

Depreciation of non-current assets: harmonization of international practices and regulatory in Ukraine

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Abstract

Introduction. In the conditions of globalization the application of international accounting standards and reporting on the enterprises business activity is becoming topical in order to take into account the different users' needs in information for administrative decision-making. The conceptual framework of financial statements of different enterprises have to be comparable, otherwise the information is not relevant for management demands. The application of International Standards of Accounting and Reporting allows understanding the statements of different companies, compare them, to make management decisions. However, in Ukraine and several other countries the national accounting standards, regulatory acts are being operated containing different provisions for regulation of accounting objects. So, the organizational and methodological principles of accrual and accounting of intangible assets amortization require to be investigated because it is an important factor affecting the results of financial and economic activity of the companies.

The main purpose of the study is to systematize the international and national practice of charging and accounting depreciation of fixed assets of enterprises, singling out the differences between them, comparing depreciation methods considering their strengths and weaknesses, identification of improvement trends in accounting depreciation of enterprise fixed assets.

The general scientific and special methods of analysis have become the methods of study. The methodological basis of investigation is the scientific treatments of researchers in economics, international, legal and regulatory acts of Ukraine.

The concrete proposals for improvement of legal and regulatory acts of Ukraine on accounting and depreciation of fixed assets for the unification of international and national requirements have become the results of the investigation.

The author has come to the conclusion of the necessity of creating a depreciation fund with real financial support for carrying out the effective depreciation policy at the enterprise. The mechanism of calculating the average depreciation ratio has been determined by multiplying it and the cost of the sold production to fix the amount of depreciation that can be used to update the fixed assets and etc. It has been proposed to adapt the legislative regulation of accounting depreciation to the international practice to avoid ambiguity.

Keywords

Depreciation, non-current assets, fixed assets, fixed means, method of depreciation, amortization fund.

JEL Classification M41

Introduction

In the process of fixed assets employment the economic benefits embodied in them are consumed by the enterprise, thus the residual value of these assets is decreased which is reflected by means of depreciation accounting. The depreciation questions are relevant today because it, as an economic category, is an important factor that affects the results of financial and economic activities of enterprise. The improvement of depreciation accounting was and remains one of the central topics at the crossroads of science and practice. The researches on the problems of accounting the operations in accrual of fixed assets depreciation should consider not only the experience of national practice but also the foreign and international requirements.

The role of the depreciation of fixed assets and its research has a wide range reflected in the forming of funding sources in renewal of fixed assets. Thus, if the acquisition was carried out by credit means, amortization, as a price component of the realised production, serves as a part in repaying loans; in the process of calculating of the finished or sold products cost the depreciation is a component of expenditure; in operating activities it is a part of the cash flow. Therefore, the study of organizational and methodological principles of accrual and accounting of fixed assets depreciation needs the further research according to a system approach to accommodate a range of users' needs for information for making management decisions.

In the line of investigation the general scientific and special methods of analysis have been used: induction and deduction - for determining the general trends in the development of accounting of fixed assets depreciation; theoretical generalization and comparison - for disclosing the nature of depreciation as an economic category. Theoretical and methodological basis of the study is the theory of system researches, scientific treatments of domestic and foreign economists on issues of fixed assets depreciation, legal and regulation acts of Ukraine, instructional materials.

The today's economic situation requires a flexible system of depreciation withholdings. In Ukraine, according to the valid provisions the concept of depreciation describes systematic allocation of the fixed assets cost, which is amortized during the time of its useful utilization. Since 01.04.2011 in accordance with the requirements of Section III of the Tax Code of Ukraine a new procedure for determining the amortization objects, the methods of depreciation accrual, the classification of fixed assets and determining their value has been provided. In accordance with the item 145.1.9 of the Tax Code of Ukraine, the depreciation accrual for tax purposes is performed by the method specified by the order of accounting policy for the purpose of preparation of financial statements and may be reviewed in the case of change in the expected way of obtaining benefits from its use. In international practice the depreciation withholdings are determined by expenses that are directly or indirectly deducted from the income to estimate the financial result.

Different methods of depreciation accrual are used in accounting. Their variety predetermines the necessity to study their essence, single out the advantages and

disadvantages of their application. For different purposes the value of fixed assets depreciation may be charged by different methods resulting in a variety of contradictions.

The national practice of fixed assets accounting is aimed at the compliance with the international standards to provide users of financial statements with the apprehensible information about these assets and their changes. Highlights in accounting of fixed assets are their recognition, computation of the carrying amounts and depreciation charges and impairment losses and incomes from the recovery of utility that should be recognized.

