

Accounting and Analytical Support for the Formation and Use of the Depreciation Fund

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Abstract—The urgency of the problem is due to the need to intensify investment activities of enterprises of the industrial sector of the economy of the Russian Federation. Domestic enterprises are experiencing an acute shortage of their own sources for investment in fixed capital, which is necessary to improve production efficiency, improve the quality of domestic products and its competitiveness. According to the authors, the depreciation fund is an effective tool for the formation of financial resources for the modernization of production facilities. The article systematizes scientific and practical approaches to the formation and use of the depreciation fund. The authors propose a methodology for the formation of the depreciation fund, the mechanism of reflection of the depreciation fund on the accounts and options for improving the existing chart of accounts in terms of accounting for these funds.

Keywords—*depreciation charges, depreciation fund, investment policy, accounting and analytical support, fixed capital, investments in fixed capital, reproduction of fixed capital.*

I. INTRODUCTION

Currently, there is a problem of shortage of sources of financing for the modernization of production and replacement of obsolete production facilities. Especially acute is the lack of internal resources for the renovation of production facilities. Depreciation fund can become such a tool. Creation of this fund will allow, without attracting external sources of financing, to carry out own investment policy, having provided continuous updating of fixed assets and increase of efficiency of all business processes at the enterprise. In case of implementation of practice of formation of amortization fund there is a necessity of its accounting and analytical maintenance.

II. MATERIALS

In accordance with the Decree of the President of Russia "On the strategy of scientific and technological development of the Russian Federation" investment activity of Russian industrial enterprises include: 1) new construction, reconstruction, innovative technical and high-tech re-equipment, expansion of existing capacities; 2) modernization, mechanization, automation of large industrial complexes and facilities. According to the Federal law of the Russian Federation "On investment activities in RF, implemented in the form of capital investments" dated February 25, 1999 No. 39-ФЗ, the cost of new construction, expansion, reconstruction and re-equipment of existing enterprises defined as investment in fixed capital (fixed assets).

Sources of financing of innovative and investment activity of industrial enterprises are own and attracted funds. Own sources of financing are depreciation and profit. The attracted funds include bank loans, borrowed funds of other organizations and budget funds. Analysis of the structure of sources of investments financing in fixed assets shows that depreciation accounts for an average of 20% of all sources, while in developed countries the share of depreciation is 80% [5]. The use of borrowed funds leads to a rise in the cost of measures to update the production and technical base of enterprises, inhibits the scientific and technical process.

Since 1992 in the Russian economy accounting and control of use of depreciation charges and depreciation fund are cancelled, the special accounting record for the account of means of depreciation fund is not applied. According to the authors, the Order of the Ministry of Finance of the USSR No. 56, developed jointly with the United Nations Center for Transnational Corporations, played a negative role in the investment activities of enterprises and the country as a whole. This order introduced a new account No. 88 "Retained earnings (uncovered loss)", which included a separate sub-account "accumulation funds". At the same time, accumulation funds were understood as retained earnings reserved (directed), according to the constituent documents or the decision of the founders, as financial support for the industrial development of the enterprise and other similar measures to create new property. At the same time the funds of this accumulation fund could be used only in three directions: on repayment of the loss revealed by results of work of the enterprise for the accounting year; on distribution between founders; on write-off of the expenses connected with creation of new property, but according to the established procedure not included in initial cost of this property. Thus, there was a clear contradiction between the purpose of the formation of the accumulation fund and its possible use. The accumulation fund was only declarative.

It is a well-known fact that the fixed assets in operation are subject to physical and moral deterioration, they lose their useful properties and can not perform their functions. The degree of depreciation of production assets, expressed in monetary terms, is often called depreciation. This definition of depreciation reveals its essence as a technical category.

The word "amortisation/depreciation" (amortisatio) in Latin means "repayment", i.e. the cost of production assets (buildings, structures, machinery and equipment) is gradually transferred to the cost of manufactured products, works (services). This definition of depreciation reveals its essence as an economic category and reflects the real impairment of

fixed capital in the production process. It should be noted that in the USSR this theoretical position was directly reflected in practical reality. When calculating depreciation of fixed assets in accounting, a record was made at the same time on reduction of the size of the authorized capital.

The nature of depreciation is quite complex and multifaceted, so different authors distinguish technical, economic, financial and accounting, compensation, renovation, investment, fiscal and other types of depreciation.

