ANALYTICAL TOOLS OF FINANCIAL RESULTS IN THE CONDITIONS OF RISK-ORIENTED MANAGEMENT

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Abstract. *The purpose* of the article is to substantiate theoretical provisions and practical foundations for improving the organization and methods of economic analysis of the formation of financial results in the conditions of risk-oriented management. *Methodology*. Methods of theoretical generalization and concretization, Internet resources have been used in this study. *Results*. There have been distinguished some approaches to the analysis of financial results of enterprises in such areas as the assessment of the level, dynamics and structure of financial results and indicators forming them, i.e. income and expenses; analysis of the financial results of operating activities as the main activity of the enterprise; determination of the influence of key factors on the formation of the financial result of the business entity and profitability analysis. The stages of analysis of financial results, tools for their implementation, the results obtained and possible management decisions are revealed. Analytical evaluation provides an opportunity to generate a significant amount of information necessary for the implementation of management decisions on the formation, distribution and use of financial results. A conceptual approach to implementation of analytical evaluation of financial results is proposed, which will help the company's management to identify unusual transactions or events, as well as amounts, indicators and trends that may indicate atypical circumstances in the formation, distribution and use of financial results. Budgeting of financial results in the conditions of risk-oriented management is

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substantiated. Formation, dynamics and change of financial results and profitability of "Kurland LLC" are analyzed. Interconnectedness of the components and coherence of the main tasks and objectives of economic analysis of profits in risk-oriented management, strategic analysis and adaptive financial mechanism aimed to ensure profitability of enterprises are revealed. It is proposed to carry out the forecast value of financial results at the enterprise taking into account various factors of influence, including those caused by risks, by means of the correlation-regression analysis. *Practical implications.* A formed mechanism of risk management identification is the basis of formation of the system of measures from the standpoint of managers of various hierarchical levels as well as realization of operative administrative influence on operations with the increased degree of risk. *Value/originality.* Risk-oriented approach to the organization of economic analysis of profits enables to identify both external and internal risks, identify key ones, develop an appropriate management model to neutralize, reduce impact and prevent them. The study of peculiarities of the budgeting system under conditions of risk-oriented management has revealed the need to develop a single effective coordinated budgeting system in order to achieve competitive advantages in the market, in accordance with the requirements of the modern concept of integrated management. The use of correlation-regression analysis enables to identify the nature of changes in the financial results caused by the effect of factors of influence, both together and separately with each factor identified.

1. Organizational aspects of the analysis of financial results in terms of risk-oriented management

Qualitative analysis of the financial results of the enterprise is of great importance in the current conditions of development and improvement of market relations in Ukraine. Its implementation affects the right decision on capital management, minimizes the financial risks of the enterprise, helps to increase the efficiency of its activities, the most rational use of material, labor, and financial resources. To make effective management decisions it is necessary to combine factors, namely: reliable information about the results of the enterprise, which is formed taking into account the specifics of management and its organizational structure; use of modern methods of financial analysis; formation of objective conclusions about the general condition of the enterprise

and determination of ways to solve certain problems. Therefore, there is a need to highlight the most important indicators of the impact on profits and the feasibility of making appropriate management decisions.

The need for qualitative financial analysis is especially relevant in cases where the company is unable to properly assess its financial condition, which in the future creates serious obstacles to its effective operation.

The methodological basis for the analysis of financial results in terms of risk-oriented management is accepted for all enterprises, regardless of organizational and legal form and form of ownership, the model of their formation and use.

The study of approaches to the analysis of financial results of the enterprise showed that most authors in the analytical evaluation of financial results of the enterprise carry out in such areas as assessment of the level, dynamics, and structure of financial results and indicators that form them, ie income and expenses; analysis of the financial result from operating activities as the main activity of the enterprise; determining the impact of key factors on the formation of the financial result of the entity and the analysis of profitability (Table 1).

It should be noted that in the process of analyzing financial results, an important factor is the information base, ie the initial data for the analysis. In modern conditions, the information base for the analysis of profit and profitability are business plan; financial plan; form № 1 «Balance Sheet» (Statement of financial position); form № 2 «Statement of financial performance» (Statement of comprehensive income); form 3 «Statement of cash flows» (by direct, indirect methods); Form № 4 "Statement of Equity" (Statement of Changes in Equity); enterprise tax return; marketing research materials [8].

In the analysis of financial results of the enterprise can be used a variety of techniques, methods, and models analysis. Their number and range depend on specific goals and objectives. At the same time, it remains unclear which method of analysis is the most accepted in practice, which provides a comprehensive analysis of financial results of the enterprise, to justify effective management decisions to improve the financial policy of the enterprise aimed at its development. The analysis of the scientific literature gives grounds to claim that most scientists prefer horizontal, vertical, and coefficient analysis (84,6%) [9]. However, in order to obtain quality indicators, it is advisable to conduct phased monitoring of financial

Table 1

Some approaches to the analysis of financial results of enterprises

Author, source	Areas of analysis of financial results
1	2
Mulyk T.O. [1]	Vertical and horizontal and trend analysis of financial results of the enterprise
Yarish P.M., Kasianova Yu.V. [2]	1. Mathematical and statistical methods of research of financial results: economic methods, methods of economic cybernetics and optimal programming, methods of research of operations, and the theory of decision-making. 2. CVP analysis and the concept of financial leverage.
Bilyk M.D., Prytuliak N.M., Pavlovska O.V., Nevmerzhytska M.Yu. [3]	1. Vertical and horizontal analysis of financial results of the enterprise. 2. Factor analysis of profit. 3. Analysis of profitability indicators. 4. Factor analysis of profitability indicators. 5. The direct-cost system as a theoretical basis for cost analysis and profit optimization. 6. Analysis of profit increase reserves.
Tomchuk O.F. [4; 5]	1. Vertical and horizontal and trend analysis of financial results of the enterprise. 2. Analysis of relative indicators (coefficients), factor analysis.
Shkolnyk I.O. [6]	1. Assessment of the dynamics and composition of financial results. 2. Factor analysis of operating profit. 3. Analysis of the relationship between costs, production, and profits. 4. Analysis of the profitability of the enterprise.
Mochalina Z.M., Pospielov O.V. [7]	1. Structural and dynamic analysis of financial results, including income and expenses. 2. Factor analysis of financial results. 3. Coefficient analysis of financial results. 4. Analysis of profitability indicators.