The international standards such as IFRS 16 "Fixed Assets" specifies that depreciation is a systematic allocation of the amount of the assets amortized during its useful life, where the amount amortized is the cost of the asset or other amount that replaces the cost, less its residual value. But before getting to examining how this standard solves these problems, we need to compare what they mean in respect of this or that period in IAS and NAS. This will allow us to understand clearly the differences and not be mistaken.

The comparative analysis of IFRS and NAS on accounting of fixed assets depreciation (fixed assets, intangible assets and other non-current tangible assets) is presented in table no. 1.

Table no. 1: Comparative analysis of the terms on the account of amortization in national and international standards

Object comparison	IAS 16, IAS 38	NAS 7, NAS 8	Actual differences
Amortization	IAS 16: systematic allocation of the amount of the assets depreciated during its useful life. IAS 38: systematic allocation of the amounts being amortized, intangible assets during its useful life.	NAS 7: systematic allocation of the cost that is amortized, fixed assets during their useful life (operation).	In the NAS stated that in the process of depreciation the amortized cost is allocated and according to IAS - the cost of the asset. In this case, the NAS is more consistent since then and in the NAS and IAS it is a cost that is amortized (see P.2 Table no.1). In IAS 16 it is said about the amount of the depreciated assets.
The amortized cost	There is not	NAS 7: original or revalue cost of fixed assets less their residual value	In NAS it is the original or revalue cost of non-current asset less the residual, and IAS - liquidation value subtracted from the cost or other amount (value) according to which the asset is reflected in the financial statements

The amortized amount (the asset that is amortized)	IAS 16: This is the cost of an asset, or other amount that replaces the cost, less its residual value. IAS 38: the cost of an asset, or other amount that replaces the cost, less its residual value	There is not	You have probably noticed that there are two similar terms, a "cost that is amortized" (see. Table 1 Clause 2) and "amount that is amortized." The difference of the second from the first is that in this case, by the definition in IAS 16, the historical cost or another amount, that it replaces it, less the same residual value, is subjected to depreciation. Take a notice that the historical cost used in NAS 7 in determining the initial value
Depreciation	There is not	NAS 7: the amount of the depreciation of the fixed assets object from the beginning of its useful life.	The amount of the depreciation of the fixed assets object from the beginning of its useful life.
Accumulated amortization of intangible assets	There is not	NAS 8: the amount of the depreciation of intangible assets from the beginning of its useful life	Total amortization of intangible assets from the beginning of its useful life.

Source: own development.

The information provided in Table 1 shows that between national and international standards on accounting for non-current assets there are differences that should be considered in practice.

At present there are no clear rules for selecting the method of depreciation, which would be ideal for companies of different legal forms and different industries. All methods may be considered different because they pursue different goals in terms of normal or accelerated write-off of fixed assets. Therefore, the amortization company policy is of great importance for selecting the methods of depreciation which allows the alternative choice to determine the value of depreciation withholdings, to manage costs and financial results.

In accounting practice companies use the following methods of depreciation (figure no. 1).

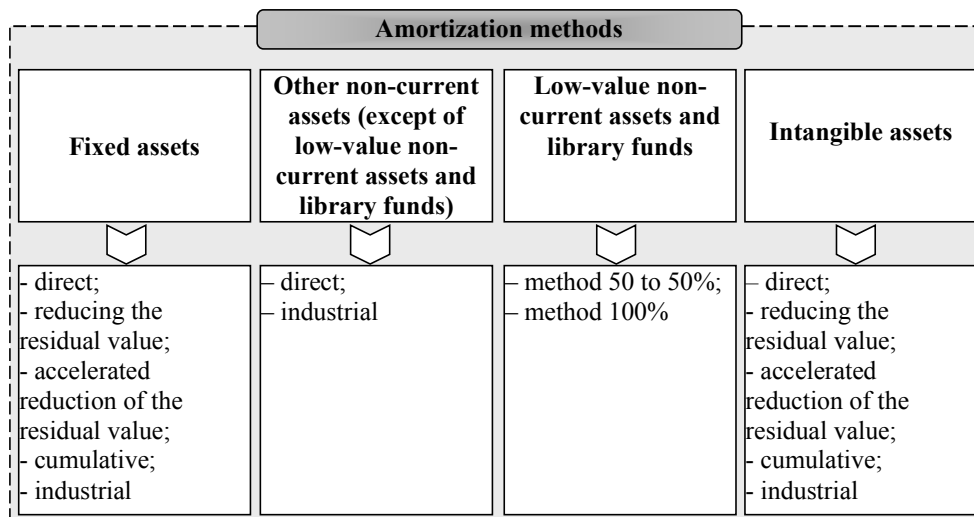


Figure no. 1: Methods of depreciation according to NAS 7 "Fixed Assets" and NAS 8 "Intangible assets"