In accordance with the Accounting Regulations (ПБУ) 6/01 "Accounting of fixed assets", depreciation is understood as a method of repayment of the cost of fixed assets. The purpose of repayment of the cost of fixed assets is not specified. Based on the logic of this standard, we can assume that depreciation is considered as compensation and financial accounting. Through the accrual of depreciation charges, the company reimburses (compensates) its costs for the acquisition of fixed assets by including them in the cost of production and, consequently, in the price of the products produced. At the same time it is a question of recognition of expenses on depreciation of fixed assets for formation of financial result of activity of the organization.

But accrual of depreciation of fixed assets should play more important role. Depreciation is a method of forming a monetary assets fund designed to restore worn-out production assets, in other words, it is a method of depreciation fund formation. As for the reimbursement of costs associated with the acquisition of fixed assets and the formation of the financial result, the existing system of accounts fully solves these problems. However, currently depreciation does not solve the task of monetary assets fund formation as a source of financing of simple reproduction, because depreciation is in the total cash flow and most often not used in accordance with the intended purpose.

III. RESULTS AND DISCUSSION

In economic, financial and legal dictionaries can almost the same definition of the depreciation fund be found. The depreciation fund is understood as the fund of money resources formed from depreciation deductions and intended for financing of simple and extended reproduction. In our opinion, here it is expedient to speak only about simple reproduction, that is about renovation. Economic calculations show that the amount of accumulated depreciation for the entire useful life of the fixed asset does not cover the cost of acquiring a new similar fixed asset. Even for simple reproduction, the company is forced to attract other sources of financing. But the main source of renovation is still the depreciation fund.

There are polar different opinions in domestic science on the question of expediency of formation of depreciation fund. Opponents of the formation of the depreciation fund argue that "only the owner of fixed assets has the right to dispose of them and part of their value returned as a result of the circuit to the current account" [6]. The authors Gordeeva G.P., Plotnikova N.G., Zlobin A.M., theoretically recognizing that depreciation charges are a source of financing the reproduction of fixed assets, at the same time believe that "... the proposal to return to the formation of the accounting depreciation fund is very problematic. Its presence in accounting and reporting will not ensure observance with the principle of compliance of the income of the organization with its expenses and increase the inflow (accumulation) of funds in the accounts, and the value

(size) of the fund in most cases will not have, so to speak, monetary filling" [5]. The majority of authors adhere to the opposite point of view and conduct research on the development of methods, mechanisms and tools for the formation and use of the depreciation Fund, calling it by another name, for example, the fixed capital fund, the capital investment financing fund [1-2,8-10].

In our opinion, the reproduction of fixed capital is a national task. Data from the Federal State Statistics Service (Rosstat) show that the share of fully worn-out fixed assets is constantly increasing and is more than 14% of the total amount of fixed assets, and the share of fully worn-out machinery and equipment is more than 22%. In accordance with the tax legislation of the Russian Federation, the amounts of accrued depreciation of fixed assets are recognized as expenses that reduce taxable profit. Thus, enterprises receive a kind of profit tax benefit in the amount of depreciation, which should stimulate the timely renewal of fixed assets. If enterprises do not invest in fixed assets, it must be recognized that this benefit is received by them illegally, and the income tax is underestimated.

In 2001, the draft of Federal law "On the restoration of fixed capital" was submitted to the State Duma for consideration. The purpose of this law was to create a mechanism for mobilizing domestic resources for the renewal, reconstruction and development of production. From the point of view of the present time, many provisions of the draft law are controversial and ambiguous, but the fact of the development of such a law indicates the relevance of the problem.

The need to control the process of accumulation and expenditure of depreciation charges is expressed by many economists in recent years. In particular, it was proposed to use an off-balance sheet account without changing the Chart of accounts [16], as well as an off-balance sheet account "Deficit of the depreciation fund" when the value of the acquired object of fixed assets exceeds the value of the depreciation fund [11]. It was recommended to open an analytical account "Depreciation fund" as part of the account No. 80 "Authorized capital" [7]. To account the accumulated funds, it was proposed to introduce an additional sub-account "Depreciation Fund" to account No. 55 "Special accounts in banks" [6].

The absence of separate accounting of the depreciation fund in practice leads to the fact that, on the one hand, the degree of depreciation of fixed assets is unacceptably high, and on the other hand, there are no financial resources for the purchase of new equipment.