Source: [1–7]

results. The essence of the above monitoring is to combine at different stages of analysis of a range of different methods, namely: coefficient method, methods of horizontal and vertical comparative analysis, the method of basic substitutions, the method of relative differences; as well as methods of correlation and regression analysis, which allow not only to analyze the balance sheet items of the enterprise but also to make a

comparative analysis of a number of enterprises in a particular industry or those engaged in similar activities. Such comparisons should be made not only for the reporting period but also for a number of years, which reflects a fairly long period of activity of the enterprise. This allows you to identify trends in the development of the enterprise for the future, which is of great importance in practice, as companies carry out both long-term and medium-term and current planning of their activities. Thus, this approach provides a comprehensive analysis of the enterprise, the ability to identify trends in its development, the reasons for changes in income, expenses, indicators of profit. Compare indicators with industry average data and make optimal management decisions to improve the efficiency of the enterprise.

Stages of analysis of financial results, tools for their implementation, results obtained and possible management decisions are presented in Table 2.

Table 2

Stages of analysis of financial results, tools for their implementation, results obtained, and possible management decisions

Stages	Tools	The results obtained	Management decisions
1	2	3	4
Analysis of the main indicators of efficiency financial area	Coefficient method, comparative method, methods of horizontal and vertical comparative analysis	The state of financial activity and financial capabilities of the enterprise	Increasing the competitiveness of the enterprise
Analysis of the main indicators of the production area		The degree of suitability of fixed assets in production, the level of use of fixed assets and materials in the profitability of the enterprise	Identification of reserves for further improvement of production efficiency, modernization of fixed assets in production
Analysis of the main indicators of enterprise development		Status of production and financial results; identifying prospects for development and consolidating market positions	Determining the competitive position of the enterprise within a specific regional market of relevant products, introduction of new products to the market, search for new segments

(End of Table 2)

1	2	3	4
Cost analysis by elements of operating costs	Methods of vertical and horizontal comparative analysis	Change during the period of the number of production costs included in the cost of production	Reduction of production costs, which are included in the cost of production
Analysis of the structure of the balance sheet	Methods of vertical and horizontal comparative analysis	The magnitude of changes that have occurred during the analyzed period and determine the consequences	Determining changes in the analyzed period relative to the base period or business plan, identifying factors that led to changes
Analysis of the financial condition of the enterprise	Coefficient method, horizontal comparative analysis	The level of financial results that determine the capabilities of the enterprise	Search for alternative solutions that take full advantage of the enterprise
Product profitability analysis	Method of basic substitutions	Evaluation of efficiency and rational use of invested funds	Making adjustments to the strategic plan
Analysis of development trends	Trend analysis method	Determining changes in the economic policy of the enterprise for more than 2 consecutive years	Determining the quality of the enterprise for a certain period, determining ways to normalize the enterprise
Construction of economic and mathematical models			
Construction of a linear multifactor regression economic-mathematical model	Methods of correlation and regression analysis	Identification of general patterns and relationships between net income and influencing factors	Attracting investment
Formation of conclusions about the general condition of the enterprise, allocation of the most important indicators of influence on profits, and expediency of acceptance of the corresponding administrative decisions			

Source: [10]

Analysis of the data in the table shows that most often in the analysis of indicators of financial and production sphere, cost by elements of operating costs, balance sheet structure, the general financial condition of the enterprise using methods of vertical and horizontal comparative analysis.

Thus, the important tool for analyzing the financial performance of enterprises is analytical evaluation in the form of techniques and methods of analysis. This estimate is used at different stages of the study of the formation, distribution, and use of financial results for:

– primary processing of collected information (verification, grouping, systematization);

– study of the state and patterns of costs, revenues, and calculation of financial results;

– determining the impact of factors on the performance of enterprises;

– calculation of unused and promising reserves to increase efficiency;

– generalization of analysis results;

– substantiation of budgets and scenarios of enterprise development and management decisions.

The use of analytical assessment provides an opportunity to generate a significant amount of information necessary for management decisions on the formation, distribution, and use of financial results. The purpose of the study of the use of methodological tools of economic analysis in the process of analytical support of financial results of enterprises is the formation of common theoretical positions and the development of universal recommendations for the use of analytical evaluation of procedures during the formation of information base.
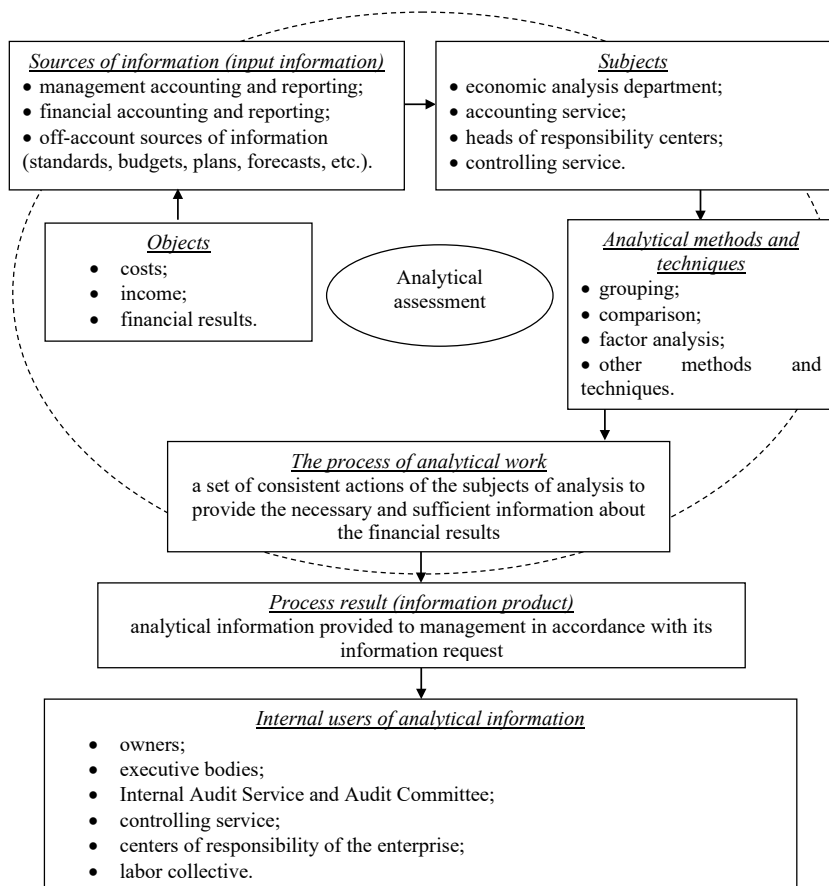
In Figure 1 shows a conceptual approach to the use of analytical evaluation of financial results.

