The article is devoted to deepening and structuring the procedures of non-judicial (non-conflict) expert studies, which are carried out by insolvent enterprises with a view to developing stabilization and rehabilitation financial measures aimed at the preservation of the enterprise as a legal entity; making effective management decisions aimed at achieving the strategic goals of the activity; the definition of the real usefulness of expert research as a form of implementation of financial and economic control for internal and external users of information; the formation of the current array of analytical information, logically structured towards achieving the goal.
Carried out, according to the official data of the financial reporting, the retrospective analysis of the financial and economic activity of the enterprise-bankrupt - the representative of the Ukrainian extractive industry. According to the results of research of crisis phenomena in the industry throughout 1990 - 2018, has been proved that during the outlined period there was significant physical deterioration (aging) of fixed assets annually; as a result of lack of sufficient sources of funding, there were degradation processes in the industry, which impacted negatively on the innovative activity. The low competitiveness of the extractive industry products manufactured using outdated technologies using physically and morally to the limit of worn-out fixed assets led to its weak position in world markets, which, in turn, led to a reduction in production, loss, and bankruptcy.

The use of analytical tools of the in-depth financial analysis has allowed authors to scientifically substantiate and prove that during 2002 - 2018, the management of industrial enterprises of the extractive industry systematically carried out deliberate actions to bring the enterprise to bankruptcy. It has proved that managerial financial decisions on short-term lending, asset management, financial policy formation, management of revenues and expenditures during the period of the expert study were aimed at reducing the company as an independent legal entity.

The prerequisites and consequences of bankruptcy have systematized; factors of influence on the results of the activity of industrial enterprise are structured. It is proved that conducting non-judicial (non-conflict) expert researches is an obligatory prerequisite of the prevention of crisis financial phenomena leading to bankruptcy.

Стаття присвячена поглибленню та структурації процедур несудових (неконфліктних) експертних досліджень, які здійснюють неплатоспроможні підприємства з метою: розробки стабілізаційних та відновлювальних фінансових заходів, спрямованих на збереження підприємства як юридичної одиниці; прийняття ефективних управлінських рішень, спрямованих на досягнення стратегічних цілей діяльності; визначення реальної корисності експертного дослідження як форми реалізації фінансово-господарського контролю для внутрішніх і зовнішніх користувачів інформації; формування актуального масиву аналітичної інформації, логічно структурованої у напрямку досягнення цілей. Здійснено, за офіційними даними фінансової звітності, ретроспективний аналіз фінансово-господарської діяльності підприємства-банкута – представника видобувної галузі України. За результатами проведенного дослідження кризових явищ в галузі впродовж 1990 – 2018 рр. доведено, що впродовж окремого періоду щорічно відбувалося значне фізичне спрацювання (старіння) основних засобів; наслідком відсутності достатнього обсягу джерел фінансування стали деградаційні процеси в галузі, які негативно позначились і на інноваційній діяльності. Низька конкурентоспроможність продукції добувної галузі, виробленої за застарілими технологіями з використанням фізично і морально до межі зношених основних засобів, обумовила її слабкі позиції на світових ринках, що, у свою чергу, призвело до скорочення виробництва, збитковості та банкрутства. Використання аналітичного інструментарію поглибленого фінансового аналізу дозволило науково обґрунтувати та довести, що впродовж 2002 – 2018 рр. керівництво промислового підприємства добувної галузі систематично здійснювало усвідомлені дії по доведенню підприємства до банкрутства. Доведено, що управлінські фінансові рішення щодо короткострокового кредитування, розпорядження активами, формування фінансової політики, управління доходами та витратами підприємства впродовж періоду проведення експертного дослідження були спрямовані на зниження підприємства як самостійної юридичної особи. Систематизовано передумови та наслідки банкрутства; структуровано чинники впливу на результати діяльності промислового підприємства. Доведено, що проведення несудових (неконфліктних) експертних досліджень є обов’язковою передумовою запобігання кризових фінансових явищ, що призводять до банкрутства.
**Problem statement.**

Ukraine continues to make a difficult transition to a democratic European system of government and is going through a thorny path of economic inequality in the conditions of production and trade in the European market space, due to outdated production systems left to Ukraine after independence in 1991 and modernization of which requires a long time and significant investment; the system of public administration is being restructured and new priorities for the development of the domestic economy are being formed. In these arduous conditions, the process of developing and adopting strategic documents defining approaches to Ukraine's industrial policy becomes especially relevant. During 2016 - 2018, the process of developing an industrial strategy took place, but the adoption of the relevant document did not take place. There is only a draft Strategy for the long time and significant investment; the system of public administration is being restructured and new priorities for the development of the domestic economy are being formed.

