Accounting model for determining the amount of the estimated liability for agricultural leasing participants

E V Tokareva, N V Chernovanova, E V Yagupova and D O Zabaznova

Volgograd State Agricultural University, 26, University Avenue, Volgograd, 400002, Russia

*E-mail: ip.elena.tokareva@yandex.ru

Abstract. The existing system of participants in leasing relationships in terms of debt formation is unacceptable, as it completely contradicts the strategy of development of agriculture in Russia. The assessment of additional costs should certainly be considered as a risk management tool. Thus, if a deliberately unprofitable agricultural leasing agreement is defined, risks will arise both for the lessee in terms of a lack of liquidity to pay lease payments and for the lessor in terms of the risks of losing the collateral and increasing the risks of non-payment. Such obligations must be formed in the supplier's accounting records, which affects not only the organization's operational stability, but also its financial stability. The article suggests a fundamentally new approach to the formation of universally applicable information data on estimated obligations of participants in agricultural leasing agreements. Proposals for the practical application of organizational and methodological aspects of accounting based on the modernization of the settlement system the amounts of reserves, estimated reserves, and estimated liabilities are substantiated. Practical implementation of the research results by managers and accountants can greatly contribute to forecasting and minimizing risks for participants in leasing agreements.

1. Introduction
Exploring the issues of structure formation and composition of reserves, estimated reserves, estimated liabilities for agribusiness in the works of L. V. Popova, D. A. Korobeynikova, L. I. Khoruzhiy, S. J. Shaldokhino and others, we have found a lack of unity of views on the methodology for determining them [1, 2]. The lack of unified methodological approaches to assessing leasing risks and standard accounts for their accounting complicates the process of collecting information and reliability of reporting indicators of an economic entity [3, 4, 5]. The relevance of the problem, ambiguity and discussion of many of its aspects led to the choice of the research topic.

2. Materials and methods
In the process of the research, we used theoretical aspects of accounting and internal audit of leasing operations in accordance with the requirements of international standards, various General scientific methods. The main ones are analysis and synthesis, induction and deduction, comparison, abstraction, observation, modeling, and so on.

The theoretical significance of the research consists in the scientific generalization, clarification and development of organizational and methodological foundations of management accounting in the
system of accounting for leasing operations.

Practical significance. The proposed accounting model will allow you to generate relevant accounting and analytical reporting data. It consists in the development of a unified set of theoretical provisions and approaches to the organizational and methodological support of participants of Federal Agroleasing with accounting and control tools.

3. Results
Having investigated various options for transactions in the Federal Agroleasing system, including atypical ones, having studied the types of risks and the reasons for their occurrence, we offer a comprehensive reflection of the risks of the main participants in transactions in accordance with IAS 37, PBU 8/2010 and PBU 21/2008.

From our point of view, participants of Agroleasing in order to generate evidence when assessing the level of economic security need to calculate the estimated liability for obviously unprofitable contracts according to our proposed methodology [6, 7].

In the first stage, at the reporting date, a list of equipment is compiled and for each item, the book value is indicated, the sale price is calculated, and the loss from sale is calculated at a discount. If the volume of equipment available is planned to be sold for more than one year, the flows of funds should be distributed by year. In our example for 3 years (table 1):

| Type of agricultural machinery | Quantity at the reporting date | The forecast period, year | Subtotal |
|-------------------------------|-------------------------------|--------------------------|----------|
| A combine harvester self-propelled RSM–101 "the Vector–410" | | | |
| Carrying amount | 5 200 | 5 200 | 5 200 | 5 200 | 15 600 |
| Selling price | 4 100 | 4 100 | 4 000 | 3 900 | 12 000 |
| Loss | – 1 100 | 1 100 | 1 200 | 1 300 | 3 600 |
| The estimated liability | 11 000 | 3 600 | 2 600 | 54 000 |
| Tractor "Kirovets" K-744-R2 configuration "Premium" | 10 | 4 | 2 | 2 | 10 |
| Carrying amount | 9 200 | 9 200 | 9 200 | 9 200 | 27 600 |
| Selling price | 7 800 | 7 800 | 7 600 | 7 400 | 22 800 |
| Loss | – 1 400 | 1 400 | 1 600 | 1 800 | 4 800 |
| The estimated liability and so on for each type | 5 600 | 3 200 | 3 600 | 48 000 |
| Total losses from sale of equipment at a discount | 16 600 | 6 800 | 6 200 | 102 000 |

Subjects of leasing legal relations should take into account the requirements for discounting the value of the estimated liability, which is present in both PBU 8/2010 and IAS 37. However, if IAS 37 considers it necessary to discount "when the impact of time on the value of money is significant", then PBU 8/2010 defines clearer criteria – if the term of performance of the estimated obligation exceeds 12 months, or a shorter period established by accounting policy [8, 9].