Various financial ratios, which show the financial proportions between different reporting items, also help to assess the financial statements of the enterprise, namely: indicators of efficiency of production activities; indicators of business activity; liquidity indicators; indicators of financial stability. Depending on the specific goals and objectives, you can perform a financial analysis of varying degrees of detail.

We believe that the use of analytical assessment in the formation of the analytical base of financial results should assist the company's management in identifying unusual transactions or events, as well as amounts, indicators,

and trends that may indicate atypical circumstances in the formation, distribution, and use of financial results.

At the same time, it is not necessary to reduce the analysis to the study of a set or list of indicators of economic efficiency and their deviations, because neither the indicators nor their dynamics are evidence of a violation

**Figure 1. Conceptual approach to the use
of analytical evaluation of financial results**

Source: suggested by the author

of the normal course of financial results. The priority for the purposes of economic analysis itself is to focus on the study of causal relationships of economic phenomena and processes and forecasting their future values. This allows you to find bottlenecks and identify areas that need monitoring.

Adequate assessment of the formation of the company's profit for the purpose of analytical support of financial results is due to the optimal choice of methodological approach to its implementation. It should be noted that the method of analysis is a set of methods, techniques used for systematic, consistent, the most appropriate practical analytical work. This will make it possible to critically assess the financial results of the enterprise both in statics for a certain period and in dynamics – for a number of periods, will identify «pain points» in financial activities and ways to more efficiently using financial resources, their rational allocation.

Timely and unbiased analysis of financial results helps to increase the efficiency of enterprises, the most appropriate and effective use of fixed assets, material, labor, and financial resources, eliminating additional costs. And the results of the analysis create objective conditions for increasing the effectiveness of management decisions, as well as obtaining reasoned accounting and analytical information for planning and forecasting financial results [11].

An important source of reserves for the growth of profitability of LLC «Kurland» is the optimization of the structure of marketable products, ie the growth of the share of those types of products that bring more profit to the company. However, the lack of free production of the required volumes by type of agricultural production leads to changes in market conditions and, accordingly, to a significant annual change in the price of the same type of product.

The formation of financial results depends entirely on the goals of the enterprise. If the company aims at high rates of development, increases sales, and conquers a significant part of the market, the purpose of the formation of financial results is a high rate of their growth. If the company stabilizes its activities, is satisfied with the minimum level of profitability or even unprofitable activities, the management of financial results should be focused on obtaining such a system that provides current solvency. And if the activities of the owners are based on the interests of the owners, the target guidelines for the formation of the final financial results are indicators such as return on investment or equity.

In order to increase the economic efficiency of production of LLC «Kurland» it is necessary to update the material and technical base of the enterprise by leasing the purchase of equipment; attracting loans for profitable projects that can bring the company a high income; reducing the equity deficit by accelerating its turnover by reducing excess inventories, work in progress, production and commercial cycle.

Economic conditions in Ukraine and LLC «Kurland» in particular are characterized by crises, increased competition, the existence and spread of information wars, which necessitate the introduction of new methods of enterprise management to ensure its effective functioning. In such conditions, the urgent task is to identify the risks of economic activity in order to develop appropriate management models. Determining the nature of probable risks, assessing their impact on the enterprise, pre-developed anti-crisis tools is one of the important tasks of business planning.

Risk management is considered a central part of the strategic management of the organization, whose task is to identify risks and manage them. At the same time, risk management as a single risk management system should include a program of control over the implementation of tasks, evaluation of the effectiveness of measures, as well as an incentive system at all levels of the organization.

The formation of a risk management system at the enterprise begins with the definition of risk management objectives at the enterprise and the identification of risks that should be subordinated to the above objectives.

The choice of a specific method of risk identification is determined by the specifics of economic activity, the scale of change, the peculiarities of the system of organization of the risk management process at the enterprise.

Thus, a significant advantage of monitoring is to provide a comprehensive analysis of financial results, clarity of dynamics and changes in indicators that are analyzed, the effective choice of management decisions based on analytical data. Properly chosen method of analysis of financial results can be the foundation for obtaining reliable indicators, and, as a result, the most efficient use of financial resources, compliance with settlement and credit discipline, achieving a rational ratio of own and investment funds, financial forecasting for effective operation in the future.

Analysis of the financial and economic results of LLC «Kurland» is a necessary condition for effective management of income and expenses in

order to increase profits and increase profitability. The future performance of the company depends on how well the analysis of financial results is carried out, the main factors that provide it are determined.

A risk-oriented approach to the organization of economic analysis of profits allows you to identify both external and internal risks, identify key ones, develop an appropriate management model to neutralize, reduce impact and prevent. Thus, risk identification deals with finding, listing, and describing risk elements. The latter include sources of risks or dangers, possible threats, events, consequences, and probabilities. Identification – one of the most important stages of the process of risk management allows the distribution of events, causes, consequences by classes, groups, categories, in which one group includes objects that have a common feature. This distribution in relation to the goals of society creates an information field to combat adverse events.

2. Budgeting of financial results in the conditions of risk-oriented management

Modern globalization processes have a significant impact on the activities of the entity, as well as produce new, more stringent requirements for resource planning and management. This necessitates the creation of a single effective coordinated budgeting system in order to achieve competitive advantages in the market, the need to optimize and reduce overhead costs, which is a requirement of the modern concept of integrated management.

In recent years, budgeting has become the most popular management technology among domestic businesses. Management, in general, understands the importance of using budgeting in business management, but in its development and implementation often faces problems of various kinds. A significant number of issues arise when establishing a single budgeting system in corporations or industrial and financial groups because in this case, it is necessary to consolidate multilevel accounting systems, take into account industry specifics, specifics of production activities, and many other related factors.

