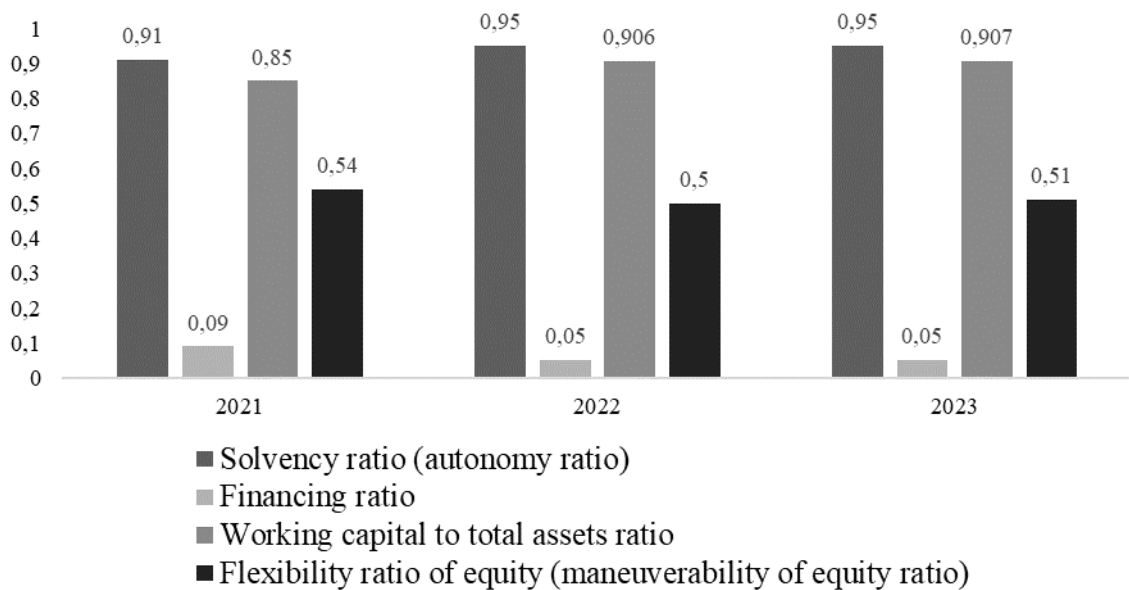


Figure 2.2 - Dynamics of solvency ratios of LLC "Agrodetalservice" for 2021-2023

The self-sufficiency ratio reflects the company's reliance on its own current assets. Starting from 2021, the ratio showed an increasing trend, reaching 0.90 in 2023, significantly exceeding the minimum norm of 0.1. This was due to the low value of short-term liabilities, indicating the financial stability of the company.

The maneuverability of equity ratio indicates the portion of equity invested in current assets, thus used to finance current operations, compared to the portion of equity capitalized. In 2023, this ratio stood at 0.51, suggesting that 50% of the equity is in liquid form. A higher value of this ratio signifies more efficient utilization of the company's own current funds and, consequently, a higher level of financial stability.

Thus, it can be concluded that the solvency and financial stability of the company are at a satisfactory level since all activities of LLC "Agrodetalservice" are financed with its own funds and are not dependent on creditors.

### **2.3 Evaluation of the effectiveness of cash flow management strategy at LLC "Agrodetalservice"**

Cash flow at the enterprise is the sum of cash receipts and expenditures over time, influencing the movement of the company's assets and capital. It has a relative size, direction, and timing. Analyzing cash flow allows for more informed conclusions about the volume and sources of cash received, as well as the main directions of its use.

Information about cash flow is provided in the cash flow statement, which is extremely important for both the management of the enterprise and its investors and creditors. For the management, it is necessary to determine whether there will be enough cash to meet current obligations, what investment financing opportunities exist, whether the enterprise can increase employee payments, or whether it can repay loans in the future. In other words, the cash flow statement helps plan the investment and financial policies of the enterprise. Let's consider the dynamics of cash flows at LLC "Agrodetalservice" by types of activities, as presented in Table 2.6.

The net cash flow from operating activities reflects the cash inflows and outflows from the primary (operational) activities of the enterprise, such as ordinary profit, depreciation, financial expenses, current liabilities, taxes paid, and interest. At LLC "Agrodetalservice" during the analyzed period, there is a trend of a 6.55-fold increase in net cash flow from operating activities. This increase was driven by the increase in non-operating profit, other non-cash transactions, and an increase in current liabilities.

Table 2.6 - Dynamics of cash flows at the LLC "Agrodetalservice" by types of activities

| Indicators                               | Values, thousand UAH. |      |      | Absolute change, thousand UAH. |             | Growth rate |            |
|--|-----------------------|------|------|--------------------------------|-------------|-------------|------------|
|  | 2021                  | 2022 | 2023 | 2022 - 2021                    | 2023 - 2022 | 2022/ 2021  | 2023/ 2022 |
| 1  | 3                     | 4    | 5    | 6                              | 7           | 8           | 9          |
| Net cash flow from operating activities  | 52                    | -65  | 426  | -13                            | 361         | -1,25       | 6,55       |
| Net cash flow from investment activities | -38                   | 0    | 0    | 38                             | 0           | 0           | 0          |
| Net cash flow from financial activities  | 0                     | 50   | -397 | 50                             | -347        | 50          | -7,94      |
| Net cash flow for the reporting period   | 14                    | -15  | 29   | -1                             | 14          | -1,07       | 1,93       |

The net cash flow from investment activities shows the receipts and expenditures from the realization of financial investments, non-current assets, interest, dividends, and derivatives. In 2021, there was expenditure on the purchase of non-current assets amounting to 38 thousand UAH. In 2022-2023, there were no receipts or expenditures from investment activities.

The net cash flow from financing activities represents the receipts and payments from equity, borrowing, repayment of loans, share buybacks, and interest payments. At LLC "Agrodetalservice," the net cash flow from financing activities in 2022 was 50 thousand UAH, which was formed due to other receipts of the enterprise. In 2023, the cash flow from financing activities amounted to (-397 thousand UAH), such a sharp fluctuation occurred due to payments under the reporting item, other payments.

The net cash flow for the reporting period represents the sum of receipts and expenditures from the operating, investing, and financing activities of the enterprise during the calendar year. In 2021, the net cash flow for the reporting period amounted to 14 thousand UAH, this positive value was formed due to the active operational activities of the enterprise. In 2022, the net cash flow had a negative

value (-15 thousand UAH) due to the decrease in current assets from operational activities of the enterprise.

In 2023, the net cash flow amounted to 29 thousand UAH, which was formed through the operational activities of the enterprise. The dynamics of net cash flow for the years 2021-2023 are presented in Figure 2.3.

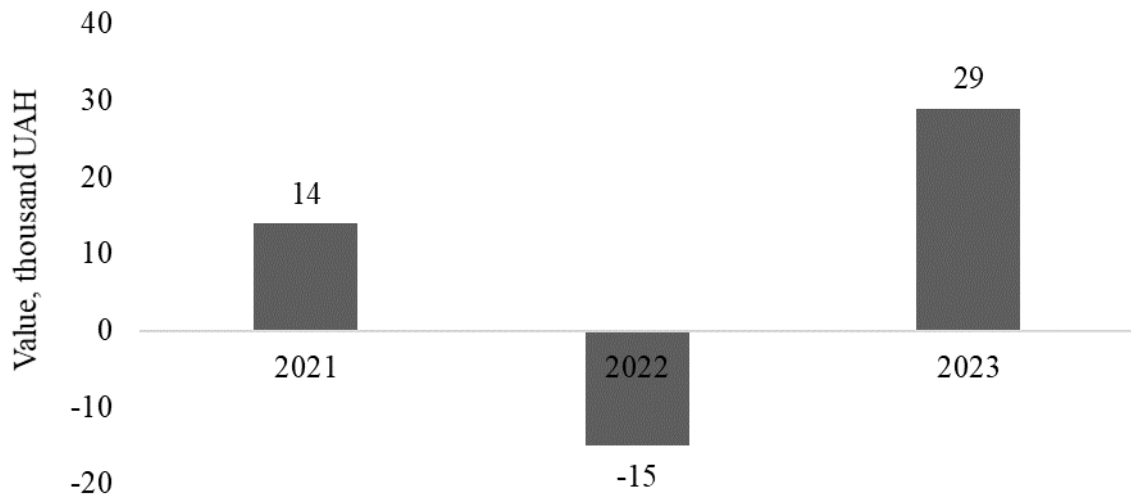


Figure 2.3 - Dynamics of Net Cash Flow of LLC "Agrodetalservice" for 2021-2023, in thousands of UAH

For a more detailed assessment of cash flows, let's calculate special cash flow ratios, which are provided in Table 2.7.

Table 2.7 - Cash Flow Ratios of LLC "Agrodetalservice" for 2021-2023

| Indicators                                    | 2021    | 2022    | 2023    |
|---|---------|---------|---------|
| Cash flow liquidity ratio (statistical power) | 1,126   | 0,940   | 1,158   |
| Cash inflow ratio                             | 62,500  | 14,563  | 213,000 |
| Cash flow efficiency ratio                    | 0,126   | -0,0605 | 0,158   |
| Net cash flow adequacy ratio                  | -0,017  | -0,007  | -0,023  |
| Net cash flow rate of return                  | -81,714 | -48,733 | -39,138 |
| Rate of return on cash received               | -9,152  | -3,137  | -5,329  |
| Rate of return on money spent                 | -10,306 | -2,948  | -6,168  |

The cash flow liquidity ratio (statistical capacity) characterizes the ability of an enterprise to cover necessary cash expenditures in the reporting period with a

positive cash flow. It is considered that to ensure cash flow liquidity, the value of the indicator should be greater than one.

At the enterprise LLC "Agrodetalservice," this ratio had different values during 2021–2023. In 2021, the ratio was 1.126, indicating sufficient positive cash flow to cover the enterprise's negative cash flow. In 2022, the statistical capacity of LLC "Agrodetalservice" was 0.94, indicating insufficient positive cash flow and consequently signaling a negative cash flow throughout the year. In 2023, there was a positive trend in the indicator, with the cash flow liquidity reaching 1.158, which is a normal value for the enterprise's economic activities. The dynamics of the statistical capacity ratio are depicted in Fig. 2.4.