In these arduous conditions, the process of developing and adopting strategic documents defining approaches to Ukraine's industrial policy becomes especially relevant. During 2016 - 2018, the process of developing an industrial strategy took place, but the adoption of the relevant document did not take place. There is only a draft Strategy for the development of the industrial complex of Ukraine until 2025. The draft Strategy identified a number of general measures that are key to both the development of the industry as a whole and Industry 4.0. There is a Strategy of Innovative Development of Ukraine for the period 2030 in the form of a project. In January 2018 the Concept of the development of the digital economy and society of Ukraine for 2018 - 2020 was approved, i.e. it is a valid strategic document defining certain measures for the transition to Industry 4.0, the implementation of which is important to increase the country's readiness for the fourth industrial revolution. The development of the industry needs to continue the main reforms and efforts to improve the investment climate. Focusing on strategic industries, such as the extractive industry, it should be emphasized that state aid for the development of the industry, in our opinion, should come by the following principles: it should be provided on time, for a certain period of time, and targeted.

According to experts - economists of leading technical institutions of higher education in Ukraine, the development of industries; implementation of innovations as prerequisites for the transition to new production; informing about EU programs; intensification of technology transfer; the development of innovation ecosystem; improving the investment climate by reducing the regulatory burden on business - all this should be the foundation for the creation of national and regional platform 4.0. Therefore, in our opinion, an important role in the economic processes taking place in our country is played by expert studies of enterprises. Their role is constantly growing due to increased competition and the complexity of globalization. The above confirms the relevance of the research topic.

**Analysis of recent research and publications.**

The main sources of information are the works of leading economists who consider issues of economic security of enterprises, expert studies of financial and economic activities as a form of control, such as V. M. Mykhailenko, O. V. Arefieva, T.H. Vasyltsiv, O.F. Dolzhenkov, I.V. Perevozova, etc. Problems of structural-logical sequence and information-analytical support of processes of expert research in scientific publications of Ukrainian economists are considered periodically and not in full due to lack of information. Therefore, the authors of the article outlined the limits of existing problems in this area and expressed their views on the processes taking place in the extractive industry of Ukraine and the industrial enterprise of this industry. That allowed to propose a structural-logical sequence of the expert research and to formulate the preconditions for the prevention of financial crises that lead to bankruptcy, as well as to justify practical counteractions to intentional bankruptcy.

**Setting objectives.**

The aim of the article is the development of a structural-logical sequence of the expert research of the extractive industry, substantiation of the preconditions for bankruptcy prevention, and development of practical recommendations to combat bankruptcy and counteraction to intentional bankruptcy.

**Presentation of the main material of research.**

Within the economic examination, the following types of examinations are carried out: an examination of documents of accounting, tax accounting and reporting; examination of documents of the economic activity of enterprises and organizations; examination of documents of financial and credit operations. [1]. The main tasks of the examination of documents of the economic activity of enterprises and organizations are the following:

- determination of documentary substantiation, analysis of financial condition indicators (solvency, financial stability, profitability, etc.);
- determination of documentary substantiation, analysis and structure of property and sources of its acquisition;
- determination of documentary substantiation, condition, and intensity of use of current assets and sources of their formation;
- determination of documentary substantiation and analysis of sources of own funds and results of financial and economic activity;
- establishment of documentary substantiation and analysis of general economic and special funds;

**Keywords:** non-judicial (non-conflict) economic expertise; insolvent enterprise; bankruptcy; retrospective analysis; extractive industry; financial instability.

**Ключові слова:** несудова (неконфліктна) економічна експертиза; неплатоспроможне підприємство; банкрут; ретроспективний аналіз; видобувна галузь; фінансова нестабільність.
− determination of documentary substantiation and analysis of the reality of settlements with debtors and creditors;
− determination of documentary substantiation and analysis of the economic feasibility of obtaining and using credit and loans;
− determination of documentary substantiation and analysis of costs and prices as factors of financial stability, break-even, and other tasks.