If the probability of outflow of resources is considered unlikely than probable, i.e. less than 50%, we are talking about the recognition of a contingent liability, namely, the disclosure of information about it in the explanatory note [10].

The estimated liability is recognized at the reporting date. Since losses on contracts may occur not only in this period, but also in future it is necessary to discount future possible losses. We also note sales prices can also be planned. In our case, they are reduced as the equipment or equipment becomes...
outdated. We suggest using a risk-free rate without taking into account the risk fee in the second stage.

In the third stage, we determine the amount of the estimated liability in table 2.

| table 2. Calculating the amount of the estimated liability. |
|---------------------------------|---------|---------|---------|---------|
| Indicators                       | 2021    | 2022    | 2023    | Subtotal|
| 1. Losses from the sale of equipment at a discount | 16 600  | 6 800   | 6 200   | 102 000 |
| 2. Discount factor               | 0.9357  | 0.8756  | 0.8193  | 0.7666  |
| 3. Amount of the estimated liability (1 x 3) | 15 533  | 5 954   | 5 080   | 78 195  |
| 4. Increase in the estimated liability at the end of the year (p.3 x 0.0687) | 1 067   | 409     | 349     | 5 372   |

The recognition of an estimated liability depends directly on the conditions for its occurrence (table 3).

| table 3. Conditions for the occurrence of estimated obligations under agricultural leasing agreements. |
|---------------------------------------------------------------|
| Conditions | Example of implementation in agricultural leasing agreements |
| 1. The entity has a present legal or constructive obligation to transfer economic benefits arising from past events; | Past events are caused by the leasing agreement and additional agreements to it (guarantees, collateral, insurance, etc.). the Legal obligation arises from the contractual form of Agroleasing, and specific obligations may arise, for example, in the case of voluntary veterinary services and animal control |
| 2. It is likely that the repayment of this obligation will lead to an outflow of resources containing economic benefits; | If the probability of resource outflow is more than 50%, then an estimated liability is formed. For example, animals that are pledged to the lessor (on its balance due to non-payments) are actually in the zone of an outbreak of an anthropogenic disease and the probability of destroying these animals is 80%. That is, there is a chance that there will be nothing to pay off losses from overdue debt. |
| 3. The amount of the liability can be reliably estimated (paragraph 14 of IAS 37, paragraph 5 of PBU 8/2010). | Methods for assessing contingent liabilities should be developed |

In the fourth stage, we determine the amount of the annual increase in the estimated liability. Since if the estimated liability is discounted, it should be increased at each reporting date. The amount of the increase is the product of the carrying amount of the estimated liability and the discount rate-0.7666 (table 2).

In general, we suggest calculating the amount of the estimated liability (EL) using the formula:

\[
EL_{n+1} = \sum_{n=1}^{\infty} \frac{VP}{(1+i)^n} ,
\]

we recommend that you determine the increased estimated liability using the formula:

\[
EL_{n+1} = \sum_{n=1}^{\infty} \frac{VP}{(1+i)^n} + (EL_{n=1} \times i) ,
\]

where: VP-possible losses (the best amount of expenses to cover); i-discount rate; n - calculation period (discounted to estimated liabilities).

If the predicted loss is probabilistic and it can be determined (reliably estimated), then the probability of occurrence of the event should be taken into account and the formula will look like:

\[
EL_{n+1} = \sum_{n=1}^{\infty} \frac{VP}{(1+i)^n} \times P ,
\]
where: P - probability of an event occurring.

The estimated liability for 01.01.2021 should be reflected in accounting and reporting in the amount of 78 195 thousand rubles. This is the best estimate of the cost of covering the estimated liability. In accordance with PBU 8/2010 "Estimated liabilities, contingent liabilities and contingent assets", formed at each reporting date, the estimated liability is reflected in the account 96 "Estimated liabilities", to which we recommend opening sub-accounts for types of estimated liabilities that reflect the specifics of agricultural leasing. An entry will be made in the accounting: debit 91.2 "other expenses, sub-account" expenses on estimated obligations "Credit 96.6.1" Obligations under obviously unprofitable contracts" in the amount of 78 195 thousand rubles. As soon as the equipment is sold at a discount and losses actually occur, the estimated liability will be written off on the account 90.9 "Profit loss from sales". For the next year, you should also recalculate the amount of the estimated liability and adjust the data for account 96.6. Information about all estimated liabilities is reflected in the notes to the balance sheet and the statement of financial results in the table "Estimated liabilities".

4. Conclusion

We have proposed a new accounting tool in the management accounting system. The proposed accounting model will increase the reliability of information in accounting and reporting, which will affect the effectiveness of risk management of agricultural leasing transactions, including non-typical ones.

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