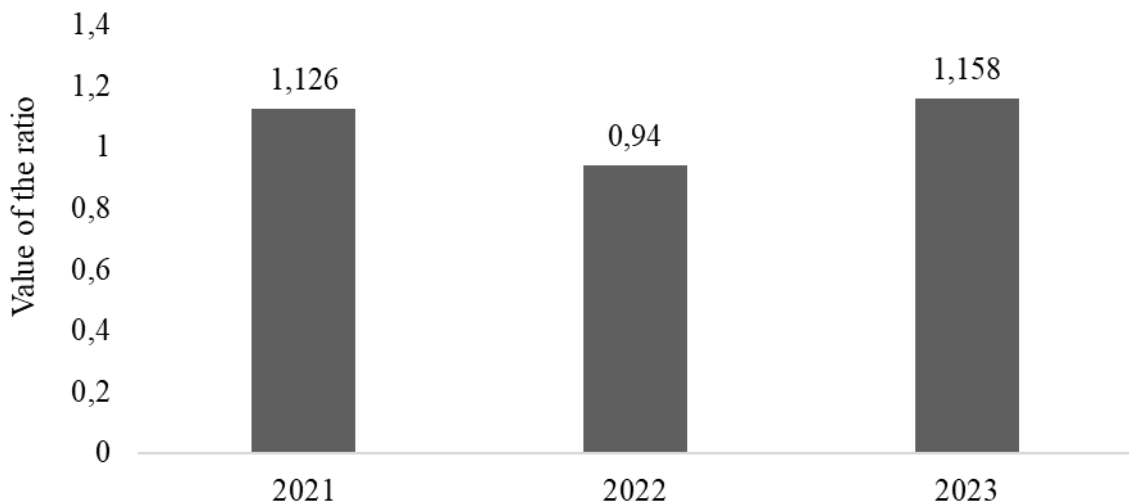


Figure 2.4 - Dynamics of the Statistical Capacity Coefficient of LLC "Agrodetalservice" for 2021-2023

The cash inflow coefficient shows the level of cash inflows. At the enterprise during the analyzed period, this coefficient tends to increase from 62.5 in 2021 to 213 in 2023. This phenomenon is positive and indicates the effective operation of the enterprise, which generates profit.

The cash flow efficiency coefficient determines the effectiveness of managerial decisions and shows the amount of net cash flow obtained from one unit of expenditure. In 2021, for every 1 UAH spent, there was a net cash flow of 13 kopecks, while in 2022, for every 1 UAH spent, the enterprise incurred a loss of (-6

kopecks), indicating inefficient enterprise activity throughout 2022. In 2023, for every 1 UAH spent, there was a profit of 16 kopecks, which is a good value compared to previous years, but overall, the cash flow efficiency coefficient remains relatively low, indicating insufficient cash flow efficiency for the enterprise as a whole. The dynamics of this coefficient are presented in Figure 2.5.

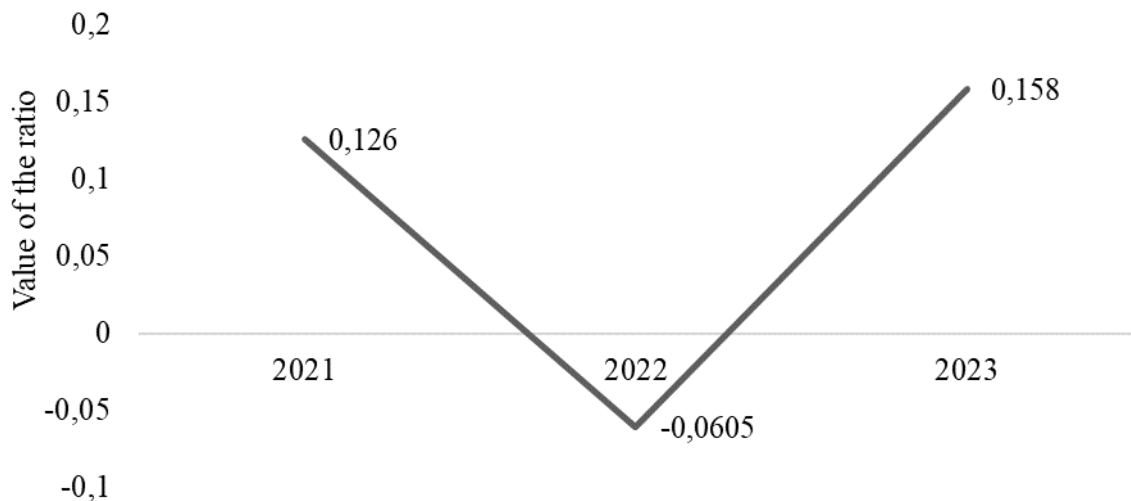


Figure 2.5 - Dynamics of the Cash Flow Efficiency Coefficient of LLC "Agrodetalservice" for 2021-2023

The adequacy coefficient of the net cash flow determines the enterprise's ability to meet its basic needs through it, namely, to repay debt, purchase inventory, and pay dividends. At the enterprise LLC "Agrodetalservice," during 2021, this coefficient was (-0.017), indicating insufficient cash flow to cover the need for an increase in inventory and the repayment of long-term and short-term principal debt. The same negative trend was observed during 2022–2023, with the coefficient being (-0.023) in 2023.

The profitability coefficient of the net cash flow indicates the amount of net profit obtained from one unit of net cash flow. At the enterprise over the three years, this coefficient was negative, indicating insufficient funds received by the enterprise to cover all expenses and generate profit during 2021–2023.

The profitability coefficients of received and spent cash reflect the volume of net profit per unit of received or spent cash. The profitability coefficient of received

cash during the analyzed period was negative, indicating insufficient profit and ineffective enterprise activity.

The profitability coefficient of spent cash is negative, indicating ineffective investment of cash that did not bring sufficient profit to the enterprise.

An important aspect of effective cash flow management in an enterprise is the uniformity of inflows and outflows, which characterizes the stability of the enterprise's functioning and determines the possibility of planning and forecasting its cash flows. The results of calculating the indicators of cash flow uniformity are provided in Table 2.8.

Table 2.8 - Cash Flow Uniformity of LLC "Agrodetalservice" for 2021-2023

| Indicators   | Value |
|--|-------|
| The average value of positive cash flow for 2021-2023, thousand UAH.     | 190,3 |
| The average value of the negative cash flow for 2021-2023, thousand UAH. | 181   |
| Mean square deviation of positive cash flow for 2021-2023, thousand UAH. | 57,46 |
| Mean square deviation of negative cash flow for 2021-2023, thousand UAH. | 68,55 |
| Coefficient of uniformity of positive cash flow                          | -2,31 |
| Coefficient of uniformity of negative cash flow                          | -1,64 |
| Coefficient of synchronicity (balance)                                   | 0,95  |

The average value of positive cash flow indicates the average inflow over the analyzed period, which amounted to 190.3 throughout the period under analysis. The average value of negative cash flow reflects the average expenditures at the enterprise during 2021–2023, with the average negative cash flow amounting to 181,000 UAH. The standard deviation of positive cash flow characterizes the range of fluctuations in positive cash flow, indicating how evenly funds are received during the investigated period. Over 2021–2023, the standard deviation of this indicator was 57.46. Similarly, the standard deviation of negative cash flow shows the range of expenditure fluctuations at the enterprise, amounting to 68.55 over the analyzed period. The coefficient of variation of positive cash flow indicates the

degree of unevenness in positive cash flow. At the enterprise, this coefficient was -2.31. The coefficient of variation of negative cash flow indicates the degree of unevenness in negative cash flow, amounting to -1.64. The synchronicity coefficient demonstrates the conformity and coherence of cash flows over time, thus determining the financial balance of the enterprise. The value of this indicator at our enterprise was 0.95, indicating financial stability. Therefore, it can be concluded that the enterprise experiences cash flows across all types of activities – operational, investment, and financial.

The calculated special coefficients for assessing cash flows and uniformity indicators have shown the presence of negative phenomena at the enterprise, such as unprofitable and inefficient operations, insufficient cash flow to cover the need for inventory growth and debt repayment.

## **Conclusions for section 2**

The assessment of the asset condition has shown that the actual value of the enterprise's assets according to the norm is within the norm, indicating a normal production potential. However, the fixed assets are rarely renewed or introduced, and throughout 2021–2023, there were no introductions at all, posing a risk of decreasing production potential due to insufficient funding.

The business activity of LLC "Agrodetalservice" has been declining over the analyzed period, driven by a decrease in the enterprise's income. This implies that the enterprise's resources are being utilized much less effectively.

The analysis of the enterprise's profitability has revealed that LLC "Agrodetalservice" is a loss-making enterprise, indicating its overall inefficiency and the need for the development and implementation of measures aimed at cost optimization and revenue growth.

An important component of cash flow management research is assessing the adequacy of the enterprise's cash, for which liquidity and solvency indicators are used.

The liquidity analysis has shown that the enterprise has an inefficient structure of current assets in terms of their utilization efficiency, with a significant amount of accounts receivable, requiring the development of ways to accelerate cash turnover and expedite the collection of accounts receivable. On the other hand, the solvency and financial stability of the enterprise are at a sufficient level, as all activities of LLC "Agrodetalservice" are financed with own funds and are not dependent on creditors.

Based on the evaluation of the cash flow management strategy effectiveness of LLC "Agrodetalservice," it can be concluded that there are cash movements across all types of activities at the enterprise – operational, investment, and financial. However, the calculated special coefficients for assessing cash flows and indicators of uniformity have shown the presence of negative phenomena, such as unprofitable and inefficient enterprise operations, insufficient cash flow to cover the need for inventory growth and repayment of long-term and short-term debt.

## **SECTION 3**

### **IMPROVEMENT DIRECTIONS OF THE CASH FLOW MANAGEMENT STRATEGY OF LLC "AGRODETALSERVICE"**

#### **3.1 Integrated assessment of the effectiveness of the enterprise's cash flow management strategy**

Cash inflows are one of the most critical conditions for the stable functioning of an enterprise, represented by cash flows from operational, investment, and financial activities. The effectiveness of utilizing cash inflows ensures maximizing the enterprise's profit and reducing its costs, forming an efficient structure of assets and capital. Therefore, assessing the effectiveness of cash flows of the enterprise is highly relevant for every business.

The assessment of cash flow effectiveness can be conducted by constructing an integrated assessment model, the result of which is the determination of an integral indicator, based on which cash flows can be characterized both by individual types of enterprise activities and overall. In economic literature, the integrated assessment model is very popular because it vividly reflects the financial condition of the enterprise, taking into account various influencing factors, indicating specific shortcomings in the enterprise's operation, being adjustable, and actively implemented in practice.

Several options for constructing an integrated assessment model of enterprise cash flow effectiveness (Table 3.1) are presented.

The sum method is based on aggregating various indicators to obtain a comprehensive integral value. It calculates both absolute and relative indicators, which helps to form an overall picture.