Thus, the list of tasks of examination of documents on the economic activity of enterprises and organizations makes it possible to formulate the concept of economic examination related to non-judicial (non-conflict) examination. According to the authors, an economic non-judicial examination is a periodic, systematic study of factors and results of economic activity of an economic entity that require qualified impartial assessment of an expert (a group of experts) to achieve a certain goal (or several goals) and solve examination's tasks that related to the conduct of financial and economic activities, which includes operations of accounting, analysis, planning, and control, as well as to prevent and forecast threats and entrepreneurial risks of capital loss. The economic non-judicial examination must comply with the following principles: timelyness, completeness, objectivity, and effectiveness.

According to I.V. Perevozova, it is expedient to use economic non-judicial examination as the most effective form of financial control of the enterprise. Here can be reduced the essence of economic-expert research to the task of identifying the most economical direction of implementation of the proposed measure for the functioning of a particular area of economic activity. Or vice versa - for substantiating of confidence in the reliability of the functioning of this area to the event already held. [2]. According to the results of such examination, the management of the enterprise will have greater confidence in the correctness of the management decisions approved by it [3].

The economic non-judicial examination is especially relevant for enterprises that are on the verge of bankruptcy and need qualified management decisions on the feasibility of continuing financial and economic activities, obtaining financial results that directly affect the macroeconomic performance of the industry and the national economy as a whole.

Today, destructive phenomena, along with other industries, are observed in the extractive industry of Ukraine, which is strategic. Given the fact that one of the pressing issues in Europe today is the shutdown of coal-fired power plants and the transition to alternative energy and natural gas, we understand that the demand for natural gas will increase. In this regard, considering the medium-term perspective, financial resources must be invested in production, but if the company is not able to effectively manage its assets, it is advisable to sell them. The level of production must be maintained by increasing the mineral resource base, the sale of licenses so that by the time the price trend increases, we have prepared production.

Volumes of natural gas production in Ukraine are presented in figure 1. The dynamics of indicators show that for 29 years, the volume of natural gas production has not recovered to the level of 1990; there is no increase in production. In 1990, gas production amounted to 28.1 billion cubic meters, and in 2018 - respectively 20.9 billion cubic meters, or 25.6% less. Ukraine is currently not providing their own needs of coal or natural gas, or oil by its own production. The import of these strategic fuel and energy resources requires significant foreign exchange that is scarce in Ukraine.

![Fig. 1. Dynamics of natural gas production in Ukraine](image)

The main economic preconditions for such a decline in the industry are the extremely depreciated state of fixed assets and the lack of sufficient sources of funding for innovation and investment activities, which are key signs of loss of financial security of the industry. Sufficient availability of fixed assets, their timely renewal, modernization, and expansion directly characterize the state of production safety of the industry. Over the last 15 years, due to the lack of own financial resources of enterprises of the industry due to constant inflationary depreciation of funds of the depreciation fund, low profitability of production, extremely unfavorable conditions for bank lending to the real sector of the economy, meager government lending for technical re-equipment and expansion of production, there was a
constant annual significant physical operation (aging) of fixed assets. In 2014, the degree of depreciation of fixed assets at the enterprises of the industry of Ukraine, in particular at the enterprises of the extractive industry, reached threatening to carry out the business itself 76.9%. Low competitiveness of products of the extractive industry, produced by outdated technologies with the use of physically and morally to the limit of worn-out fixed assets, causes its weak position in world markets, which, in turn, leads to reduced production, unprofitable, lack of sources to cover even direct wage costs and even to bankruptcy.

If in 1990 the share of unprofitable enterprises of the extractive industry was only 2%, then since 2011, the share of unprofitable enterprises has reached 50.6%. Even though during 2011 - 2018 the share of unprofitable enterprises decreased to 36.1%, this cannot be considered a positive factor because during this period we observe the degradation of this industry of Ukraine, which is characterized by the following:

- arrears of wage payments by bankrupt enterprises as of 1 January 2018, amounted to UAH 23,521 thousand; as of 1 January 2019 - UAH 28,180 thousand; that is, there is a stable trend of debt growth, the lack of solution mechanisms of socio-economic problems that pose a threat of loss of economic security at the state level;
- social tensions in society (lack of jobs and stable wages) causes an outflow of narrowly professional staff (the drillers), which is very relevant for the extractive industry, and this makes it impossible to resume the development of this industry.

Similar crisis phenomena that led to bankruptcy took place at Bukros Drilling Company PJSC during 2002-2018 [4]. Bukros Drilling Company PJSC is a manufacturing enterprise for the construction of oil and gas wells.