Hnylytska L. V. [12, p. 89] notes that in only 2% of cases risk identification is based on credentials, due to the fact that the risk management process is mainly carried out by managers whose conclusions are based only on personal experience and intuition.

Under such conditions, it is useful to build a model that would characterize all major economic processes in the enterprise and contain: the structure of hierarchical subordination, sources of resources and funding centers, centers of incoming financial flows by type, and so on.

One of the most important conditions for the functioning of an effective budgeting system is its global use in conjunction with the elements and procedures of risk management at all levels of the organizational structure of the enterprise. Involving in the process of budgeting and risk management a sufficient number of employees with clearly defined «limits of responsibility» will solve the following tasks: reduce the complexity of the process of implementation and maintenance of budgeting by its decentralization; increase the number of areas and areas of detection, monitoring and initial identification of risks that affect the activities of the enterprise; increase the responsibility of specific executors, delegating to them the authority and responsibility for the implementation of certain budget indicators; to improve the system of motivation with elements related to the evaluation of the results of the planned indicators.

The main task of budgeting as a management technology is to increase the efficiency of production activities of the enterprise on the basis of target orientation and coordination of all events, as well as increase the flexibility of the enterprise in the transformation of the economic system.

In the West, a «risk-based budgeting» approach was introduced a few years ago. In this approach, any input parameter for the budget is set not by a single digit, but by a range of values. This range can be set by 2-3 values and expert assessment of their probability (for example, pessimistic, optimistic, and realistic scenarios), and can be set more complex in the form of statistical distribution [13].

With the help of simulation, the collected information on uncertainties can be consolidated into a financial model. The output will be a budget in which the final data will be presented not in a single value, but in the form of probability distribution in a certain range. The information provided in this way gives decision-makers an understanding of the full picture of the possible future and allows them to make informed decisions about realistic targets and the necessary reserves.

It should be noted that the formation and use of reserves should take into account the following: contingencies should be included in the budget as a

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separate item; reserves should not be used to cover costs incurred as a result of negligent performance by officials, etc.

Due to the fact that budgeting is likely to determine the planned indicators that the company risks not meeting, it is worth using a historical approach to the calculation of key targets. This approach is that in order to calculate the indicators for the planning period it is necessary to analyze the size of similar, which was achieved in previous reporting periods. It should be noted that with such an approach, the more analyzed the previous reporting periods, the more accurate the sample will be. We propose to calculate the planned indicators by using the methods of mathematical statistics and calculating the historical volatility of the total income of the enterprise.

The use of the KPI motivation system allows establishing the levels of responsibility of employees for the implementation of the budget, which will allow for more effective control in the event of significant deviations of the actual indicators from the planned.

Under conditions of risk during budgeting, it is mandatory to reflect in the budget of the total costs of the enterprise a separate item of unforeseen costs, which we propose to submit as follows: probable costs caused by the risk; the cost of measures to eliminate the effects of risk.

To determine the planned indicators of probable unforeseen costs, we propose to use the methods of mathematical statistics on costs, which were carried out in previous reporting periods and are associated with the occurrence of a risk situation. Table 3 shows the risky business transactions that took place in LLC «Kurland» during 2018–2020, with a distribution of the probability of their occurrence.

Using the probability coefficients calculated in Table 3 for each type of probable risk that took place in the company from results in previous years, we determine using a mathematical expectation of random variables the estimated amount of costs that may incur in case of recurrence of risk in economic activity of LLC «Kurland (formulas 1-4):

$$M(Xp) = 849 \times 0{,}25 + 610 \times 0{,}25 = 212{,}25 + 152{,}5 = 364{,}75 \text{ (thousand UAH)} \quad (1)$$

$$M(Xk) = 52 \times 1 = 52 \text{ (thousand UAH)} \quad (2)$$

$$M(Xz) = 0 \text{ (thousand UAH)} \quad (3)$$

$$M(Xb) = 13 \times 1 = 13 \text{ (thousand UAH)} \quad (4)$$

$$M(Xs) = 48 \times 0{,}2 + 148 \times 0{,}2 = 9{,}6 + 29{,}6 = 39{,}2 \text{ (thousand UAH)} \quad (6)$$

Table 3

Calculation of the coefficient of the probability
of economic risk in LLC «Kurland»

№	Tax risk (X) / Number of events (s)	2018	2019	2020
1	Occurrence of overdue payments by counterparties, thousand UAH, Xp	-	849	610
	Pi, coefficient	-	0,25	0,25
2	Erroneous transfer of funds to third party accounts, thousand UAH Xk	52	-	-
	Pi, coefficient	1	-	-
3	Violation of tax legislation, thousand UAH, Xz	-	-	-
	Pi, coefficient	-	-	-
4	Bankruptcy of counterparties, thousand UAH, Xb	-	-	13
	Pi, coefficient	-	-	1
5	Payment of penalties, thousand UAH, Xs	-	48	148
	Pi, coefficient	-	0,2	0,2

Source: calculated by the author according to the studied company

According to the calculated indicators, the estimated values of costs that the company may incur in the event of a risk situation are determined.

Having calculated the estimated absolute values of costs that may occur in the forecast period in LLC «Kurland», we calculate the possible deviations from the calculated forecast values (formulas 7-10):

$$\sigma(X_p) = \sqrt{849^2 \times 0,25 + 610^2 \times 0,25 - 364,75^2} = \sqrt{180200,25 + 93025 - 13342,56} = \tag{7}$$
$$\sqrt{259882,69} = 509,78 \text{thousand UAH}$$

$$\sigma(X_k) = \sqrt{52^2 \times 1 - 52^2} = 0 \text{thousand UAH} \tag{8}$$

$$\sigma(X_b) = \sqrt{13^2 \times 1 - 13^2} = 0 \text{ thousand UAH} \tag{9}$$

$$\sigma(X_s) = \sqrt{48^2 \times 0,2 + 148^2 \times 0,2 - 39,2^2} = \sqrt{460,8 + 4308,8 - 1536,64} = \sqrt{3232,96} =$$
$$= 56,86 \text{thousand UAH} \tag{10}$$

On the basis of the calculations, a possible deviation of costs associated with the recurrence of overdue debt by 509,78 thousand UAH; expenses for payment of penalties – by 56,86 thousand UAH.