Table 3.1 - Methods for constructing an integrated assessment model of the effectiveness of cash flow management strategy of the enterprise

| Construction method                         | Characteristics of the method  | Advantages   | Disadvantages   |
|---|--|--|---|
| Sum method                                  | It involves the determination of an integral indicator by summing its actual values according to absolute or relative measures. Used only when all selected indicators are unidirectional. | Ease of calculation  | Unidirectionality of the studied indicators (increase - improvement, decrease - deterioration); |
| Geometric mean method                       | It is used when the total volume of cash flows is not an amount but a product, and it calculates average growth and growth rates.  | Possibility of application to a large number of indicators | the significance of indicators is not taken into account;                                       |
| Method of coefficients                      | It provides for the definition of an integral indicator as a product of the corresponding partial coefficients, which shows the relative change of the investigated indicators.            | Ease of calculation  | Limitation in the application of the number of indicators;                                      |
| Point method (method of expert evaluations) | It makes it possible to obtain an integral assessment of the company's financial condition in points, reflecting the total assessments for each selected indicator.                        | Ease of calculation  | Does not assess the state of the indicator comprehensively;                                     |
| Taxonomy method                             | It is based on calculating a taxonomic indicator that reflects the degree of approximation to the standard.  | Ease of calculation  | It takes into account a limited number of indicators;   |

*Source: Constructed by the author based on [52, 62, 65]*

The main advantage of this approach is its simplicity and the ability to use it for different types of indicators. However, the method has a significant limitation: it requires all included indicators to be unidirectional, meaning they either all increase or all decrease. If the indicators have different dynamics, this can lead to incorrect conclusions [52].

The geometric mean method utilizes average values based on the product of individual indicators. It is useful when the overall volume of cash flows or other measured parameters is determined by multiplying relative growth or increment indicators. The main advantage is the simplicity of calculations, but the method has its limitations: it is suitable only for indicators with the same directionality, which is not always feasible in real practice [52].

The coefficients method uses the product of partial coefficients to determine the integral indicator. For example, coefficients of individual aspects of financial activity are calculated and combined into a single result. This method is characterized by simplicity of calculations, but its drawback is the limited number of coefficients that can be used simultaneously for objective analysis [65].

The scoring method (expert assessment method) allows obtaining an integral assessment of the enterprise by assigning scores to individual indicators. Expert opinions are used, enabling consideration of all key factors. The method is useful because it allows analyzing a large amount of data involving experts, but it is less formalized and can be subjective depending on the experience and knowledge of the experts [62].

The taxonomy method involves standardizing indicators for comparison on different scales. Then, the indicators are used to build taxonomic indices reflecting the overall condition of the object. This approach considers the significance of each indicator but requires standardization and quite complex calculations, necessitating appropriate preparation and resources [65].

Based on the advantages and disadvantages of each method for constructing an integrated assessment model, it can be concluded that in this case, the scoring method would be appropriate.

In general terms, the model for the integrated assessment of the effectiveness of the cash flow management strategy of an enterprise is described by formula (3.1) [31]:

$$E = a_1x_1 + a_2x_2 + \dots + a_nx_n, \quad (3.1)$$

where  $E$  – the effectiveness of cash flows;

$x_1, \dots, x_n$  – indicators of cash flow efficiency;

$a_1, \dots, a_n$  – weight coefficients for  $X$ .

This formula reflects the construction of an integral indicator using additive aggregation.

Additive aggregation for building an integral indicator is a method that combines several individual indicators or criteria into a single cumulative result. Such a set of indicators is often used in economics to simplify analysis and understand the overall condition or performance of the object under study.

First, individual indicators are selected, which together should reflect the state or effectiveness of the analyzed system. These could be economic indicators, company performance metrics, financial ratios, and so on.

Each individual indicator is assigned its own weight, reflecting its relative importance in the overall result. For example, a profitability indicator may have a greater weight than a turnover indicator if it is more important for evaluation purposes [44].

Additive aggregation sums these indicators, taking into account their weights, to obtain an integral result. The result is a single cumulative indicator that combines all components and provides an overall assessment.

Instead of analyzing each individual indicator, the integral indicator allows for quickly understanding the overall condition of the system or object.

The integral indicator enables comparisons between different systems (such as companies or regions) based on a single criterion.

Thanks to additive aggregation, it becomes possible to create a single indicator that provides a simplified yet comprehensive assessment of the effectiveness or condition of various systems.

The indicators of the effectiveness of the cash flow management strategy of the enterprise, which will be used in the model, include special coefficients for assessing cash flows: the cash flow liquidity ratio (statistical capacity), cash receipts

coefficient, cash expenditure coefficient, cash flow efficiency coefficient, net cash flow sufficiency coefficient, net cash flow profitability coefficient, profitability coefficient of received cash, profitability coefficient of spent cash. The selected indicators directly reflect the movement of the company's cash flows, its deficit and surplus, the ratio of receipts and expenditures, the sufficiency of receipts to finance expenditures, and overall show solvency as well as the profitability of the enterprise, justifying the choice of these indicators for the model.

According to previous research, the most significant indicator for the enterprise is the cash flow efficiency coefficient. This financial indicator reflects the company's ability to generate cash flow from its activities compared to revenues or profits. This coefficient helps to assess how effectively the company converts its revenues or profits into actual cash needed to finance operations, investments, and obligations payments.

If this coefficient is high, it means that the company effectively converts profit into cash. However, if it is low, it may indicate that a significant portion of the company's profit consists of non-cash components or that its operational activities face difficulties in obtaining actual cash. This coefficient is important for assessing the financial stability and profitability of the company. Investors, creditors, and analysts use it to better understand the company's ability to generate cash, fulfill its obligations, and finance future projects.

The second most important indicator is the net cash flow sufficiency coefficient. This financial indicator determines how effectively the company generates cash needed to service its obligations and carry out investment activities. In other words, it shows whether the incoming funds are sufficient to cover the company's basic financial needs.

A coefficient exceeding one indicates that the company has sufficient cash to cover its obligations or investment needs. However, if the coefficient is lower than one, it signals a cash shortage, and the company needs to review its financial strategy. This indicator helps investors, creditors, and company management assess its ability to effectively service debts, invest in development, and meet current

operational needs. It provides an overall picture of financial stability and allows informed decisions regarding the company's finances.

The third-ranking coefficient is the profitability coefficient of net cash flow. This financial indicator reflects the company's ability to generate profit in the form of cash. It shows the portion of cash flow remaining after operational expenses, taxes, and other obligations are deducted, allowing an assessment of how effectively the company converts its income into net cash flow [34].

The higher coefficient indicates that the company effectively generates profit, leaving a larger portion of income in cash. This means that the company has high liquidity and can easily finance its obligations. A low coefficient suggests that a significant portion of income is used for operational expenses or other obligations, leaving less cash for other purposes. This indicator helps investors, creditors, and managers assess the company's ability to generate cash and allocate it between operational and investment needs. It also provides an overall idea of financial management efficiency at the enterprise and can be used for profitability comparisons with other companies or industry standards.

The last significant indicator is the cash flow liquidity coefficient. This financial indicator reflects the company's ability to generate a sufficient amount of cash to meet short-term obligations promptly. This coefficient demonstrates how effectively the company uses its cash resources to maintain solvency in the near term.

If the cash flow liquidity coefficient is higher than one, it indicates that the company has a sufficient amount of funds to cover short-term obligations. However, if this coefficient is lower than one, it signals that the cash from operating activities is insufficient to fully satisfy short-term obligations. This indicator allows management, investors, and creditors to assess the company's short-term solvency. It shows how effectively the company can generate cash from its core operations to cover its debts and expenses in the near future [70].

The overall model for assessing the effectiveness of cash flows at the enterprise over three years will look like this:

$$E(2021) = 1,126 * 0,129 + 62,5 * 0,262 + 0,126 * 0,049 + (-0,017) * 0,073 + (-81,714) * 0,115 + (-9,152) * 0,168 + (-10,306) * 0,203 = 3,50$$

$$E(2022) = 0,940 * 0,129 + 14,563 * 0,262 + (-0,061) * 0,049 + (-0,007) * 0,073 + (-48,733) * 0,115 + (-3,137) * 0,168 + (-2,948) * 0,203 = -2,80$$

$$E(2023) = 1,158 * 0,129 + 213,0 * 0,262 + 0,158 * 0,049 + (-0,023) * 0,073 + (-39,138) * 0,115 + (-5,329) * 0,168 + (-6,168) * 0,203 = 49,31$$

The dynamics of the presented integrated model indicate that the highest efficiency of cash flows is observed in 2023, driven by increased inflows and reduced outflows at the enterprise throughout 2023. In previous years, the efficiency of cash flows was significantly lower, and in 2022, it even had a negative value, indicating inefficient organization of cash flows at LLC "Agrodetalservice".

Therefore, it can be concluded that in this section of the work, models of integrated assessment of the effectiveness of cash flow management strategies of the enterprise were analyzed, their advantages and disadvantages were noted. The calculated model using the scoring method was able to determine the priority of the calculated indicators and reveal their essence overall. Thus, such a model is suitable for use in Ukrainian enterprises, provided there is a sufficient number of experts with specific education and work experience.

### **3.2 Operational measures to enhance cash flow management efficiency at LLC "Agrodetalservice"**

Developing operational measures to enhance cash flow management is a crucial step in maintaining the financial stability of a company. It allows for swift responses to current changes and ensures the preservation of positive cash flow dynamics. The objectives of operational cash flow management at the company level are as follows [34, 47, 70]:

1. Optimization of Cash Resource Utilization:

- Expense Control: Ensures expenditures are justified and directed towards the most critical projects.

- Payment Prioritization: Establishes the order of payments based on urgency and importance to avoid cash shortages for critical payments.

## 2. Enhancement of Solvency and Liquidity:

- Accounts Receivable Management: Measures to accelerate collections from debtors help maintain cash flow balance.

- Cash Reserves: Establishing a reserve fund enables prompt responses to unforeseen expenses and preserves solvency.

## 3. Management of Accounts Payable:

- Supplier Negotiations: Agreements for payment deferrals or changes in supply terms can provide additional time for fund accumulation.

- Reputation Maintenance: Timely payments to suppliers foster good relationships and enable access to more favorable terms.

## 4. Improvement of Cash Flow Forecasting:

- Seasonality Analysis: Understanding cyclic changes in cash flows helps prepare for potential periods of revenue decline.

- Trend Identification: Studying historical data aids in predicting potential financial challenges.

## 5. Enhancing Financial Management Efficiency:

- Assessment of Investment Opportunities: Rapid evaluation of projects enables quick decisions regarding their financing or rejection.

- Reinvestment of Free Funds: Utilizing temporarily available funds for short-term investments can increase overall profitability.

## 6. Ensuring Stability During Crises:

- Crisis Management Strategies: Ensure prompt changes to financial strategies in conditions of economic instability.

- Diversification of Funding Sources: Engaging various funding sources prevents reliance on a single financing channel.

Thus, the development of operational measures to enhance cash flow management efficiency helps the enterprise to maintain financial stability, adapt to changing conditions, and ensure stable operation even in unforeseen circumstances.

Cash flow optimization enables maintaining financial balance, which is achieved when the company's need for cash equals their supply in each period.

To optimize cash flows, it is important to study the factors that influence their volume and formation process over time. External factors may include overall debt issues, low production levels, purchasing power, unfavorable credit conditions, as well as imperfect tax policies. Internal factors affecting the company's cash flow include high production costs, low competitiveness, lack of markets, and sources of long-term investment financing, and so on.

