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Probabilistic Liability as an Economic Category in Valuation and Analytical Procedures

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ABSTRACT
The subject of the study is probabilistic obligations as one of the elements of hidden obligations, which in turn are included in the category of informal obligations (obligations that do not have all the legislatively established criteria). The aim of the work is the scientific justification for identifying and determining the value of probabilistic obligations. The feasibility of determining probabilistic obligations is due to the need to improve the assessment and other analytical procedures in modern conditions. A probabilistic obligation is defined by the author as a probabilistic obligation of an economic entity, the settlement (cancellation) of which will lead or may lead to the disposal of the organization of resources containing economic benefits, which may appear with a certain probability in the future as a result of inaction of the organization and / or occurrence (non-occurrence) of one or several future uncertain events, including those not controlled by the organization.
The article discusses in detail the main causes of probabilistic obligations for the company. As a result of the research, the following tasks were solved: the essence of such an economic category as probabilistic obligations was revealed; analyzed the reasons for the need to determine them; considered the legal basis and economic reasons for the presence of obligations with a criterion of probability of occurrence; The basic principles of determining the value of probabilistic obligations are proposed. The article discusses examples of the appearance of probabilistic obligations.
The proposed use of probabilistic obligations in the scientific category of the economic category will allow for more efficient management functions, will assist in the development of valuation procedures, will allow for more detailed disclosure of information in accounting (financial) statements, and will also simplify financial analysis, including bankruptcy proceedings.
Keywords: probabilistic obligation, informal obligation, hidden obligation, contingent liability, estimated liability, estimated activity, management accounting, financial analysis, own funds, business value.
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INTRODUCTION
The role of valuation activity in modern conditions is extremely important, because solves many problems of economic relations [7]. Many scientists are involved in improving the assessment procedures. Moreover, in scientific research in the field of valuation, it is important to study both the assets and liabilities of the company. The economic category of “commitment” has long been included in scientific circulation and practice in all areas of economic science. However, taking into account the specifics, legal regulation, and prevailing practice in a particular area of economic activity, the concept of “obligation” has some different interpretations and nuances [12, 15,18,19, 21].
This study is devoted to the definition of the concept of one of the elements of the liabilities of society - probabilistic obligation.
Obligation as an economic category is used in various sciences: accounting, jurisprudence, appraisal, management accounting, business planning, etc.
Liabilities are an integral element in calculating the net assets (equity) of the valued company [1].
Probabilistic obligations investigated in this article are one of the elements of hidden obligations [8], which in turn are included in the category of informal obligations (obligations that do not have all the legislatively established criteria) [10].

LITERATURE REVIEW
Jurisprudence defines an obligation as the obligation of one person (debtor) “to perform a certain action in favor of another person (creditor), such as: transferring property, performing work, providing services, contributing to joint activities, paying money, etc., or refrain from a certain action, and the creditor has the right to demand from the debtor the performance of his duties. Obligations arise from contracts and other transactions, as a result of harm, as a result of unjust enrichment, as well as from other grounds.” (Article 307 of the Civil Code of the Russian Federation).
Note that the concept of “obligation” from the point of view of accounting has some discrepancies arising from the accounting system. The concept of “liability” for the Russian accounting system (RAS) and the international financial reporting system (IFRS) will have differences [4,5].
The concept of “obligation” is used in regulatory documents governing accounting procedures, as well as other economic sciences, for example, valuation, audit, financial analysis.
Obligation - “the debt of the organization existing at the reporting date, which is the result of completed projects of its economic activity and the calculations on which should lead to the outflow of assets. An obligation may arise due to the validity of a contract or legal norm, as well as business customs” [12].
Cancellation of an obligation provides for the cancellation of the creditor's claims, with the simultaneous deprivation of any property (property rights) from the organization itself. Debt can be repaid by paying money, transferring assets, providing services, in the form of replacing one type of obligation with another, removing claims from the lender, forgiving the debt, offsetting, converting the obligation into capital and in other ways not prohibited by law.

In accounting, as well as in financial statements, the obligation is reflected when the settlement of the obligation provides a high probability of the outflow of assets that can bring economic benefits to the organization, and when the amount of the liability can be measured with a sufficient degree of reliability.

Consider the definition of a liability under IFRS. “A liability is an entity's existing obligation arising from past events, the settlement of which is expected to result in the disposal of the organization's resources containing economic benefits” [18].

According to existing accounting rules “in order for an obligation to exist, all three criteria must be met:

- the organization has an obligation;
- this obligation is to transfer an economic resource;
- this obligation exists at present and was formed as a result of past events [20].