Taking into account the calculations and the scenario approach to budgeting, we will build a simplified model of contingency budget LLC «Kurland» (Table 4).

Contingency budget of LLC «Kurland» for the forecast period

№	Indexes	Budget scenarios are possible		
		optimal	real	critical
	1. Probable costs of risk			
1.1	Erroneous transfer of funds to third party accounts, thousand UAH	100	100	100
1.2	Violation of tax legislation, thousand UAH	-	-	-
1.3	Bankruptcy of counterparties, thousand UAH	13	13	13
1.4	Payment of penalties, thousand UAH	19,4	39,2	58,6
1.n	Other expenses, thousand UAH	-	-	-
	Total costs	132,4	152,2	171,6
	2. Expenses for measures to eliminate the consequences of the risk			
2.1	Creating a reserve for doubtful debts, thousand UAH	16,14	364,75	729,5
2.n	Other costs for the creation of events	-	-	-
	Total costs	16,14	364,75	729,5
	The total amount of unforeseen costs	148,54	516,95	901,1

Source: calculated by the author according to the studied company

So, as can be seen from Table 4, the total planned unforeseen costs of LLC «Kurland» in the real budget scenario will be 516,95 thousand UAH, and taking into account the calculated possible deviations, their amount will be 148,54 thousand UAH. and 901,1 thousand UAH. under the optimal and critical scenario, respectively. All estimated contingencies should be included in the total cost budget for the respective scenarios.

We propose to calculate the planned amount of income of the enterprise by using the retrospective degree of variability of total income.

The retrospective degree of variability of total income allows establishing the level of variability of the studied indicator taking into account the studied period of time and is calculated by the formula 11.

$$S = \sqrt{\frac{\sum\limits_{i=1}^{n}(x_i - \bar{x})}{n}} \times \sqrt{t} \times 100\%. \qquad (11)$$

where S – retrospective degree of variability,

xi and $\bar{x}$ – growth rate of the indicator,

n – the number of years involved in the calculation,

t – the total number of years studied.

Using the indicator of the retrospective degree of variability of total income allows you to set the level of variability of the total income of the enterprise for several periods of time.

The calculation of the retrospective degree of variability of total income is given in Table 5 and formula 12.

Table 5

Calculation of the forecast income level of LLC «Kurland»

Indexes	2018	2019	2020
The amount of income received, thousand UAH	291 288	362 366	327 233
Income growth rate, %	x	24,4	90,3
Retrospective degree of variability of total income			

Source: calculated by the author according to the studied company

Using the dynamics and growth rates of the total income of LLC «Kurland», we calculate its retrospective degree of variability:

$$S = \sqrt{\frac{\sum\limits_{i=1}^{2}(24,4^2 + 90,3^2)}{2}} \times \sqrt{3} \times 100\% = \sqrt{\frac{595,36 + 8154,09}{2}} \times 1,732 \times 100\% = 66,14 \times 1,732$$

$$\times 100\% = 114,55$$

So, the degree of variability in the amount of total income for the last three years is within 114,55%. This degree should be taken into account when determining the forecast values of income in different scenarios.

Analyzing the dynamics of the financial results of LLC «Kurland» for 2018-2020 and using the methods of mathematical statistics, we determine the forecast level of profitability of the company and the degree of deviation of the calculated value (Table 6 and formulas 13-14).

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Table 6

Calculation of the forecast level of profitability of LLC «Kurland»

№	Number of events (s) Tax risk (X)	2018	2019	2020
1	The amount of net profit, thousand UAH, *Xpr*	77731	77466	- 8270
	Pi, coefficient	0,2	0,2	0,2

Source: calculated by the author according to the studied company

Using the probability coefficients calculated in Table 4, we determine the estimated amount of profit:

$$M(Xpr) = 77731 \times 0,2 + 77466 \times 0,2 - 8270 \times 0,2 =$$
$$= 15546,2 + 15493,2 - 1654 = 29385,4 \text{ thousand UAH} \qquad (13)$$

$$\sigma(X_{pr}) = \sqrt{77731^2 \times 0,2 + 77466^2 \times 0,2 + (-8270)^2 \times 0,2 - 29385,4^2} =$$
$$\sqrt{6042108361 \times 0,2 + 6000981156 \times 0,2 + 68392,9 \times 0,2 - 863501733,16} =$$
$$= \sqrt{1208421672,2 + 1200196231,2 + 13678,58 - 863501733,16} =$$
$$\sqrt{1545129848,82} = 30938,14 \text{ thousand UAH}$$

So, based on the analytical actions, it is established that the projected level of profit will be 29385,4 thousand UAH with a possible fluctuation of 30938,14 thousand UAH.

Using the above calculations and following the concept of Target-Profit System, we will build a generalized three-scenario budget of financial results, which will reflect the total projected income, financial result, and expenses of LLC «Kurland» (Table 7).

Table 7

Generalized budget of financial results
of LLC «Kurland» for the forecast period

№	Indexes	Budget scenarios are possible		
		optimal	real	critical
1	Total income, thousand UAH	618107	327 233	275665
2	Financial result, thousand UAH	27041	29385,4	32198
3	Total costs, thousand UAH	359183	196070	123758
	incl. unforeseen costs	148,54	516,95	901,1

Source: calculated by the author according to the studied company

For the real scenario, we propose to take into account the calculated forecast values, and for the optimal and critical-adjusted forecast values for their possible deviations.

It should be noted that this approach to the calculation of forecast values does not take into account all the features of the entity, and therefore the identified indicators need to be studied for their compliance with short-term prospects for development and feasibility. If there is a range of possible deviations from the budget, it is necessary to understand what is the potential cost of such deviations in the form of, for example, additional funds to cover them.

The main indicators of the budget of financial results are net profit and profitability of sales. The first indicator is determined in absolute terms, and the other – in relative terms. It should be noted that these indicators refer to the strategic indicators of the entity, the threshold values of which are set by the owners of the enterprise or senior management.