As noted by Dorrah D.H. and McCabe B., information analysis plays a significant role in the optimization process. It serves not only as a basis for justifying and selecting a specific optimization direction but also as an indicator of the satisfaction of the optimization object. Similarly, it is important to evaluate the selected results, which can also be considered as a final indicator capable of providing information on the achievement of optimization goals [15].

The optimization of cash flows of the LLC "Agrodetalservice" involves the development of a scheme of operational measures to enhance the efficiency of cash flow management of the enterprise (Fig. 3.1).

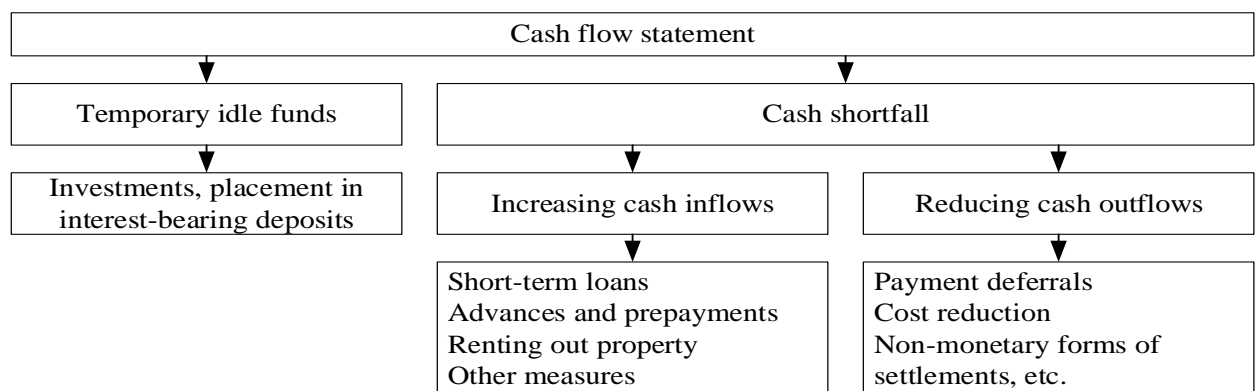


Figure 3.1 - Scheme of Operational Measures to Enhance Cash Flow Management Efficiency at LLC "Agrodetalservice"

*Source: Constructed by the author*

The scheme of operational measures to enhance the efficiency of cash flow management provides a comprehensive overview of ways to optimize financial resources. It focuses on two main states of cash flows: temporarily idle cash and cash deficits, offering various solutions depending on the situation.

The first state is temporarily idle cash. When the enterprise has excess funds not used for current operations, these resources can be invested in short-term financial instruments. This may include placing temporarily idle funds in interest-bearing deposit accounts to earn additional income and effectively utilize financial surpluses. Such an approach allows the enterprise not only to preserve funds but also to benefit from investing.

The second state is cash deficits. When there are insufficient funds to cover current obligations, the scheme proposes two approaches to improve the situation: increasing cash inflow and reducing cash outflow.

Increasing cash inflow involves various measures that can contribute to a rapid increase in receipts.

Short-term loans: Obtaining short-term loans helps quickly raise funds for current needs, providing the enterprise with flexibility.

Advances and prepayments: Obtaining advances or prepayments from customers allows for receiving funds earlier than specified in the contract.

Leasing of assets: Leasing out unused assets allows for generating additional income from assets that are temporarily idle.

Other measures: These may include alternative methods to raise funds, such as issuing bonds or selling surplus equipment.

By focusing on cost reduction and payment deferrals, the enterprise can reduce financial burdens by:

Payment deferrals: Arrangements with suppliers or creditors for payment deferrals free up funds for current expenses.

Cost cutting: Optimizing operational expenses helps eliminate unnecessary costs without harming core processes.

Non-cash forms of settlement: Using barter or other non-cash forms of settlement helps avoid excessive reliance on cash resources.

Operational measures to enhance cash flow management efficiency are extremely important for ensuring the financial stability and resilience of an enterprise. The scheme, which considers two main states of cash flows — temporarily idle cash and cash shortages — allows for a better understanding of approaches to effective financial resource management.

In the case of temporary cash surpluses, the enterprise has the opportunity to generate additional income by investing in short-term financial instruments. Placing temporarily idle funds in interest-bearing deposits or other investment options helps optimize the use of financial surpluses, ensuring stable revenue growth.

During cash shortages, operational measures include various methods to enhance financial management efficiency, allowing for simultaneous increase in cash inflows and decrease in outflows. Obtaining short-term loans, advances, and prepayments helps promptly cover the financial needs of the enterprise. Leasing unused assets or selling surplus equipment provides an opportunity to generate additional income. Meanwhile, payment deferrals, cost-cutting measures, and non-cash forms of settlement contribute to reducing financial burdens.

Thorough planning and control of cash flows enable the enterprise to swiftly respond to changes in the financial environment, make informed decisions, and maintain financial stability. This ensures effective management of operational activities, helps maintain liquidity and solvency, and guarantees optimal utilization of financial resources for current operations and strategic development.

The scheme of operational measures provides a comprehensive view of various cash flow management methods, offering flexible solutions for addressing temporary cash surpluses or shortages. This assists management in making strategic decisions quickly and effectively to ensure efficient cash flow management within the enterprise.

### **3.3 Recommendations for developing a cash flow management strategy for LLC "Agrodetalservice"**

Operational measures help to quickly adapt to changes in the financial environment by utilizing various tools to increase inflows and reduce expenses. However, such measures are only part of a comprehensive approach to cash flow management for the enterprise. Optimizing idle funds by investing them in interest-bearing deposits or other financial instruments can help increase profit. And tools to overcome deficits, such as obtaining short-term loans or advances, payment deferrals, and cost-cutting, help maintain stability in cash flows.

To solidify these short-term measures and elevate them to a strategic level, it is necessary to implement a long-term cash flow management strategy that aligns with current market realities and considers the specific nature of the enterprise's activities [34].

This transition logically follows from the challenges of operational management, where situations of temporary surplus and deficit of cash occur simultaneously. A strategic approach allows not only to respond to current challenges but also to formulate a clear plan of action for the future. This will enable effective cash flow management at the enterprise, regardless of external or internal factors, and ensure steady growth even in volatile market conditions.

Given the current economic conditions in Ukraine, the state of financial markets, and the role of government support in such crisis situations, a scheme for forming a cash flow management strategy for LLC "Agrodetalservice" is proposed (Figure 3.2).

The proposed scheme illustrates the process of forming the cash flow management strategy of the enterprise through data collection and analysis of various factors. A detailed analysis of each stage will help understand how these components affect effective financial flow management.

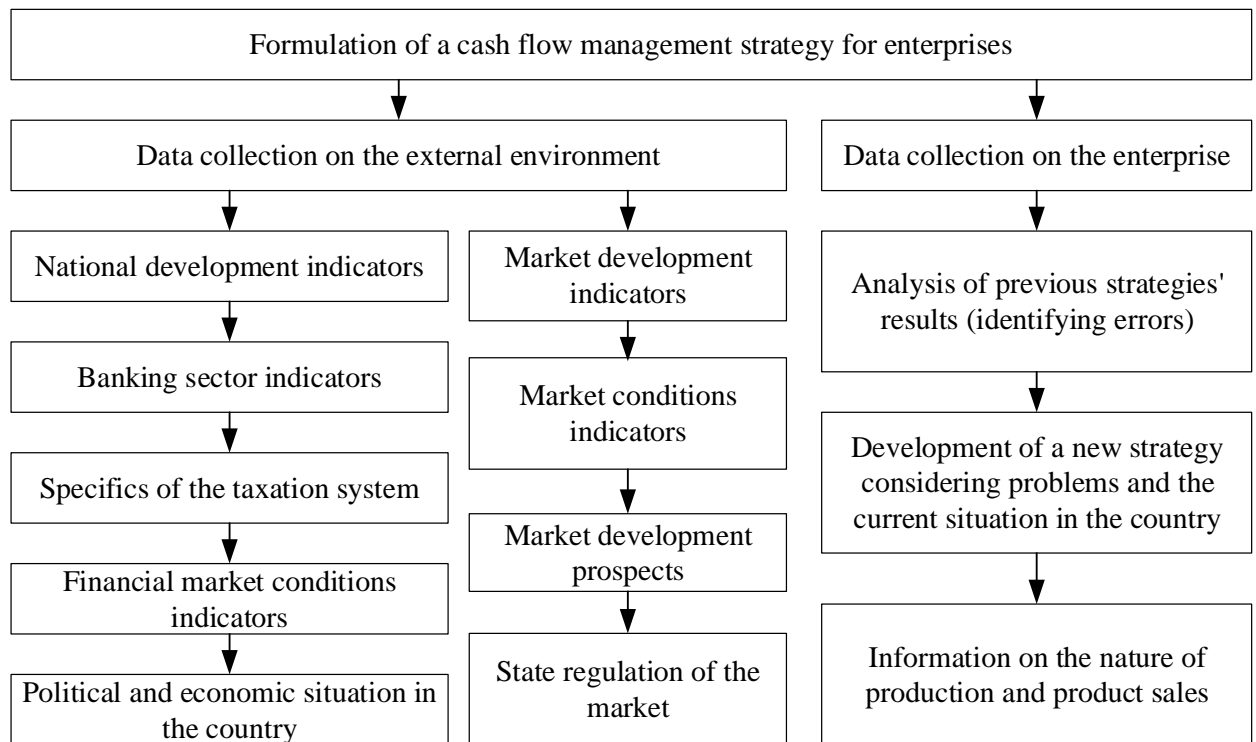


Figure 3.2 - Cash Flow Management Strategy Formation Scheme for LLC "Agrodetalservice"

*Source: Constructed by the author*

To develop an effective management strategy, it is necessary to have a comprehensive understanding of both the internal and external environment of the enterprise.

1. Gathering data on the external environment. Collecting information about external factors allows for an assessment of the economic situation and conditions under which the enterprise operates. Key indicators include:

- Indicators of overall national development. Evaluate the overall state of the country's economy, including GDP, inflation rate, unemployment, and other macroeconomic indicators.
- Banking sector indicators. Determine lending conditions, interest rates, liquidity levels, and the stability of financial institutions.
- Specifics of the tax system. Researching the tax environment is important for understanding fiscal obligations, tax rates, and the impact of tax policies on financial flows.

- Financial market sentiment indicators. Analyze changes in the financial market, such as exchange rates, stock market conditions, investment conditions, to gauge the stability of the financial sector.

- Political-economic situation in the country. Assess political stability and risks, as well as legislative changes that may affect economic activities.

2. Market Development Indicators. Researching market conditions, demand and supply, competition, and industry trends. The research includes the following indicators:

- Market Sentiment Indicators. Enable identification of seasonal and cyclical changes, as well as determine the optimal time for product or service implementation.

- Market Development Prospects. Forecasting future market conditions that will affect the enterprise's ability to sell its products and services.

- Government Market Regulation. Rules, policies, and standards established by the government may create both opportunities and constraints for the enterprise.