To implement the company's investment policy, it is necessary to carry out depreciation management, which is understood as a set of measures aimed at ensuring the accounting and control of the formation and effective use of the depreciation fund. Depreciation management should become an integral part of financial management and an important tool of investment and depreciation policy of the company. This corresponds to the principle of a systematic approach to the management of an economic entity, which many authors speak about [3-4,13-14].

When implementing the depreciation fund in practice, it is necessary to determine the following important aspects: 1) the date of formation of the depreciation fund; 2) the method of calculation of amount of payments to the depreciation fund; 3)

the time of use of funds from the depreciation fund; 4) the determination of the amount of spent funds of depreciation fund.

Ideally, the depreciation fund should be formed on the date of receipt of funds from buyers for products sold. The cost of products sold, and therefore its price includes the amount of depreciation, so you need to reserve part of the cash proceeds equal to the amount of depreciation, putting it, for example, in the bank on deposit. However, in practice, this provision is not possible to implement. First, the moment of depreciation and the moment of receipt of funds from buyers do not coincide in time, and secondly, it is impossible to immediately determine the cash equivalent of depreciation in the revenue received. In our opinion, the moment of formation of the depreciation fund should be the date of December 31 of the reporting year. On this date, organizations form annual financial statements, which include "Balance sheet", "Statement of financial results", "Explanations to the balance sheet and the statement of financial results". These forms of reporting have all the information necessary to determine the amount of contributions to the depreciation fund.

When determining the amount of deductions to the depreciation fund, it should be borne in mind that the amount of depreciation of fixed assets and the amount of deductions to the depreciation fund differ from each other. The amount of deductions to the depreciation fund may be greater than the amount of accrued depreciation due to the sale of the balance of finished products in stock at the beginning of the period and may be less if not all products are sold in the reporting period. In other words, the basis for the formation of the depreciation fund is not the amount of depreciation of fixed assets accrued in financial accounting, but the amount of depreciation as part of the cash proceeds received by the organization from the sale of products.

To determine the amount of contributions to the depreciation fund, following methodology can be proposed. The "Notes" provide information about the economic elements of costs, including the annual amount of depreciation of fixed assets. Therefore, this amount of depreciation is included in the cost of production manufactured for the year and in the cost of work in progress at the end of the year. At the same time, it is necessary to take into account the fact that not all products produced can be sold, there may be remnants of products in stock. Therefore, to determine the amount of contributions to the depreciation fund, the total amount of depreciation for the year should be divided into three parts:

- the amount of depreciation attributable to the volume of products sold;
- the amount of depreciation attributable to the balance of finished products in stock;
- the amount of depreciation attributable to the remains of work in progress.

In the calculation of the amount of contributions to the depreciation fund only the amount of depreciation attributable to the volume of products sold should be taken. For this purpose, first, the total amount of products sold, finished products in stock and work in progress is determined. Then the proportion of products sold is determined. The total amount of accumulated depreciation for the year is multiplied by this specific weight, and thus the amount of depreciation attributable to the products sold is determined. However, the

amount of revenue in the "Statement of financial results" does not reflect the actual receipt of cash for products sold, since the statements are formed on the basis of the assumption of temporary certainty of the facts of economic activity, that is, on the accrual basis. Information about the receipt of funds from buyers must be taken from the "Statement of cash flows". Having this information, the ratio of cash proceeds to sales revenue is determined. After that, it is necessary to adjust the amount of depreciation attributable to the goods sold in accordance with the coefficient of receipt of funds from buyers. In our opinion, exactly in this amount the depreciation fund for the reporting year should be formed. The calculated amount of money must be withdrawn from circulation and accumulated on a special account in the bank.

Consider an example of calculating the amount of contributions to the depreciation fund in table I.

TABLE I. INITIAL DATA FOR THE CALCULATION OF CONTRIBUTIONS TO THE DEPRECIATION FUND

Indicators	2018, thousand rubles.	Source of information
Amount of depreciation of fixed assets	2868	Explanations to the balance sheet and statement of financial results (section 2.1 "Availability and movement of property, plant and equipment»)
Stocks (finished goods, work in progress)	12554	Balance sheet (transcript of the article "Stocks"). Explanations to the balance sheet and statement of financial results (4.1 "Availability and movement of stocks")
Proceeds from sales	158949	Statement of financial results
Cash proceeds (receipts from buyers for goods)	179995	Cash flow statement

According to the table we will make the necessary calculations:

- determine the share of sales revenue:

$$158949 / (12554 + 158949) * 100 = 92,7\% \quad (1)$$
- determine the amount of depreciation attributable to the goods sold:

$$2868 * 92,7\% / 100 = 2659 \text{ thousand rubles.} \quad (2)$$
- determine the ratio of cash to sales revenue:

$$179995 / 158949 = 1,13 \quad (3)$$
- adjust the amount of depreciation on the ratio:

$$2659 * 1,13 = 3005 \text{ thousand rubles.} \quad (4)$$

Thus, on December 31, 2018, contributions to the depreciation fund will amount to 3005 thousand rubles.