As with assets, the concept of liability in accordance with IFRS has a broader meaning: obligations for accounting purposes in accordance with IFRS, in addition to the grounds inherent in obligations under RAS, include obligations arising as an obligation to return the assets received for temporary use or disposal. And according to accounting procedures in accordance with which IFRS financial statements are generated, the availability and use of off-balance accounts is not provided [5]. From an economic and legal point of view, this difference, according to the author, is the most significant between RAS and IFRS when defining the concept of “liability”.

According to RAS and IFRS, for accounting purposes, an asset and a liability are determined (and are reflected in the financial statements) by the following conditions:

- the presence of an asset or liability is real at the relevant date, has all the relevant signs and is due to the fact of economic life;
- there are relevant legal documents (for RAS and IFRS, the rights to recognize an accounting item may vary);
- the value of the accounting object (asset or liability) can be measured (estimated) with a sufficient degree of reliability.

Some discrepancies in terms of assets and liabilities under RAS and IFRS are offset by off-balance sheet accounts, which according to RAS are used to summarize information on the availability and movement of values temporarily in use or disposal of the organization, as well as conditional rights and obligations [13].

However, such accounting procedures, using accounting accounts, off-balance accounts, are not enough to reflect all facts of economic life, as well as emerging assets, liabilities, income and expenses.

Note that for more than two decades in Russia there has been a steady tendency towards the transformation of the Russian accounting system and the transition to international financial reporting standards; a number of regulatory documents have been adopted that govern the application of IFRS in Russia.

The concept of liability is used in various regulatory documents governing IFRS. For example: “obligation - in case the employee rendered the service in exchange for compensation payable in the future”, “financial obligation”, etc. [16-18].

A lot of research has been devoted to the issues of determining, accounting and evaluating obligations [2,3, 10, 21].

METHODOLOGY

The author notes that if we consider the obligations for the purposes of business valuation, management accounting, operational and strategic management, conducting analytical financial analysis procedures, the concept of “obligation” meets the criteria of obligation in accordance with IFRS more than in RAS, however, if the concept of “obligation” are used for accounting purposes under RAS, in this case it is necessary to rely on regulatory documents governing the implementation of accounting accounting procedures Provided under RAS. Valuation activities, as well as other analytical areas of the economy are extremely important in modern economic conditions [7].

It should be noted that the occurrence of obligations can be predicted, there is a reasonable assumption that the organization will have an obligation to pay off debt in the future.

From an accounting point of view, the occurrence of liabilities in the future is determined by estimated liabilities. “Estimated liability - an obligation with an indefinite period of performance or a liability of an indefinite amount” [18].

Similar in essence definitions of estimated liabilities exist in other regulatory documents [15,19].

For determination, assessment and recording (and, consequently, use in financial analytical procedures) of estimated liabilities is carried out with reasonable assurance that a future obligation will arise, and the amount of such a liability can be determined and justified. Reflection in accounting for estimated liabilities occurs through the creation of appropriate reserves, for example: reserve for employees leave, reserve for warranty service, reserve for capital repairs of fixed assets, etc. Through the formation of reserves, the organization evenly includes the cost of deductions to the created reserves, which it subsequently uses to pay off liabilities arising in the future.

If the estimated liabilities cannot be reliably determined and calculated, then the concept of contingent liabilities is used. The term "contingent liabilities" is used for liabilities that do not meet the criteria for their recognition for accounting purposes.

The variety of various facts of the economic life of companies, situations, events, emerging circumstances leads to the need to consider economic principles, concepts and definitions in a wider range than is provided for by applicable laws and regulations governing accounting.

ANALYSIS

For valuation activities, management accounting, and in a number of other cases, it is advisable to consider obligations more broadly. With regard to obligations that the organization may have in the future with only a certain probability, including with a probability of occurrence less than 50%, the author proposes to use the concept of “probabilistic obligation”.

A probabilistic obligation - is a probabilistic obligation of an economic entity, the settlement (cancellation) of which will or may lead to the disposal of the organization of resources containing economic benefits, which may appear with a certain probability of occurrence in the future as a result of the inaction of the organization and / or occurrence (non-occurrence) of one or more future uncertain events, including those not controlled by the organization.

A probabilistic obligation does not meet all the criteria of the obligation for accounting purposes, but within the framework of the corresponding economic science, discipline or direction has sufficient signs for recognition as a liability and can be used for valuation procedures, managerial accounting, financial analysis, business planning and other analytical procedures, not regulated by accounting rules. A probabilistic obligation is to be determined, including with a low (substantially less than 50%) probability of occurrence, and a cost estimate using economic and mathematical tools to determine the likelihood of an adverse financial event occurring (for example: the possibility of bringing to subsidiary liability and recovering losses from the analyzed (of the assessed organization as a management company (functions of the executive body) or as the owner, co-owner of a subsidiary or dependent company; -judicial and / or judicial financial claims, obligations arising from challenging in court previously completed transactions, etc.) [10].