3. Enterprise Data Compilation. Internal assessment of the enterprise's activities is crucial for adapting management strategy to real opportunities and constraints, and involves:

- Analysis of Previous Strategy Results (Error Identification). Evaluating past strategies helps identify shortcomings and issues to avoid in the future.

- Development of a New Strategy Considering Problems and Current Country Situation. Adapting the strategy to address current issues and external changes is essential for effective cash flow management.

- Information on Production and Sales Characteristics. Understanding internal processes, from production stages to product sales methods, and integrating them appropriately into the new strategy.

- In this way, each stage of this scheme plays a crucial role in developing cash flow management strategy. It ensures a comprehensive approach, including external analysis of the economic environment, internal assessment of the enterprise,

and synthesis of the gathered information to create an effective and adaptive strategy.

The main strategies of enterprise cash flow management may vary depending on the type of economic activity, development goals, and market conditions. Table 3.2 presents various types of strategies with corresponding characteristics, such as limited growth, accelerated growth, reduction, and combination. These strategies allow choosing the optimal approach to cash flow management that corresponds to the enterprise's situation and helps achieve its financial goals.

Table 3.2 - Main Strategies of Enterprise Cash Flow Management

| Strategy           | Essence   |
|--------------------|---|
| Limited growth     | This type of economic strategy is used by an enterprise with a stable range of products and production technologies and a limited impact of technological progress. It is possible to choose such a strategy under conditions of minor fluctuations in the commodity market situation and a stable competitive position of the enterprise. Accordingly, the company's cash flow management strategy should be primarily aimed at rationalizing the operating cycle. |
| Accelerated growth | This type of economic strategy is typical for enterprises in the early stages of their life cycle and for industries that are dynamically developing under the influence of technological progress. In this case, strategic management of cash flows should aim to ensure high rates of growth of cash volumes and diversification of cash flows by directions, types, regions, etc.  |
| Abbreviation       | This economic strategy is often chosen by an enterprise in the last stages of its life cycle and during periods of financial crisis. It provides for reducing volumes and product assortment. Strategic cash flow management ensures effective disinvestment and high maneuverability of freed cash.  |
| Combination        | This economic strategy integrates all the mentioned strategies and is characteristic of large enterprises with broad sectoral and regional diversification of economic activity. The cash flow management strategy is differentiated in terms of individual strategic structural subdivisions, determined by different goals of their economic development.   |

*Source: Constructed by the author*

The enterprise LLC 'Agrodetalservice' is facing difficulties due to its loss-making operations and adverse external conditions, including crises and wars. An analysis of the financial performance of the enterprise demonstrates a high degree of depreciation of fixed assets, loss-making operations, and decreased business activity. In such conditions, it is important to choose a cash flow management strategy that will help reduce losses and stabilize the financial position.

The strategy of reduction is the optimal choice for LLC 'Agrodetalservice' for several reasons:

1. Reduction of financial burden: The reduction strategy involves cost optimization and cutting unprofitable business directions. This will help the enterprise focus on key products and services that have the highest profitability.

2. Asset optimization: In times of crisis, the enterprise should consider selling unnecessary or inefficient assets to obtain financial resources for operational activities and reduce liabilities.

3. Preservation of solvency: Reduction will allow the enterprise to maneuver existing resources to support key processes and remain solvent even in adverse conditions.

The reduction strategy aims to reduce costs and focus on key areas of activity to overcome financial difficulties, preserve liquidity, and prepare for further recovery. Here are the main measures envisaged by this strategy:

1. Cost Optimization:

- Cost Analysis: Detailed analysis of operational expenses to identify excess and inefficient costs.

- Cost Reduction: Elimination of unnecessary expenses, reduction of production or administrative costs that do not affect key processes.

- Contract Review: Review of existing contracts with suppliers to reduce costs, including negotiating payment deferrals or price reductions.

2. Asset Optimization:

- Sale of Unnecessary Assets: Selling unused or inefficient assets to generate additional financial resources.

- Property Leasing: Leasing out temporarily unused assets that can generate income.

### 3. Divestment:

- Discontinuation of Unprofitable Divisions: Closing or selling business segments that do not generate sufficient profit.

- Focus on Key Products: Concentrating on core products and services with the highest profitability.

### 4. Workforce Reduction:

- Workforce Optimization: Reducing excess staff to decrease labor costs.
- Duties Redistribution: Rational distribution of responsibilities among employees to enhance work efficiency.

### 5. Reduction of Accounts Receivable:

- Accelerated Collection: Negotiating with debtors to expedite payment of outstanding debts.

- Debt Restructuring: Reviewing payment terms for debtors experiencing difficulties in payments.

### 6. Financial Planning and Management:

- Budgetary Control: Strict control over budget compliance and timely response to deviations.

- Payment Calendar: Developing a payment calendar to coordinate cash inflows and outflows to avoid cash gaps.

- 7. Establishment of a Contingency Fund: Creating a contingency fund to overcome unforeseen financial difficulties or cash shortfalls.

Implementing these measures within the framework of the reduction strategy allows the enterprise LLC "Agrodetalservice" to reduce financial burden, focus on the most effective business areas, and create a financial reserve for future recovery.

### **Conclusions for section 3**

As part of the improvement of the cash flow management strategy of the enterprise LLC "Agrodetalservice", an integrated assessment of the effectiveness of the cash flow management strategy of the enterprise has been proposed.

Models of integrated assessment of the effectiveness of the cash flow management strategy of the enterprise have been analyzed, highlighting their advantages and disadvantages. An integrated model based on additive convolution has been constructed.

The dynamics of the presented integrated model indicate that the highest efficiency of cash flows is observed in 2023, which is achieved due to increased receipts and reduced expenditures at the enterprise throughout 2023. In previous years, the efficiency of cash flows was significantly lower, and in 2022 it even had a negative value, indicating ineffective organization of cash flows at LLC "Agrodetalservice".

Operational measures to increase the efficiency of cash flow management at LLC "Agrodetalservice" have been proposed. The scheme of operational measures to increase the efficiency of cash flow management of the enterprise provides a comprehensive overview of ways to optimize financial resources. It focuses on two main states of cash flows: temporarily idle cash and cash shortages, offering various solutions depending on the situation.

A scheme for forming a cash flow management strategy for LLC "Agrodetalservice" has been proposed, and it has been determined that the optimal strategy for the enterprise is reduction, which will help reduce losses and stabilize the financial condition. This strategy involves optimizing costs, assets, divestment, workforce reduction, reducing accounts receivable, and forming a contingency fund.

## CONCLUSIONS

Having analyzed the essence of the cash flow concept, the advantages and disadvantages of each definition of "cash flow" were identified. After conducting the analysis, a general concept was proposed that fully reflects the essence of the cash flow and takes into account the opinions of all the aforementioned authors. It is noted that cash flows at the enterprise are formed due to receipts and payments for investment, operating, and financing activities, so cash flows for each type of enterprise activity were considered.

Overall, the analysis conducted underscores the importance of considering the concept of "cash flows," which ensures the stability of the enterprise's operation. Therefore, it can be concluded that organizing cash flows is always relevant and significantly affects the efficiency level of the economic entity.

It is determined that cash flows are a multi-dimensional economic category that includes various types. The classification considered allows purposeful accounting, analysis, and planning of different types of cash flows at the enterprise and requires disclosure of existing methodological approaches for their analysis and management.

The importance of classifying enterprise cash flows is determined by their function in serving the economic activities of the enterprise. The analysis of existing methodological approaches to classifying enterprise cash flows has revealed the advantages and disadvantages of each methodology, which determines the appropriateness of its use.

The assessment of the asset status indicated that the real value of the enterprise's assets according to the norm is within the acceptable range, which characterizes a normal production potential. However, the main assets are being renewed and introduced very rarely, and from 2021 to 2023, there were no introductions at all, posing a risk of decreased production potential due to insufficient funding at the enterprise.

The business activity of LLC "Agrodetalservice" is declining throughout the analyzed period, driven by a decrease in the company's revenues. This implies that the resources of the enterprise are being utilized much less efficiently.

The analysis of the profitability of the enterprise showed that LLC "Agrodetalservice" is a loss-making enterprise, indicating its overall inefficiency and the need for the development and implementation of measures aimed at optimizing costs and increasing revenues.

An important component of the study of cash flow management at the enterprise is the assessment of its liquidity, for which liquidity and solvency indicators are used.

The liquidity analysis revealed that the enterprise has an inefficient structure of current assets in terms of their utilization efficiency, with a significant volume of accounts receivable, requiring the development of ways to accelerate cash turnover and expedite the collection of accounts receivable. Conversely, the solvency and financial stability of the enterprise are at a sufficient level since all activities of LLC "Agrodetalservice" are financed with its own funds and are not dependent on creditors.

Based on the results of the assessment of the effectiveness of cash flow management strategy of LLC "Agrodetalservice," it can be concluded that the enterprise experiences cash flows across all types of activities – operational, investment, and financial.

Special coefficients were calculated to assess cash flows, and uniformity indicators showed that the enterprise is experiencing negative phenomena such as unprofitable and inefficient activities, insufficient cash flow to cover the need for inventory growth and debt repayment, both long-term and short-term.

As part of the improvement of the cash flow management strategy of LLC "Agrodetalservice," an integrated assessment of the strategy's effectiveness was proposed.

Models of integrated assessment of the effectiveness of the cash flow management strategy of the enterprise were analyzed, highlighting their advantages

and disadvantages. An integrated model based on additive convolution was constructed.

The dynamics of the presented integrated model indicate that the highest effectiveness of cash flows is observed in 2023, attributed to increased inflows and reduced outflows at the enterprise during 2023. In previous years, the effectiveness of cash flows was significantly lower, and in 2022, it even took on a negative value, indicating inefficient organization of cash flows at LLC "Agrodetalservice."

Operational measures to increase the efficiency of cash flow management at LLC "Agrodetalservice" have been proposed. The scheme of operational measures to enhance the efficiency of cash flow management at the enterprise provides a comprehensive overview of ways to optimize financial resources. It focuses on two main states of cash flows: temporarily free cash and cash deficits, offering various solutions depending on the situation.

A scheme for forming the cash flow management strategy for LLC "Agrodetalservice" has been proposed, determining that the optimal strategy for the company is reduction. This strategy will help to minimize losses and stabilize the financial situation. It involves cost optimization, asset management, divestment, personnel reduction, reduction of accounts receivable, and the establishment of a reserve fund.