The proposed method of formation of the depreciation fund allows to solve the problem of "cash filling" of the depreciation fund, which is one of the main arguments against its existence.

The amount of deductions to the depreciation fund directly depends on the methods of depreciation of fixed assets. In foreign practice, dozens of specific methods of both progressive and regressive depreciation are used, which allow taking into account not only the national characteristics of the

country, but also the specifics of the enterprise, and the intensity of the use of fixed assets.

Russian legislation significantly limits the range of depreciation methods used. ПБУ 6/01 "Accounting of fixed assets" provides four ways of depreciation of fixed assets: linear method; reducing balance method; method of writing off value according to the sum of the digits of the years of useful life; method of writing off value in proportion to the volume of production (works). At the same time, even the methods of accrual of depreciation allowed by the legislation are not fully used. Almost all domestic enterprises use the linear method of depreciation, ignoring other permitted methods of depreciation. One of the reasons for this situation is that depreciation has lost its importance as a source of financing the reproduction of fixed assets of the enterprise and is not accumulated in a separate monetary assets fund. The use of different methods of depreciation makes it possible to influence not only the cost of production and profit, but also the speed of formation of the depreciation fund. The choice of the optimal method of depreciation for different groups of fixed assets is an important element of the company's depreciation policy and one of the tasks solved within the framework of depreciation management.

For the organization of depreciation fund means of control modification of the existing plan of accounts of accounting is required. This is necessary to implement a methodological approach to depreciation understanding, which consists in the fact that depreciation of fixed assets reduces the fixed capital of the organization. In the modern system of accounts for the accounting of the capital of the organization are essentially two accounts: No. 80 "Authorized capital", which reflects the amount of initial capital; No. 84 "Retained earnings (uncovered loss)", which reflects the amount of capital increments.

In accordance with the legislation, any change in the authorized capital requires state registration, so the use of account No. 80 "Authorized capital" as a source of formation of the depreciation fund is difficult. In our opinion, account No. 84 "Retained earnings (uncovered loss)" should be used for this purpose. To account for the funds of the depreciation fund, the free number of the passive account of the Chart of Accounts can also be used, for example, account No. 88 "Depreciation fund". Then the formation of the depreciation fund will be reflected in the accounting record:

- Debit of account No. 84 "Retained earnings (uncovered loss)" - Credit of account No. 88 "Depreciation fund".

Another option is possible. In order not to change the system Chart of accounts, it is enough to open separate sub-accounts to account No. 84:

- No. 84/1 "Retained earnings (uncovered loss)";
- No. 84/2 "Depreciation fund".

Then the accounts for the formation and use of the depreciation fund will be made on the sub-accounts of account No. 84. At the same time for the same amount it is necessary to make a transfer of funds from the current account of the organization to a special account "Depreciation fund":

- Debit of account No. 55 "Special accounts in banks" – Credit of account No. 51 "Current accounts".

The use of the depreciation fund should be recorded, if possible, simultaneously with the moment of payment of the supplier's invoice for the acquired fixed asset and other cash expenses. At the end of each month according to the summary data of the expenditure of funds from a special account in the accounting record is made on the use of the depreciation fund:

- Debit of account 88 "Depreciation fund" - Credit of account 84 "Retained earnings (uncovered loss)".

Thus, the recovery of the fixed capital of the organization is reflected. Since the formation and use of the depreciation fund is directly related to the amount of retained earnings, it is inevitable that the question of limiting the share of profits allocated to the payment of dividends will arise. It should be said that in 2008 the government of the Russian Federation pursued an anti-crisis dividend policy, as a result of which state-owned companies refused to pay dividends in favor of financing investment projects. The issues of regulation of corporate consumption policy are solved in Switzerland, the USA, and the European Union tough enough [9].

IV. CONCLUSION

Thus, the introduction of the depreciation fund in the overall management system of the company is an important tool for long-term development of enterprises and increasing the production potential of the Russian Federation.

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