A probabilistic liability has some similar characteristics with a contingent liability, but differs from it. Unlike a contingent liability, a probabilistic liability is subject to valuation.

Consider the individual elements of probabilistic obligations:

- a probabilistic obligation arising from the occurrence of a probabilistic asset (for example, if there are grounds for challenging judicially conducted transactions, including the occurrence of such grounds during the bankruptcy procedure);
- the alleged obligation to compensate for lost profits, losses of third parties;
- the existence of grounds for bringing the organization to subsidiary and / or joint liability;
- the alleged accrual of penalties, the obligation to finance environmental measures or other negative financial consequences that may arise during the planned control measures of state bodies;
- the estimated additional charge of taxes, fees and related sanctions as a result of systematic (for example, every three years) tax control measures;
- other probabilistic obligations.

The specified list of probabilistic obligations is not exhaustive and closed. Consider the given positions of probabilistic obligations in more detail.

A probabilistic liability arising from the occurrence of a probabilistic asset (for example, if there are grounds for challenging judicially completed transactions, including the occurrence of such grounds during the bankruptcy procedure). The analysis identified the grounds for contesting transactions. Moreover, the company being evaluated can be the plaintiff (initiator) of contesting the transaction, and the defendant, i.e. will be required to enter the proceedings not on his own initiative [14]. As a result of contesting a transaction, an organization may receive both assets and liabilities [11]. However, these facts are only probabilistic in nature. In this case, both the asset and the liability will be probabilistic, and contesting the transaction may be economically beneficial or disadvantageous for the organization. It should be noted that during the bankruptcy procedure, the likelihood of grounds for contesting transactions is more likely than in ordinary relationships between business entities. Accordingly, when evaluating a company in bankruptcy, the possibility of probabilistic liabilities increases.

The alleged obligation to compensate for lost profits, losses of third parties. In this context, claims can be considered as probabilistic obligations directly arising from the contractual relationship for which claims are filed, however, the outcome of the trial of claims (losses, lost profits, etc.) is ambiguous and is only assumed (probable) character. Also, for the studied economic category, the alleged financial claims systematically arising in the course of the company's activity are suitable. For example, a company produces technically sophisticated products for which there is a three-year warranty period. Taking into account the analysis of past years, it was determined that in the first year after the sale of products reasonable claims arise in the amount of 2% of the value of products sold, in the second year after the sale of products reasonable claims arise in the amount of 1% of the size of products sold and in the third year after the sale of products reasonable claims arise in the amount of 0.5% of the value of products sold. Thus, it is possible to determine the probabilistic obligations associated with the warranty repair of finished products.

The existence of grounds for bringing the organization to subsidiary and / or joint liability. In the course of business activities, there are cases when a company may have an obligation to pay off debts to third parties arising on the basis of bringing the evaluated company to subsidiary and / or joint liability [14]. Similar obligations may arise from contracts of guarantee (for example, for affiliated companies), under which the company being valued may be the person obligated to repay unfulfilled obligations.

The estimated accrual of penalties, the obligation to finance environmental measures, or other negative financial consequences that may arise during the planned control measures of state bodies.

The inclusion of the company in the audit plan for compliance with antitrust, environmental, fire laws or other specialized inspections with a high probability may indicate the occurrence of negative financial consequences. The size of financial claims by state control bodies may vary, depending on the scale of the activity. In most cases, the elimination of violations identified by state control bodies leads to additional expenses of the organization, which can be defined as a probabilistic obligation.

The estimated additional charge of taxes, fees and related sanctions as a result of systematic (for example, every three years) tax control measures. As practice shows, the probability of additional taxes in the framework of the field tax audit is quite high. Of course, the amount of such additional charges will depend on the company's internal control system. The projected additional charge of taxes during tax control measures can reasonably be considered probabilistic liabilities [9].

For any analytical procedures, it is important not only to determine the fact of the existence of a probabilistic obligation, but also to determine its size. For this, it is necessary to determine the anticipated, projected liability that may arise in the future. Next, you need to determine the appropriate risk (the probability of this adverse event.

The very probability of events can be determined by the tools used in modern science. This may be a mathematical model based on an analysis of previously occurring events. The method of expert assessments can also be applied, based on a generalization of the opinions of the interviewed experts of the corresponding field of activity.

DISCUSSIONS

Consider examples of determining the size of a probabilistic obligation.

Example 1

A pharmaceutical company sold a batch of medicines for 1,000,000 monetary units. Cash is fully received from customers. Later it turned out that in the production of this (already implemented) batch there were technical problems that were identified after the sale of drugs. The company withdraws this shipment. It is supposed to terminate supply contracts with all buyers of this batch of products. During these activities, it is expected to return a batch of drugs. Medicines are subject to destruction.