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## **APPENDIXES**

**Appendix A**  
**Balance Sheet (Statement of Financial Position)**

Table A.1 - Balance Sheet (Statement of Financial Position) as of December 31, 2021

| Assets   | Line code | At the beginning of the reporting period | At the end of the reporting period |
|--|-----------|--|------------------------------------|
| 1  | 2         | 3  | 4                                  |
| I. Non-current assets                                      |           |  |                                    |
| Intangible assets:   | 1000      | 9  | 175                                |
| initial value  | 1001      | 10                                       | 228                                |
| accumulated depreciation                                   | 1002      | (-1)                                     | -53                                |
| Incomplete capital investments                             | 1005      |  | 0                                  |
| Fixed assets:  | 1010      | 14572                                    | 28859                              |
| initial value  | 1011      | 376630                                   | 606291                             |
| Wear and tear  | 1012      | -362058                                  | -577432                            |
| Investment real estate                                     | 1015      | 0  | 0                                  |
| Long-term financial investments:                           |           |  |                                    |
| accounted for using the equity method in other enterprises | 1030      | 0  | 0                                  |
| other financial investments                                | 1035      | 0  | 0                                  |
| Long-term accounts receivable                              | 1040      | 12                                       | 202                                |
| Deferred tax assets  | 1045      | 0  | 0                                  |
| Total for section I  | 1095      | 14593                                    | 29236                              |
| II. Current assets   |           |  |                                    |
| Stocks   | 1100      | 7437                                     | 8267                               |
| Production stocks  | 1101      | 2859                                     | 5853                               |
| Unfinished production                                      | 1102      |  |                                    |
| Cargo  | 1103      |  |                                    |
| Promissory notes received                                  | 1104      | 4578                                     | 2414                               |
| Accounts receivable for products, goods, works, services   | 1125      | 827                                      | 681                                |
| Accounts receivable by calculations: on issued advances    | 1130      | 119                                      | 120                                |
| with a budget  | 1135      |  |                                    |
| including income tax                                       | 1136      |  |                                    |
| from accrued income  | 1145      | 5775                                     | 31262                              |
| Other current receivables                                  | 1155      | 381                                      | 419                                |
| Current financial investments                              | 1160      |  |                                    |
| Money and its equivalents                                  | 1165      | 1  | 2                                  |
| Cash   | 1166      |  |                                    |
| Bank accounts  | 1167      | 1  | 2                                  |
| Deferred expenses  | 1170      | 16                                       | 17                                 |
| Other current assets                                       | 1190      | 772                                      | 164                                |

## Continuation of Appendix A

| 1   | 2         | 3  | 4                                  |
|---|-----------|--|------------------------------------|
| Total for section II  | 1195      | 15328                                    | 40932                              |
| III. Non-current assets held for sale and disposal groups                       | 1200      | 0  | 0                                  |
| Balance   | 1300      | 29921                                    | 70168                              |
|   |           |  |                                    |
| Liabilities   | Line code | At the beginning of the reporting period | At the end of the reporting period |
| I. Equity   |           |  |                                    |
| Registered (share) capital  | 1400      | 4121                                     | 9688                               |
| Capital in revaluations   | 1405      | 9282                                     | 17010                              |
| Additional capital  | 1410      |  | 175                                |
| Reserve capital   | 1415      |  |                                    |
| Retained earnings (uncovered loss)  | 1420      | 13281                                    | 37254                              |
| Unpaid capital  | 1425      |  |                                    |
| Withdrawn capital   | 1430      |  |                                    |
| Total for section I   | 1495      | 26684                                    | 64127                              |
| II. Long-term liabilities and collateral  |           |  |                                    |
| Deferred tax liabilities  | 1500      | 0  | 0                                  |
| long-term bank credits  | 1510      | 0  | 0                                  |
| Other long-term liabilities   | 1515      | 0  | 0                                  |
| Long-term security  | 1520      | 0  | 0                                  |
| Long-term staff costs   | 1521      | 0  | 0                                  |
| Targeted financing  | 1525      | 0  | 0                                  |
| Total for section II  | 1595      | 0  | 0                                  |
| III. Current liabilities and collateral   |           |  |                                    |
| Short-term bank credits   | 1600      | 0  | 0                                  |
| Current debt on long-term liabilities:<br>on long-term liabilities              | 1610      |  |                                    |
| for goods, works, services  | 1615      | 290                                      | 710                                |
| according to calculations with the budget                                       | 1620      | 291                                      | 493                                |
| for including income tax  | 1621      | 48                                       | 174                                |
| according to insurance calculations   | 1625      | 562                                      | 1101                               |
| according to payroll calculations   | 1630      | 919                                      | 1754                               |
| on received advances  | 1635      |  | 283                                |
| from internal calculations  | 1645      |  |                                    |
| Current supplies  | 1660      | 1084                                     | 1565                               |
| Deferred commission income from reinsurers                                      | 1665      |  |                                    |
| Other current commitments   | 1690      | 91                                       | 135                                |
| Total for section III   | 1695      | 3237                                     | 6041                               |
| IV. Liabilities related to non-current assets held for sale and disposal groups | 1700      | 0  | 0                                  |
| Balance   | 1900      | 29921                                    | 70168                              |

Table A.2 - Balance Sheet (Statement of Financial Position) as of December 31, 2022

| Assets   | Line code | At the beginning of the reporting period | At the end of the reporting period |
|--|-----------|--|------------------------------------|
| 1  | 2         | 3  | 4                                  |
| I. Non-current assets                                      |           |  |                                    |
| Intangible assets:   | 1000      | 175                                      | 161                                |
| initial value  | 1001      | 228                                      | 228                                |
| accumulated depreciation                                   | 1002      | -53                                      | -67                                |
| Incomplete capital investments                             | 1005      | 0  | 0                                  |
| Fixed assets:  | 1010      | 28859                                    | 34943                              |
| initial value  | 1011      | 606291                                   | 895118                             |
| Wear and tear  | 1012      | -577432                                  | -860175                            |
| Investment real estate                                     | 1015      | 0  | 0                                  |
| Long-term financial investments:                           |           |  |                                    |
| accounted for using the equity method in other enterprises | 1030      | 0  | 0                                  |
| other financial investments                                | 1035      | 0  | 0                                  |
| Long-term accounts receivable                              | 1040      | 202                                      | 134                                |
| Deferred tax assets  | 1045      | 0  | 0                                  |
| Total for section I  | 1095      | 29236                                    | 35238                              |
| II. Current assets   |           |  |                                    |
| Stocks   | 1100      | 7885                                     | 6312                               |
| Production stocks  | 1101      | 5853                                     | 3750                               |
| Unfinished production                                      | 1102      |  |                                    |
| Final product  | 1103      |  |                                    |
| Cargo  | 1104      | 2032                                     | 2562                               |
| Accounts receivable for products, goods, works, services   | 1125      | 466                                      | 116                                |
| Accounts receivable by calculations: on issued advances    | 1130      | 120                                      | 40                                 |
| with a budget  | 1135      |  |                                    |
| including income tax                                       | 1136      |  |                                    |
| from accrued income  | 1145      | 31644                                    | 32261                              |
| Other current receivables                                  | 1155      | 1424                                     | 77                                 |
| Current financial investments                              | 1160      |  |                                    |
| Money and its equivalents                                  | 1165      | 2  | 16                                 |
| Cash   | 1166      |  |                                    |
| Bank accounts  | 1167      | 2  | 16                                 |
| Deferred expenses  | 1170      | 17                                       |                                    |
| Other current assets                                       | 1190      | 164                                      | 171                                |

## Continuation of Appendix A

| 1   | 2         | 3  | 4                                  |
|---|-----------|--|------------------------------------|
| Total for section II  | 1195      | 41722                                    | 38993                              |
| III. Non-current assets held for sale and disposal groups                       | 1200      | 0  | 0                                  |
| Balance   | 1300      | 70958                                    | 74231                              |
| Liabilities   | Line code | At the beginning of the reporting period | At the end of the reporting period |
| I. Equity   |           |  |                                    |
| Registered (share) capital  | 1400      | 9688                                     | 9688                               |
| Capital in revaluations   | 1405      | 17010                                    | 22349                              |
| Additional capital  | 1410      | 175                                      | 175                                |
| Reserve capital   | 1415      |  |                                    |
| Retained earnings (uncovered loss)  | 1420      | 37760                                    | 38380                              |
| Unpaid capital  | 1425      |  |                                    |
| Withdrawn capital   | 1430      |  |                                    |
| Total for section I   | 1495      | 64633                                    | 70592                              |
| II. Long-term liabilities and collateral  |           |  |                                    |
| Deferred tax liabilities  | 1500      | 0  | 0                                  |
| long-term bank credits  | 1510      | 0  | 0                                  |
| Other long-term liabilities   | 1515      | 0  | 0                                  |
| Long-term security  | 1520      | 0  | 0                                  |
| Long-term staff costs   | 1521      | 0  | 0                                  |
| Targeted financing  | 1525      | 0  | 0                                  |
| Total for section II  | 1595      | 0  | 0                                  |
| III. Current liabilities and collateral   |           |  |                                    |
| Short-term bank credits   | 1600      | 0  | 0                                  |
| Current debt on long-term liabilities:<br>on long-term liabilities              | 1610      |  |                                    |
| for goods, works, services  | 1615      | 713                                      | 509                                |
| according to calculations with the budget                                       | 1620      | 493                                      | 441                                |
| for including income tax  | 1621      | 174                                      |                                    |
| according to insurance calculations   | 1625      | 1101                                     | 572                                |
| according to payroll calculations   | 1630      | 1754                                     | 1140                               |
| on received advances  | 1635      | 287                                      | 351                                |
| from internal calculations  | 1645      |  |                                    |
| Current supplies  | 1660      | 1842                                     | 513                                |
| Deferred commission income from reinsurers                                      | 1665      |  |                                    |
| Other current commitments   | 1690      | 135                                      | 113                                |
| Total for section III   | 1695      | 6325                                     | 3639                               |
| IV. Liabilities related to non-current assets held for sale and disposal groups | 1700      | 0  | 0                                  |
| Balance   | 1900      | 70958                                    | 74231                              |

Table A.3 - Balance Sheet (Statement of Financial Position) as of December 31, 2023

| Assets   | Line code | At the beginning of the reporting period | At the end of the reporting period |
|--|-----------|--|------------------------------------|
| 1  | 2         | 3  | 4                                  |
| I. Non-current assets                                      |           |  |                                    |
| Intangible assets:   | 1000      | 161                                      | 155                                |
| initial value  | 1001      | 228                                      | 234                                |
| accumulated depreciation                                   | 1002      | -67                                      | -79                                |
| Incomplete capital investments                             | 1005      | 0  | 0                                  |
| Fixed assets:  | 1010      | 34940                                    | 33186                              |
| initial value  | 1011      | 895115                                   | 896047                             |
| Wear and tear  | 1012      | -860175                                  | -862861                            |
| Investment real estate                                     | 1015      | 0  | 0                                  |
| Long-term financial investments:                           |           |  |                                    |
| accounted for using the equity method in other enterprises | 1030      | 0  | 0                                  |
| other financial investments                                | 1035      | 0  | 0                                  |
| Long-term accounts receivable                              | 1040      | 134                                      | 134                                |
| Deferred tax assets  | 1045      | 0  | 0                                  |
| Total for section I  | 1095      | 35235                                    | 33475                              |
| II. Current assets   |           |  |                                    |
| Stocks   | 1100      | 6312                                     | 8544                               |
| Production stocks  | 1101      | 3750                                     | 3900                               |
| Unfinished production                                      | 1102      |  |                                    |
| Final product  | 1103      |  |                                    |
| Cargo  | 1104      | 2562                                     | 4644                               |
| Accounts receivable for products, goods, works, services   | 1125      | 116                                      | 722                                |
| Accounts receivable by calculations: on issued advances    | 1130      | 40                                       | 36                                 |
| with a budget  | 1135      |  |                                    |
| including income tax                                       | 1136      |  |                                    |
| from accrued income  | 1145      | 32264                                    | 29705                              |
| Other current receivables                                  | 1155      | 77                                       | 59                                 |
| Current financial investments                              | 1160      |  |                                    |
| Money and its equivalents                                  | 1165      | 16                                       | 1                                  |
| Cash   | 1166      |  |                                    |
| Bank accounts  | 1167      | 16                                       | 1                                  |
| Deferred expenses  | 1170      |  |                                    |