The tendency of changes the value of the property (Fig. 2) indicates an increase in the value of assets by revaluation surplus of fixed assets without economic justification, which provides for the reconstruction, modernization, and other improvements in the quality of fixed assets; there are also no species structural changes in fixed assets. The outlined policy of revaluation surplus of fixed assets had a negative impact on the results of financial and economic activities, in particular in the formation of prices for the products of the enterprise.

**Fig. 2. Dynamics of the value of assets of Bukros Drilling Company PJSC during 2002 - 2011**

Trends of change in the ratio of non-current and current assets of the enterprise during the analyzed period indicate the capitalization of property, which reduces its mobility (Fig. 3). Thus, the value of non-current assets is several times higher than the value of current assets since 2006.
The increase of the value of fixed assets has led to an increase of volume of equity, which shows a sufficient level of equity to cover liabilities in case of calculating the ratios, but economically - the enterprise did not receive resources to improve its financial condition in terms of solvency and financial stability. Such a procedure was used by the enterprise to justify solvency to banking institutions in providing credit resources for the "problem" enterprise. The results of the examination showed that as of 1 January 2012, more than 60% of fixed assets were completely worn out.

During the analyzed period (2002 - 2011), the weight of tangible current assets in the form of inventories and work in progress increases and reaches the level of 56.17% as of 31 December 2005, and 88.6% as of 1 January 2012. That is a systemic sign of "freezing" working capital in inventories, which leads to a decrease in their turnover and efficiency. In the same period, there is a significant reduction in economic turnover. The total amount of tangible current assets in the total current assets of the enterprise is 72.21% as of 31 December 2002, and 89.2% as of 1 January 2012.

Already in 2003, despite the financial crisis, the enterprise's management attracted credit resources of the bank (according to official data from the electronic source of the issuer of securities smida.gov.ua) in the amount of UAH 2,300 thousand:
- short-term bank credit on 31 January 2003, UAH 1,300 thousand (at 22% per annum);
- short-term bank credit on 29 September 2003, UAH 1,000 thousand (at 21% per annum).

In 2010, the enterprise additionally attracted credit resources in the form of short-term bank credit, the total amount of debt on credits as of 31 December 2010, amounted to 4,302.0 thousand UAH. During the period under review, there were changes in the structure of debt, but the total amount of accounts payable gradually increased. As of 1 January 2012, the structure of accounts payable was as follows: insurance debt (SSC) had the largest share - 43.9%; debt to the budget was 24.4%; debt on bank credits - 13.5%; wage arrears - 8.6%; accounts payable for goods, works, services - 6.01%; other current debt - 2.7% and debt on received advances - 1%. Thus, the financial insolvency of Bukros Drilling Company PJSC is manifested not only in commercial activities but also in non-payment of taxes and fees, non-payment of wages, inability to service credit resources, which together are financial signs of bankruptcy, which were evident in 2011.

According to the results of the economic non-judicial examination, the followings indicate the financial inability of Bukros Drilling Company PJSC to ensure the "normal" movement of financial and economic activities, during the period under review:
- reduction of the cost of equity due to the steady systematic growth of uncovered losses;
- the growing of deficit of own current assets;
- "capitalization of assets" by increasing the value of fixed assets, resulting in the share of non-current assets as of 1 January 2012, amounted to 85.5%, which significantly increased the component of fixed costs (depreciation) in the cost of production and led to non-competitive pricing;
- reducing the negative amount of functioning capital;
- accumulation of unmotivated by the production of inventories of goods and low-liquid balances of work in progress under the conditions of simultaneous reduction of production, which is a mechanism of "freezing" of current assets in inventories;
- growth of arrears of wages; proportional increase in insurance debt (SSC);
- reduction of labor productivity per person.

It is necessary to pay attention to such tendencies of change of the coefficient of financial autonomy. As of 1 January 2002, it was equal to 0.5, as of 31 December 2011 it was already 0.8, but this level is not financially justified from the point of view of financial stability because the share of equity has increased due to overestimation valuation of fixed assets by the decision of the owners, which is carried out to technically avoid bankruptcy proceedings; but the
enterprise operates in a market economy, so an overestimation of the value of fixed assets is not a guarantee of sale of property in the bankruptcy procedure at the value reflected in the balance sheet.