In addition, thresholds can be set not only for one value for the entire planning year but also for each month separately, taking into account pre-known factors affecting the income and expenses of the entity. This is due to the fact that, depending on the specifics of doing business in some months, economic activity may be unprofitable, and in general for the reporting year – profitable with a sufficient rate of return.

Each business entity, when planning its business activities, determines the target values of strategic indicators, the achievement of which is a kind of strategic goal. For these indicators, it is mandatory to set a period of achievement, which must be at least one calendar year. These indicators must be communicated to all responsible structural units.

Any budget is made in order to keep financial results under control and to be able to correlate costs with revenues. The budget management system is, first of all, a management system that is implemented with the help of budgets.

Setting up a budget management system can lead to additional labor costs. In addition, the introduction of a budget management system can afford stable medium or large companies in which the activity is profitable: products are manufactured, successfully sold, shipped from stock, contractors are solvent and satisfied.

In recent years, to ensure the budget indicators of economic entities, a system of motivation «Key Performance Indicators» (KPI system), which

allows you to monitor the business activity of officials of the company in real-time.

Using the KPI system as a basis for motivation to achieve goals in the budget process can be the best solution to the problem of non-compliance with budget indicators and the ability to involve staff in creating a working budget system.

In addition, based on the KPI system, it is possible to differentiate the responsibility of responsibility centers for financial results and develop a budget model. Note that the KPIs of strategic financial objectives should always set those responsible at the level of the respective budgets.

The main advantage of the KPI motivation system is that the management decision-making process is reduced to the analysis of data that is available at any time and presented in a pre-accessible format.

We believe that the use of a KPI motivation system with an important tool in the management of each business entity, especially in modern conditions of operation in a risky environment. This system allows you to monitor the performance of the most important performance indicators of the entity, and especially indicators that affect the overall financial result.

This model provides the definition of key indicators of income, expenses, and financial results based on the historical experience of the entity, the separation into a separate system of indicators of unforeseen costs that may occur as a result of risk, as well as establishing a system of motivation and responsibility to results of implementation key budget indicators.

3. Economic analysis of forecasting the behavior of financial results under the conditions of risk-oriented management

Modern conditions of operation of domestic enterprises are characterized by a high level of uncertainty and risk, which is due to a lack of information and the ability to predict the probability of future events and their impact on the financial performance of the enterprise. Uncertainty of the situation forms a set of possible options that should be considered by management in the process of forming the economic strategy of the enterprise.

Profit is one of the most important indicators of the enterprise, which, uniting all aspects of its operation, reflects the efficiency and effectiveness of the use of resources in the process of economic activity. Peculiarities of the organization of economic analysis of profit are also the need for

permanent study of the dynamics of this indicator, to ensure the ability to predict and identify promising areas of enterprise development and avoid risky activities, ensuring the possibility of forming and implementing a system of preventive measures.

In order to make managerial decisions, it is necessary to conduct an economic analysis focused on ensuring the implementation of the management function, which is forward-looking and has a high level of uncertainty, examines the economic system on the parameters that determine its future state.

Risk-oriented profit management is traditionally aimed at maximizing it in favorable business conditions, or minimizing the negative consequences in the event of adverse events, and involves management decisions at the stages of formation, distribution, and use of profits [14].

Considering the financial results of LLC «Kurland», it is appropriate to analyze their formation during the 2018–2020 years (Table 8).

As can be seen from Table 8 LLC «Kurland» is developing dynamically, but the financial results of its activities in the reporting period are much worse than in previous periods. The operating activity of the company is especially ineffective, where the growth rate of both direct costs of production (21%) and other operating costs (48,4%) is much higher than the growth rate of income (revenue of sales of products (goods, works), services) (12,3%), operating income (15,2%).

As a part of financial results from investment and financial activity both positive, and negative tendencies are observed: growth of financial expenses to 121540 thousand UAH in 2020 affected the getting loss of 8270 thousand UAH.

Economic analysis of profits in the new environment should be aimed not only at the formation, distribution, and analysis of reserves to increase profits, but also to study internal (business environment, risks, and factors of formation profit) and external factors that will help such economic analysis meet new conditions operation of the enterprise (including in conditions of uncertainty) and the demands of the management process.

In such conditions, a necessary task for the management staff of the enterprise is to adapt to an unstable environment, which requires a flexible formation of the financial mechanism to ensure the profitability of the enterprise.

Table 8

Analysis of the formation, dynamics, and changes in financial results, thousand UAH

№	Indexes	2018	2019	2020	Deviation of the reporting year (+,-)	
					from the base year	from the intermediate year
1	2	3	4	5	6	7
1	Net income (revenue) from sales of products (goods, works, services)	291288	362366	327 233	35945	- 35133
2	Cost of goods sold (goods, works, services)	265608	309984	321 494	55886	11510
3	Gross profit	25680	52 382	5 739	- 19941	- 46643
4	Other operating income	139296	69 521	170 470	31174	100949
5	Administrative expenses	27213	27 266	17 951	- 9262	– 9315
6	Selling expenses	25222	34 581	23 858	- 1364	- 10723
7	Other operating expenses	14289	16 341	21 211	6922	4870
8	Financial results from operating activities	98252	43 715	113 189	14937	69474
9	Gains or losses on financial and investment transactions	- 20521	33751	- 121459	- 100938	- 155210
10	Financial result before tax	77731	77 466	- 8270	- 86001	- 85736
11	Expenses (income) from income tax	-	-	-	-	-
12	Net profit (loss)	77731	77 466	- 8270	- 86001	- 85736

Source: calculated by the author according to the studied company

As noted by O.V. Chernodubova, solving the problem of developing a financial mechanism to ensure the profitability of enterprises on the basis of an adaptive approach has two components:

1) formation of an adaptive financial mechanism focused on the balance of financial relations and adaptation to changing economic conditions;

2) development of tools for the implementation of this mechanism, aimed at ensuring flexible financial policy [15].

This changes the traditional approach to the formation, distribution, and use of profits, which, adapting to changes in the environment, leads to consideration of the financial mechanism for profitability based on an adaptive approach as a set of coordinated methods, tools, levers which provide balance financial relations. For this purpose, the tools of analysis and forecasting of profitability indicators and their adjustment based on changes in the external and internal environment are used.