## Continuation of Appendix A

| 1   | 2         | 3  | 4                                  |
|---|-----------|--|------------------------------------|
| Other current assets  | 1190      | 171                                      | 117                                |
| Total for section II  | 1195      | 38996                                    | 39184                              |
| III. Non-current assets held for sale and disposal groups                       | 1200      | 0  | 0                                  |
| Balance   | 1300      | 74231                                    | 72659                              |
| Liabilities   | Line code | At the beginning of the reporting period | At the end of the reporting period |
| I. Equity   |           |  |                                    |
| Registered (share) capital  | 1400      | 9688                                     | 9688                               |
| Capital in revaluations   | 1405      | 22349                                    | 21385                              |
| Additional capital  | 1410      | 175                                      | 109                                |
| Reserve capital   | 1415      |  |                                    |
| Retained earnings (uncovered loss)  | 1420      | 38796                                    | 37855                              |
| Unpaid capital  | 1425      |  |                                    |
| Withdrawn capital   | 1430      |  |                                    |
| Total for section I   | 1495      | 71008                                    | 69037                              |
| II. Long-term liabilities and collateral  |           |  |                                    |
| Deferred tax liabilities  | 1500      | 0  | 0                                  |
| long-term bank credits  | 1510      | 0  | 0                                  |
| Other long-term liabilities   | 1515      | 0  | 0                                  |
| Long-term security  | 1520      | 0  | 0                                  |
| Long-term staff costs   | 1521      | 0  | 0                                  |
| Targeted financing  | 1525      | 0  | 0                                  |
| Total for section II  | 1595      | 0  | 0                                  |
| III. Current liabilities and collateral   |           |  |                                    |
| Short-term bank credits   | 1600      | 0  | 0                                  |
| Current debt on long-term liabilities: on long-term liabilities                 | 1610      |  |                                    |
| for goods, works, services  | 1615      | 509                                      | 108                                |
| according to calculations with the budget                                       | 1620      | 441                                      | 596                                |
| for including income tax  | 1621      |  |                                    |
| according to insurance calculations   | 1625      | 572                                      | 935                                |
| according to payroll calculations   | 1630      | 1140                                     | 1788                               |
| on received advances  | 1635      | 351                                      | 2                                  |
| from internal calculations  | 1645      |  |                                    |
| Current supplies  | 1660      | 97                                       | 19                                 |
| Deferred commission income from reinsurers                                      | 1665      |  |                                    |
| Other current commitments   | 1690      | 113                                      | 174                                |
| Total for section III   | 1695      | 3223                                     | 3622                               |
| IV. Liabilities related to non-current assets held for sale and disposal groups | 1700      | 0  | 0                                  |
| Balance   | 1900      | 74231                                    | 72659                              |

## Appendix B

### Statement of Financial Results (Statement of Comprehensive Income)

Table B.1 - Statement of Financial Results (Statement of Comprehensive Income) for 12 months of 2021

#### I. Financial Results

| Item   | Line code | For the reporting period | For the same period of the previous year |
|--|-----------|--------------------------|--|
| Net income from sales of products (goods, works, services) | 2000      | 87723                    | 58945                                    |
| Cost of goods sold (goods, works, services)                | 2050      | -84439                   | -56108                                   |
| Gross profit   | 2090      | 3284                     | 2837                                     |
| Gross: damage  | 2095      |                          |  |
| Other operating income                                     | 2120      | 722                      | 121                                      |
| Administrative expenses                                    | 2130      | -1209                    | -1136                                    |
| Selling expenses   | 2150      |                          |  |
| Other operating expenses                                   | 2180      | -4161                    | -998                                     |
| The financial result from operating activities: profit     | 2190      |                          | 824                                      |
| The financial result from operating activities: loss       | 2195      | -1364                    |  |
| Income from equity participation                           | 2200      |                          |  |
| Other financial income                                     | 2220      |                          |  |
| Other income   | 2240      | 412                      | 60                                       |
| Financial expenses   | 2250      |                          | -94                                      |
| Losses from equity participation                           | 2255      |                          |  |
| Other expenses   | 2270      | -18                      | -1                                       |
| Pre-tax financial result: profit                           | 2290      |                          | 789                                      |
| Pre-tax financial result: loss                             | 2295      | -970                     |  |
| Expenses (income) from income tax                          | 2300      | -174                     | -106                                     |
| Net financial result: profit                               | 2350      |                          | 683                                      |
| Net financial result: loss                                 | 2355      | -1144                    |  |

## II. Comprehensive income

| Item   | Line code | For the reporting period | For the same period of the previous year |
|--|-----------|--------------------------|--|
| Revaluation (depreciation) of non-current assets                     | 2400      | 0                        | 0  |
| Revaluation (depreciation) of financial instruments                  | 2405      | 0                        | 0  |
| Accumulated exchange rate differences                                | 2410      | 0                        | 0  |
| Share of other comprehensive income of associates and joint ventures | 2415      | 0                        | 0  |
| Other total income   | 2445      | 0                        | 0  |
| Other aggregate pre-tax income                                       | 2450      | 0                        | 0  |
| Income tax related to other comprehensive income                     | 2455      | 0                        | 0  |
| Other total income after tax   | 2460      | 0                        | 0  |
| Total income (sum of lines 2350, 2355, and 2460)                     | 2465      | -1144                    | 683                                      |

Table B.2 - Statement of Financial Results (Statement of Comprehensive Income) for 12 months of 2022

## I. Financial Results

| Item   | Line code | For the reporting period | For the same period of the previous year |
|--|-----------|--------------------------|--|
| Net income from sales of products (goods, works, services) | 2000      | 78061                    | 87723                                    |
| Cost of goods sold (goods, works, services)                | 2050      | -75342                   | -84439                                   |
| Gross profit   | 2090      | 2719                     | 3284                                     |
| Gross: damage  | 2095      |                          |  |
| Other operating income                                     | 2120      | 181                      | 722                                      |
| Administrative expenses                                    | 2130      | -1086                    | -1209                                    |
| Selling expenses   | 2150      |                          |  |
| Other operating expenses                                   | 2180      | -2258                    | -4161                                    |
| The financial result from operating activities: profit     | 2190      |                          |  |
| The financial result from operating activities: loss       | 2195      | -444                     | -1364                                    |
| Income from equity participation                           | 2200      |                          |  |
| Other financial income                                     | 2220      |                          |  |
| Other income   | 2240      | 87                       | 412                                      |
| Financial expenses   | 2250      |                          |  |
| Losses from equity participation                           | 2255      |                          |  |
| Other expenses   | 2270      | -213                     | -18                                      |
| Pre-tax financial result: profit                           | 2290      |                          |  |
| Pre-tax financial result: loss                             | 2295      | -570                     | -970                                     |
| Expenses (income) from income tax                          | 2300      | -161                     | -174                                     |
| Net financial result: profit                               | 2350      |                          |  |
| Net financial result: loss                                 | 2355      | -731                     | -1144                                    |

## II. Comprehensive income

| Item   | Line code | For the reporting period | For the same period of the previous year |
|--|-----------|--------------------------|--|
| Revaluation (depreciation) of non-current assets                     | 2400      | 0                        | 0  |
| Revaluation (depreciation) of financial instruments                  | 2405      | 0                        | 0  |
| Accumulated exchange rate differences                                | 2410      | 0                        | 0  |
| Share of other comprehensive income of associates and joint ventures | 2415      | 0                        | 0  |
| Other total income   | 2445      | 0                        | 0  |
| Other aggregate pre-tax income                                       | 2450      | 0                        | 0  |
| Income tax related to other comprehensive income                     | 2455      | 0                        | 0  |
| Other total income after tax   | 2460      | 0                        | 0  |
| Total income (sum of lines 2350, 2355, and 2460)                     | 2465      | -731                     | -1144                                    |

Table B.3 - Statement of Financial Results (Statement of Comprehensive Income) for 12 months of 2023

## I. Financial Results

| Item   | Line code | For the reporting period | For the same period of the previous year |
|--|-----------|--------------------------|--|
| Net income from sales of products (goods, works, services) | 2000      | 59744                    | 78061                                    |
| Cost of goods sold (goods, works, services)                | 2050      | -58997                   | -75342                                   |
| Gross profit   | 2090      | 747                      | 2719                                     |
| Gross: damage  | 2095      |                          |  |
| Other operating income                                     | 2120      | 416                      | 181                                      |
| Administrative expenses                                    | 2130      | -760                     | -1086                                    |
| Selling expenses   | 2150      |                          |  |
| Other operating expenses                                   | 2180      | -1538                    | -2258                                    |
| The financial result from operating activities: profit     | 2190      |                          |  |
| The financial result from operating activities: loss       | 2195      | -1135                    | -444                                     |
| Income from equity participation                           | 2200      |                          |  |
| Other financial income                                     | 2220      |                          |  |
| Other income   | 2240      |                          | 87                                       |
| Financial expenses   | 2250      |                          |  |
| Losses from equity participation                           | 2255      |                          |  |
| Other expenses   | 2270      |                          | -213                                     |
| Pre-tax financial result: profit                           | 2290      |                          |  |
| Pre-tax financial result: loss                             | 2295      | -1135                    | -570                                     |
| Expenses (income) from income tax                          | 2300      |                          | -161                                     |
| Net financial result: profit                               | 2350      |                          |  |
| Net financial result: loss                                 | 2355      | -1135                    | -731                                     |

## II. Comprehensive income

| Item   | Line code | For the reporting period | For the same period of the previous year |
|--|-----------|--------------------------|--|
| Revaluation (depreciation) of non-current assets                     | 2400      | 0                        | 0  |
| Revaluation (depreciation) of financial instruments                  | 2405      | 0                        | 0  |
| Accumulated exchange rate differences                                | 2410      | 0                        | 0  |
| Share of other comprehensive income of associates and joint ventures | 2415      | 0                        | 0  |
| Other total income   | 2445      | 0                        | 0  |
| Other aggregate pre-tax income                                       | 2450      | 0                        | 0  |
| Income tax related to other comprehensive income                     | 2455      | 0                        | 0  |
| Other total income after tax   | 2460      | 0                        | 0  |
| Total income (sum of lines 2350, 2355, and 2460)                     | 2465      | -1135                    | -731                                     |