Thus, the results of the economic examination of the activities of Bukros Drilling Company PJSC during 2002 - 2011 indicate that the enterprise was in a state of persistent current insolvency and had clear signs of bankruptcy. The main causes of the financial crisis include:

− low liquidity and financial instability, which can be seen from the trends of changes of the structure of current assets and short-term liabilities; the trends of the calculated indicators of liquidity, financial stability; the trends of changes of absolute indicators of current solvency; unprofitable activities at the level of operating and ordinary activities; sustainable loss-making activities with a tendency to accumulate uncovered losses in equity;
− investment and innovation passivity explained by the constant shortage of own financial resources, "aging" of fixed assets; disinterest of owners in investing funds to unprofitable activities of the enterprise, and vice versa - the diversion of funds from the main activity;
− financial and economic crisis, which lasted in the country during the analyzed period and had a significant impact on the enterprise;
− inefficient internal management aimed at "delaying" the financial crisis by attracting credit resources in periods of unprofitable activities and taking administrative measures aimed at concealing the financial crisis.

Economic non-judicial examination of financial and economic activities of Bukros Drilling Company PJSC in 2012 - 2018 is characterized by the following results. There is a withdrawal of the share of the property and a lack of cash from its sale. Ninety-seven wells worth UAH 5,258,873,908.00 without VAT (UAH 6,310,648,689.00 with VAT) were put into operation from the off-balance sheet account.

During the period 2012 - 2018, the financial and economic condition of the enterprise did not correspond to that which characterizes the ability to carry out economic activities. Beginning in 2013, the enterprise's management methodically withdrew the property from the economic turnover, and by transferring specialized assets from off-balance-sheet accounts to the balance sheet deliberately postponed the bankruptcy procedure. In parallel, the process of accumulation of uncovered losses took place.

It should be noted that to conceal information about the write-off of property shares during the entire period under analysis, the enterprise's management did not reflect in the accounting of these transactions and provided inaccurate information in the financial statements. As of 31 December 2015, in order to increase the value of equity and property on the balance sheet accounts, the value of specialized assets was taken into account and as of 1 January 2016, the value of assets amounted to UAH 5,570,303 thousand.

In addition, the lack of a "normal" movement of financial and economic activities during the period under review is evidenced by key indicators:

− no costs for servicing credit resources since 2012;
− accumulation of uncovered losses of previous years;
− the lack of own current assets;
− further "capitalization of assets" by increasing the value of fixed assets and transfer to the balance sheet accounts of specialized assets, resulting in the share of non-current assets as of 31 December 2015 amounted to 95%, which prevents the formation of adequate pricing policy and further economic activity;
− financial insolvency to repay interest and principal by credit obligations, which causes penalties and encourages the banking institution to seize the mortgaged property;
− the rapid growth of accounts payable under such items as liabilities to the budget; according to insurance calculations; according to payroll calculations.

Based on the economic non-judicial examination of the results of the financial and economic activities of the enterprise, which led to long-term insolvency, we can conclude that the enterprise was in a state of bankruptcy since 2006.

The economic non-judicial examination aims not only to conduct an expert study of the financial and economic activities of the enterprise according to the generally accepted method but also to establish causal links between the influencing factors to the processes and results of the enterprise; detection of hidden influences of internal and external environment on the results of the financial and economic activities; taking into account the time factor that is relevant for the formation of an array of analytical information. In fig. 4 presents the structural-logical sequence and information-analytical tasks of the economic non-judicial examination of financial and economic activities of the enterprise, which is carried out in order to determine the signs of fictitious bankruptcy; actions to bring to bankruptcy; actions to conceal bankruptcy; signs of loss or restoration of solvency.
Conclusions from the study.

Therefore, the implementation of economic non-judicial expertise is a necessary and mandatory prerequisite for the prevention and pre-emption of financial crises that lead to bankruptcy.

Thus, the untimely response of regulatory authorities to the unfair attitude of the enterprise's management to the issue of preservation of property and its effective use led to the bankruptcy of the enterprise of the extractive industry that is strategically important for the economy of Ukraine.

The development of the industry of Ukrainian requires a careful overhaul of the education system, in particular, to provide technical institutions of higher education organizational, economic, and legal foundations of the formation of the Industry 4.0 platform, which is based on the solution of a threefold strategic scientific task ensuring effective interaction in the system "HEIs – business (industrial enterprises by industry) - the state". The issues of improving the tools of financial support of business with the participation of an industrial enterprise in the development of Industry 4.0 in order to improve the industrial and innovation policy of the state cannot be ignored either.

The scientific community of the Engineering Institute of ZNU, which trains highly qualified specialists in many engineering and economic specialties, believes that the Zaporizhzhya region, which is represented by strategic industries, have every reason to create a regional platform 4.0 following the example of EU countries, which would unite state institutions, business and scientists.

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