So, the conceptual foundations of the adaptive financial mechanism to ensure the profitability of the enterprise include the purpose, principles, object and subjects, implementation mechanism, tools, methods of evaluating the effectiveness, and providing systems.

Considering the need to calculate the integrated indicator of profit as a general indicator for further analysis of its components and the choice of direction of the enterprise, L.O. Chorna determines that the adoption of «sound organizational and technical and economic and managerial decisions it is advisable to use systems for monitoring and analysis of profitability and their dependence on external (market, legal, administrative) and internal (logistical, organizational and managerial, strategic, informational, economic, social) factors» [16].

The main indicators of economic analysis of profit include indicators of profitability (total profitability of the enterprise, return on equity, the profitability of means of production), revenue indicators (gross return on sales of products (works, services), the revenue of core, operating, investment and financial activities), factor analysis and integrated valuation (integrated profit margin) [17].

The analysis of revenue, in particular, the analysis of indicators on the indicator of the profitability of the main activity allows to reveal effective and inefficient directions of functioning of the enterprise and to make necessary changes. Similarly, using the financial levers of the adaptive mechanism of profitability provides an assessment of the tax, innovation, investment, credit, and dividend policies of the enterprise.

Let's analyze the profitability of the studied company in Table 9.

Table 9

Analysis of profitability indicators LLC «Kurland», %

Indexes	2018	2019	2020	Deviation, (+,-)
1. Return on assets	20,09	16,32	- 2,27	- 22,36
2. Return on share capital	- 51,61	- 71,75	8,46	60,07
3. Return on fixed assets	83,54	77,49	- 5,88	- 89,42
4. Profitability of the main activity	26,68	21,38	- 2,57	- 29,25
5. Product profitability	109,67	116,89	1,78	- 107,89
6. Profitability of sales	8,82	14,45	1,75	- 7,07

Source: calculated by the author according to the studied company

As can be seen from the above calculations, the profitability of LLC «Kurland» for the period under review is declining in almost all indicators, except the return on equity, as the amount of equity is negative. The presence of undistributed loss affected the value of return on equity. During the study period, there is a decrease in the efficiency of LLC «Kurland».
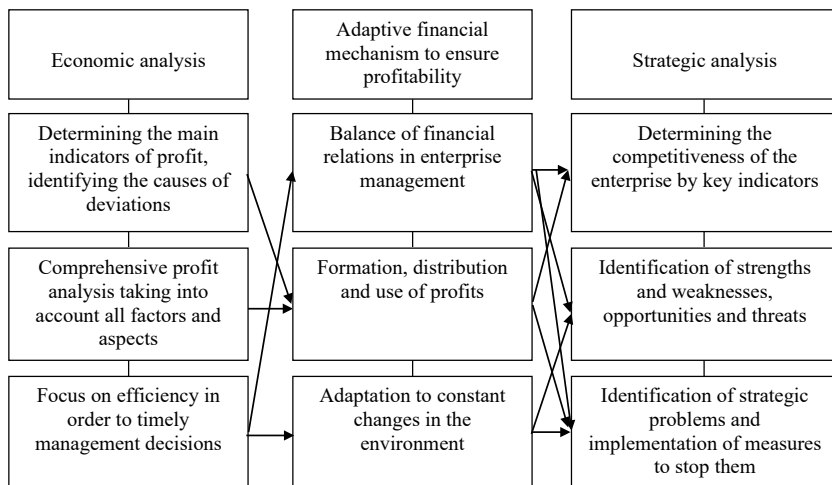
Having identified shortcomings in the analysis of profitability, we must actively develop possible ways to improve production, increase the competitiveness of products, which in the future will contribute to the growth of profits and profitability of the enterprise.

So, the economic analysis of profits in terms of risk-oriented management acquires the features of strategic analysis, which, using various applied techniques, ensures the achievement of strategic management goals.

The interconnectedness of the components and the coherence of the main tasks and objectives of economic analysis of profits in risk-oriented management, strategic analysis, and adaptive financial mechanism to ensure the profitability of enterprises are systematized in Figure 2.

So, the main tasks of economic and strategic analysis of profits, an adaptive financial mechanism for profitability need to be considered as a system, interaction in dynamics, as such an approach allows risk-oriented profit management in the enterprise.

A risk-oriented approach to the organization of economic profit analysis allows you to identify both external and internal risks, identify key ones, develop an appropriate management model to neutralize, reduce impact and prevent. An important aspect that will contribute to the goals is the formation of quality information that meets the needs of users.

Economic analysis	Adaptive financial mechanism to ensure profitability	Strategic analysis
Determining the main indicators of profit, identifying the causes of deviations	Balance of financial relations in enterprise management	Determining the competitiveness of the enterprise by key indicators
Comprehensive profit analysis taking into account all factors and aspects	Formation, distribution and use of profits	Identification of strengths and weaknesses, opportunities and threats
Focus on efficiency in order to timely management decisions	Adaptation to constant changes in the environment	Identification of strategic problems and implementation of measures to stop them

Figure 2. Features of the influence of risk-oriented management system on the method of economic analysis of profit

Source: formed by the author on the basis of [18]

The methods of economic analysis shown in Figure 2 are mainly aimed at retrospective or current analysis of financial results and factors of their formation.

Effective operation of risk-oriented management requires not only retrospective and current but also forecast economic analysis in order to assess the forecast (budget) value of the financial result in the future, taking into account information about the risks of economic activities that affect the formation of financial results.

Strategic analysis is designed to assess the forecast values of strategically important indicators of the enterprise, but it is based mainly on comprehensive assessments of economic activity, forecasting its development, establishing current and forecast competitive advantages, assessing markets, assessing the place of the entity in the market and more.

4. Findings

Today it is common practice to use statistical, mathematical, and expert methods of assessing economic, financial, market risks. Expert

methods have very subjective assessments and their application requires the involvement of highly qualified specialists in risk assessment and their impact on a particular economic indicator.

Statistical and mathematical methods are more accurate and are used on the basis of economic indicators that have occurred in the enterprise as a result of past events over time. And the longer the period of time, the more accurate, they believe, will be the forecast.

In the field of mathematical statistics, there is a correlation and regression analysis of data that allow estimating the predicted values of the studied indicator, taking into account the influence of various factors.