## Appendix C

### Cash flow statement

Table C.1 - Cash Flow Statement for the 2021

| Item  | Line Code | Inflows | Outflows |
|---|-----------|---------|----------|
| 1   | 2         | 3       | 4        |
| 1. Cash flows from operating activities:                                  |           |         |          |
| Profit (loss) from ordinary activities before tax                         | 3500      |         | 970      |
| Adjustments for: Depreciation of non-current assets                       | 3505      | 2619    | x        |
| Increase (decrease) in provisions   | 3510      | 481     |          |
| Unrealized foreign exchange loss (gain)                                   | 3515      |         |          |
| Loss (gain) from non-operating activities and other non-cash transactions | 3520      | 3045    |          |
| Financial expenses  | 3540      |         |          |
| Decrease (increase) in current assets, including:                         | 3550      |         | 7395     |
| Decrease (increase) in inventories  | 3551      |         | 830      |
| Decrease (increase) in accounts receivable for products, goods            | 3553      | 146     |          |
| Decrease (increase) in other current accounts receivable                  | 3554      |         | 38       |
| Decrease (increase) in other current assets                               | 3557      | 608     |          |
| Increase (decrease) in current liabilities, including:                    | 3560      | 2323    |          |
| Increase (decrease) in accounts payable for goods, works, services        | 3561      | 420     |          |
| Increase (decrease) in accounts payable for budget settlements            | 3562      | 202     |          |
| Increase (decrease) in accounts payable for insurance settlements         | 3563      | 539     |          |
| Increase (decrease) in accounts payable for payroll settlements           | 3564      | 835     |          |
| Increase (decrease) in other current liabilities                          | 3567      | 44      |          |
| Cash from operating activities  | 3570      | 103     |          |
| Income tax paid   | 3580      | x       | 51       |
| Interest paid   | 3585      | x       |          |
| Net cash flow from operating activities                                   | 3195      | 52      |          |
| 2. Cash flows from investing activities                                   |           |         |          |
| Proceeds from the sale of: Financial investments                          | 3200      |         | x        |
| Non-current assets  | 3205      |         | x        |
| Proceeds from received: Interest  | 3215      |         | x        |
| Dividends   | 3220      |         | x        |
| Proceeds from derivatives   | 3225      |         | x        |
| Other proceeds  | 3250      |         | x        |
| Expenditures on acquisition of:   |           |         |          |
| Financial investments   | 3255      | x       |          |
| Non-current assets  | 3260      | x       | 38       |
| Payments for derivatives  | 3270      | x       |          |
| Other payments  | 3290      | x       |          |

## Continuation of Appendix C

| 1   | 2    | 3  | 4  |
|---|------|----|----|
| Net cash flow from investing activities         | 3295 |    | 38 |
| Cash flows from financing activities            |      |    |    |
| Proceeds from: Equity                           | 3300 |    | x  |
| Borrowings                                      | 3305 |    | x  |
| Other proceeds                                  | 3340 |    | x  |
| Expenditures on: Buyback of own shares          | 3345 | x  |    |
| Repayment of borrowings                         | 3350 | x  |    |
| Payment of dividends                            | 3355 | x  |    |
| Payment of interest                             | 3360 | x  |    |
| Repayment of financial lease liabilities        | 3365 | x  |    |
| Other payments                                  | 3390 | x  |    |
| Net cash flow from financing activities         | 3395 |    |    |
| Net cash flow for the reporting period          | 3400 | 14 |    |
| Cash balance at the beginning of the year       | 3405 | 2  | x  |
| Effect of exchange rate changes on cash balance | 3410 |    |    |
| Cash balance at the end of the year             | 3415 | 16 | x  |

Table C.2 - Cash Flow Statement for the 2022

| Item  | Line Code | Inflows | Outflows |
|---|-----------|---------|----------|
| 1   | 2         | 3       | 4        |
| 1. Cash flows from operating activities:                                  |           |         |          |
| Profit (loss) from ordinary activities before tax                         | 3500      |         | 1135     |
| Adjustments for: Depreciation of non-current assets                       | 3505      | 3402    | x        |
| Increase (decrease) in provisions   | 3510      | -78     |          |
| Unrealized foreign exchange loss (gain)                                   | 3515      |         |          |
| Loss (gain) from non-operating activities and other non-cash transactions | 3520      |         |          |
| Financial expenses  | 3540      |         | x        |
| Decrease (increase) in current assets, including:                         | 3550      | -2858   |          |
| Decrease (increase) in inventories  | 3551      | -2234   |          |
| Decrease (increase) in accounts receivable for products, goods            | 3553      | -606    |          |
| Decrease (increase) in other current accounts receivable                  | 3554      | -18     |          |
| Decrease (increase) in other current assets                               | 3557      |         |          |
| Increase (decrease) in current liabilities, including:                    | 3560      | 765     |          |
| Increase (decrease) in accounts payable for goods, works, services        | 3561      | -401    |          |
| Increase (decrease) in accounts payable for budget settlements            | 3562      | 155     |          |
| Increase (decrease) in accounts payable for insurance settlements         | 3563      | 363     |          |
| Increase (decrease) in accounts payable for payroll settlements           | 3564      | 648     |          |
| Increase (decrease) in other current liabilities                          | 3567      |         |          |
| Cash from operating activities  | 3570      | 96      |          |
| Income tax paid   | 3580      | x       | 191      |
| Interest paid   | 3585      | x       |          |
| Net cash flow from operating activities                                   | 3195      |         | 65       |
| 2. Cash flows from investing activities                                   |           |         |          |
| Proceeds from the sale of: Financial investments                          | 3200      |         | x        |
| Non-current assets  | 3205      |         | x        |
| Proceeds from received: Interest  | 3215      |         | x        |
| Dividends   | 3220      |         | x        |
| Proceeds from derivatives   | 3225      |         | x        |
| Other proceeds  | 3250      |         | x        |
| Expenditures on acquisition of:   |           |         |          |
| Financial investments   | 3255      | x       |          |
| Non-current assets  | 3260      | x       |          |
| Payments for derivatives  | 3270      | x       |          |
| Other payments  | 3290      | x       |          |
| Net cash flow from investing activities                                   | 3295      |         |          |

## Continuation of Appendix C

| 1   | 2    | 3     | 4     |
|---|------|-------|-------|
| Cash flows from financing activities            |      |       |       |
| Proceeds from: Equity                           | 3300 |       | x     |
| Borrowings                                      | 3305 |       | x     |
| Other proceeds                                  | 3340 | 79306 | x     |
| Expenditures on: Buyback of own shares          | 3345 | x     |       |
| Repayment of borrowings                         | 3350 | x     |       |
| Payment of dividends                            | 3355 | x     |       |
| Payment of interest                             | 3360 | x     |       |
| Repayment of financial lease liabilities        | 3365 | x     |       |
| Other payments                                  | 3390 | x     | 79256 |
| Net cash flow from financing activities         | 3395 | 50    |       |
| Net cash flow for the reporting period          | 3400 |       | 15    |
| Cash balance at the beginning of the year       | 3405 | 16    | x     |
| Effect of exchange rate changes on cash balance | 3410 |       |       |
| Cash balance at the end of the year             | 3415 | 1     | x     |

Table C.3 - Cash Flow Statement for the 2023

| Item  | Line Code | Inflows | Outflows |
|---|-----------|---------|----------|
| 1   | 2         | 3       | 4        |
| 1. Cash flows from operating activities:                                  |           |         |          |
| Profit (loss) from ordinary activities before tax                         | 3500      | 106     |          |
| Adjustments for: Depreciation of non-current assets                       | 3505      | 339     | x        |
| Increase (decrease) in provisions   | 3510      | -19     |          |
| Unrealized foreign exchange loss (gain)                                   | 3515      |         |          |
| Loss (gain) from non-operating activities and other non-cash transactions | 3520      |         | x        |
| Financial expenses  | 3540      |         |          |
| Decrease (increase) in current assets, including:                         | 3550      |         |          |
| Decrease (increase) in inventories  | 3551      | -1264   |          |
| Decrease (increase) in accounts receivable for products, goods            | 3553      | -182    |          |
| Decrease (increase) in other current accounts receivable                  | 3554      | 20      |          |
| Decrease (increase) in other current assets                               | 3557      |         |          |
| Increase (decrease) in current liabilities, including:                    | 3560      |         |          |
| Increase (decrease) in accounts payable for goods, works, services        | 3561      | 15      |          |
| Increase (decrease) in accounts payable for budget settlements            | 3562      | -106    |          |
| Increase (decrease) in accounts payable for insurance settlements         | 3563      | 2       |          |
| Increase (decrease) in accounts payable for payroll settlements           | 3564      | -73     |          |
| Increase (decrease) in other current liabilities                          | 3567      |         |          |
| Cash from operating activities  | 3570      | 426     |          |
| Income tax paid   | 3580      | x       |          |
| Interest paid   | 3585      | x       |          |
| Net cash flow from operating activities                                   | 3195      | 426     |          |
| 2. Cash flows from investing activities                                   |           |         |          |
| Proceeds from the sale of: Financial investments                          | 3200      |         | x        |
| Non-current assets  | 3205      |         | x        |
| Proceeds from received: Interest  | 3215      |         | x        |
| Dividends   | 3220      |         | x        |
| Proceeds from derivatives   | 3225      |         | x        |
| Other proceeds  | 3250      |         | x        |
| Expenditures on acquisition of:   |           |         |          |
| Financial investments   | 3255      | x       |          |
| Non-current assets  | 3260      | x       |          |
| Payments for derivatives  | 3270      | x       |          |
| Other payments  | 3290      | x       |          |

## Continuation of Appendix C

| 1   | 2    | 3    | 4    |
|---|------|------|------|
| Net cash flow from investing activities         | 3295 |      |      |
| Cash flows from financing activities            |      |      |      |
| Proceeds from: Equity                           | 3300 |      | x    |
| Borrowings                                      | 3305 |      | x    |
| Other proceeds                                  | 3340 | 7778 | x    |
| Expenditures on: Buyback of own shares          | 3345 | x    |      |
| Repayment of borrowings                         | 3350 | x    |      |
| Payment of dividends                            | 3355 | x    |      |
| Payment of interest                             | 3360 | x    |      |
| Repayment of financial lease liabilities        | 3365 | x    |      |
| Other payments                                  | 3390 | x    | 8175 |
| Net cash flow from financing activities         | 3395 |      | 397  |
| Net cash flow for the reporting period          | 3400 | 29   |      |
| Cash balance at the beginning of the year       | 3405 | 1    | x    |
| Effect of exchange rate changes on cash balance | 3410 |      |      |
| Cash balance at the end of the year             | 3415 | 30   | x    |