At the current moment (for example, the date of assessment or financial analysis), the drugs have not yet been returned, the obligation to return funds will arise in the future, after the return from the suppliers of products. But already at the current date it is possible (for the purposes of valuation activity, financial analysis, but not for accounting purposes, according to which the company will have obligations after the fact of returning the products and the corresponding documentation), a probabilistic obligation can be determined.

The probability of obligations can be considered in the amount of 100%, and the value of such obligations may consist of the amount of money to be returned to customers, penalties for improper performance of the contract by the pharmaceutical company (for example, in the amount of 10% of the cost of production), and compensation for transport costs for the return of products (for example, 150,000 monetary units).

As a result, on the current date of the assessment, a probabilistic obligation can be determined by summing the amount of cash to be returned, the amount of penalties and compensation for transportation costs for returning the product; the value of probabilistic liabilities is determined in the amount of 1,250,000 monetary units (1,000,000 + 100,000+ 150,000).

Example 2

A pharmaceutical company has sold 10,000,000 packages of dietary supplements. All products were sold to the public. During the application, it turned out that in 0.1% of the population, the use of these dietary supplements led to poor health. This fact has been proven through appropriate laboratory tests. Judgments of the first affected people determined that health deterioration was estimated at 300 monetary units.

At the moment, court decisions have been received only for the first victims.

It has been determined by expert judgment that approximately 80% of victims will go to court for compensation.

Accordingly, in order to determine a probabilistic obligation, it is necessary to carry out the following calculations: determine the amount of the estimated number of people affected by biologically active additives, determine, taking into account the probability of filing lawsuits, the number of all lawsuits and multiply by the amount of compensation for ill health determined by the court. Thus, a probabilistic liability can be determined in the amount of 2,400,000 monetary units (10,000,000 * 0.1% * 80% * 300).

Example 3

A food processing company through the processing of agricultural products has formed a retail sales network for these products. The retail sales network is formed in the form of 10 subsidiaries (individual legal entities), which cover independent territories.

Taking into account the established practice, it became known that one of the subsidiaries involved in the retail sale of food products of the parent company is operating inefficiently, at a loss. Currently, the amount of losses is 1,000,000 monetary units. This loss-making company enters into bankruptcy proceedings. The financial analysis of the bankrupt company led to the well-reasoned conclusion that the company's assets would not be enough to cover all liabilities, and taking into account the costs of the bankruptcy process itself, by the time the bankruptcy procedure is completed, the amount of outstanding debt to bankrupt creditors approved by the court in the register of creditors will amount to 1,200,000 units. Since the parent company actively managed the subsidiary, influenced strategic decisions, it is highly likely (the probability is set at 90%) that the court will ultimately hold the parent company subsidiary, i.e. the parent company will have to pay off the debts of the subsidiary to bankruptcy creditors.

Thus, at the current moment, the value of the probabilistic liability of the parent company will be determined by multiplying the estimated amount of accounts payable outstanding by the end of the bankruptcy by the probability of this fact, i.e. will amount to 1,080,000 monetary units (1,200,000 * 80%).

In all the examples cited, certain probabilistic liabilities are not reflected in the accounting registers, however, they can (and should, to determine the real financial condition of the company) be determined for the assessment of the company or during financial analysis.

CONCLUSION

Probabilistic liabilities may not become real obligations of the company, but for a more accurate and reasonable determination of the financial condition of the company being evaluated, they must be taken into account, evaluated and used in the implementation of analytical procedures.

The elements of probabilistic obligations described in this article are not exhaustive. The author showed only the main positions of probabilistic obligations, the causes and conditions for the occurrence of probabilistic obligations are wider and more diverse.

If for the occurrence of a probabilistic obligation there are two or more doubts about the occurrence of an adverse financial event, then such a probabilistic obligation is subject to assessment taking into account the corresponding probabilities of the occurrence of these events, even if such probability (probability in the aggregate) is significantly lower than 50%. Note that to determine the probabilities, one can use mathematical models based on past experience (if there is such an experience), by the method of expert estimates (specialists of the corresponding profile determine the corresponding probability) or other tools known to science.

Note that the proposed toolkit for determining and evaluating estimated obligations should not become a tool for unjustified manipulation of the financial performance of the company [6]. The use of such an economic category as probabilistic obligations is quite reasonable and justified in modern economic conditions in separate analytical procedures. The use of such tools in analytical procedures will help to obtain more accurate results in evaluating a business, will allow for more accurate business planning, building economic models, more informed management decisions, etc.

According to the author, taking into account modern principles of the approach to financial information, the use of probabilistic obligations in analytical procedures will be reasonable and appropriate.

The author hopes that research on the topics presented will continue, develop and find their justified application.

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