Correlation analysis shows the relationship between performance and factors and determines the influence of the same factors on each other. Regression analysis allows you to build a model of the behavior of the performance indicator taking into account the influence of various factors and, based on the built model, to predict the value of the performance indicator for a certain value of each of the studied factors.

We propose to use correlation-regression analysis to determine the forecast values of financial results, which is now widely used in economics at both the macro and micro levels.

The choice of correlation-regression analysis is related to the requirements of risk-oriented management, which consist of an unseparated study of a particular economic indicator, and in relation to the factors that influence it.

That is why we propose to carry out at the enterprise with the help of correlation-regression analysis to establish the forecast value of the financial result, taking into account various factors of influence, including those that arose due to risk.

The purpose and objectives of correlation-regression analysis of financial results are given in Table 10.

Having considered the essence, purpose, tasks, and information sources of correlation-regression analysis of financial results, we proceed to consider the procedure for such analysis, which is depicted as an algorithm in Figure 3.

Table 10

The purpose and objectives of correlation and regression analysis of financial results

| Purpose and objectives	Brief description
The purpose of correlation-regression analysis	It consists in establishing the forecast value of the financial results of the entity, establishing a set of factors that have a significant impact on them, and, on this basis, modeling the behavior of the performance indicator
Tasks of correlation regression analysis	The main tasks of correlation-regression analysis are: – to establish factors of significant influence on financial results of the investigated enterprise; – establish a form of relationship between factors and financial performance; – estimate the unknown parameters of the equation in order to build a model of behavior of financial results under the influence of established factors; – check the reliability of the constructed model; – build a graphical dependence of the financial result on each of the established factors.

Source: suggested by the author

The results of regression analysis are presented in the form of the Report of regression analysis, which contains the following sections: indicators of regression statistics; indicators of analysis of variance, coefficients of correlation-regression analysis.

Regression statistics indicate the tightness of the relationship between the factors selected in the model and the financial result, as well as indicate the share of factors influencing the financial result, which remained unaccounted for in the correlation-regression model of financial results.

The graphical method of constructing both the correlation-regression model of financial results and the graphs of balances play an important role in the analysis.

Graphs of the correlation-regression model are constructed separately for each pair of performance indicators and one of the factors and shows the dependence of the performance factor on each factor separately. The number of graphs constructed will depend on the number of factors presented in the model.

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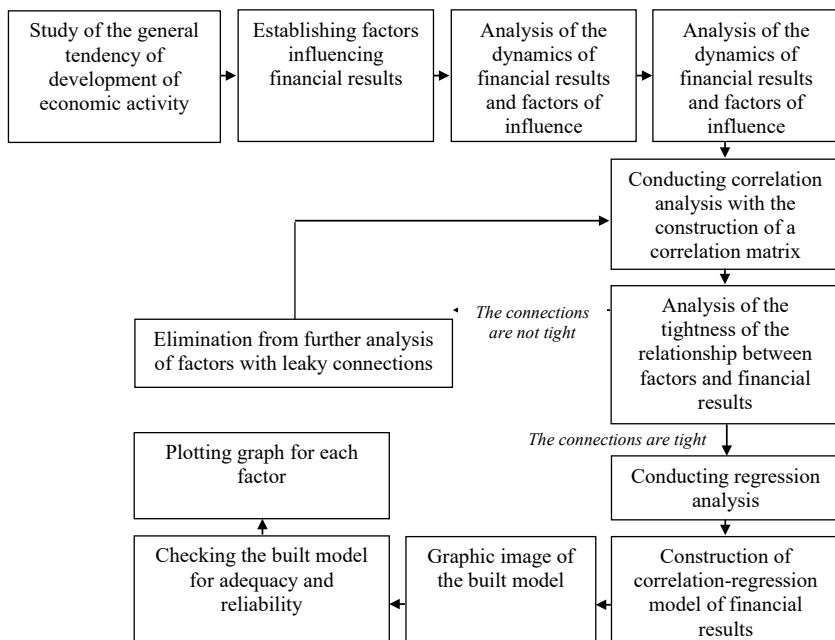
**Figure 3. General procedure for correlation
and regression analysis of financial results**

Source: suggested by the author

Graphs of factor residues show the correctness of calculations and reliability of the model. The model is reliable and accurate if the balances are normally distributed, their values are approaching or are equal to zero and there are no trends in the performance indicator.

Fulfillment of all the above conditions is a confirmation of the construction of a reliable correlation-regression model that can be used to predict financial results.

So, our proposed correlation-regression model of financial results is significant and reliable, and can also be used when budgeting financial results taking into account the predicted values of factors that affect their behavior.

5. Conclusions

An important tool in the analysis of the financial performance of enterprises is analytical evaluation in the form of techniques and methods of analysis. This assessment is used at different stages of the study of the formation, distribution, and use of financial results.

The use of analytical assessment in the formation of the analytical base of financial results should assist the company's management in identifying unusual transactions or events, as well as amounts, indicators, and trends that may indicate atypical circumstances in the formation, distribution, and use of financial results.

Risk-oriented approach to the organization of economic analysis of profits allows you to identify both external and internal risks, identify key ones, develop an appropriate management model to neutralize, reduce impact and prevent.

The study of the peculiarities of the budgeting system in terms of risk-oriented management showed the need to create a single effective coordinated budgeting system in order to achieve competitive advantages in the market, in accordance with the requirements of the modern concept of integrated management.

The KPI model provides for the determination of key indicators of income, expenses, and financial results based on the historical experience of the entity, the separation into a separate system of indicators of unforeseen costs that may occur as a result of risk, as well as establishing a system of motivation and responsibility key budget indicators.

Effective operation of risk-oriented management requires a forecast economic analysis in order to assess the budgetary value of the financial result, taking into account information about the inherent risks of the business entity. It is proposed to use in the budgeting process analytical tools for evaluating financial results, which is based on the use methods of correlation and regression analysis and allows you to build a predictive model of financial results taking into account the factors influencing them (the purpose and tasks of correlation-regression analysis of financial results, sources of information for this analysis are determined). The use of correlation-regression analysis allows you to identify the nature of changes in the value of financial results as a result of the factors of impact, both together and separately with each of the identified factors.

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