As it is shown in figure no. 1 the depreciation of fixed assets, intangible assets and other non-current tangible assets (except of low-value non-current tangible assets and library funds) according to NAS 7 is carried out by means of the following methods:

- 1) Direct, according to which the annual amount of depreciation is determined by dividing the amortized cost on the useful life of the fixed assets object;
- 2) Reduction of the residual value, according to which the annual amount of depreciation is determined as the product of the residual value of the object at the beginning of the year under review or the original cost at the date of the commencement of depreciation charge and the annual depreciation rate. The annual depreciation rate (in percentage) is calculated as the difference between the one and the result of the root of the degree of the number of years of the object useful life from the result of dividing the liquidation value of the object on its original value;
- 3) Rapid decrease in the residual value, according to which the annual amount of depreciation is defined as the product of the residual value of the facility at the beginning of the year under review or the original cost at the date of the commencement of depreciation and annual depreciation rate, which is calculated on the base of the useful life of the facility, and doubles;
- 4) Cumulative, according to which the annual amount of depreciation is calculated by multiplying the cost that is amortized and a cumulative factor. The cumulative rate is calculated by dividing the number of years remaining to the end of the useful life of the fixed assets object on the amount of the number of years of its useful life.
- 5) Production, according to which the monthly amount of depreciation is calculated by multiplying the actual monthly production volume (works, services) and production rate of

depreciation. The production rate of depreciation is calculated by dividing the cost that is amortized on the total volume of goods (works, services), which the company expects to produce (perform) using the assets.

The comparison of the depreciation methods is given in table no.2.

Table no. 2: Comparison of the depreciation methods defined in NAS 7 "Fixed Assets"

Amortization method	Advantages	Disadvantages	To what assets is used
Direct	<ol style="list-style-type: none"> 1. Simplicity and accuracy in calculation 2. Uniformity in distribution of the depreciation amounts between the accounting periods 	<ol style="list-style-type: none"> 1. Excludes the obsolescence of the facility 2. Does not take into account the operation peculiarities of the facility 3. The need to increase the cost of repairs of late years when the facility is operated 	The passive part of fixed assets the degree of exploitation of which remains unchanged in each reporting period (capital expenditure on improving the land, buildings, edifices, transmission devices, farm implements, low-value non-current assets)
Reduction of the residual value	<ol style="list-style-type: none"> 1. Write-off of most of the non-current assets in the first months of operation. 2. Consideration of the obsolescence. 3. Reduction of taxable income in the first years of operation 	<ol style="list-style-type: none"> 1. Inconsistency in the actual use of the fixed assets object. 2. High labour intensity. 3. Increase of expenses in the first years of operation of the facility due to the depreciation component. 4. The availability of residual value is obligatory. 	The objects that are directly used in the production process (group "machinery and equipment")
Rapid decrease in the residual value	<ol style="list-style-type: none"> 1. Write-off of most of the non-current assets in the first months of operation. 2. Consideration of obsolescence. 3. Reduction of taxable income in the first years of operation 	<ol style="list-style-type: none"> 1. High labour intensity. 2. Increase of expenses in the first years of operation of the facility due to the depreciation component. 3. Mandatory presence 	The objects that are directly used in the production process (group "machinery and equipment")

		of residual value of the object, which is calculated with inaccuracies.	
Cumulative	<ol style="list-style-type: none"> 1. Simple and rational. 2. Write-off of most of the non-current assets in the first months of operation. 	<ol style="list-style-type: none"> 1. Working life is measured by a total number of years. 2. Inconsistency in the actual use of the fixed assets object. 3. Increase of expenses in the first years of operation of the facility due to the depreciation component. 	The active parts of objects (groups "machinery and equipment", "Vehicles")
Production	<ol style="list-style-type: none"> 1. Simple and rational. 2. The direct relationship between the amount of wear and volumes of manufactured products. 3. Reduction of taxable income in the first years of operation 	<ol style="list-style-type: none"> 1. Limitedness in use. 2. It is used in case when the actual volume of manufactured products can be determined as to the asset that is amortized. 	The objects of fixed assets intended for mass production of similar products

Source: own development.

Taking into account the above table, we can say that the choice of depreciation method depends on the goals put forward before an enterprise. In our opinion, a cumulative method is the most accurate and versatile one for the calculating of depreciation charges by the rapid way. It is easy in calculations and has a similar calculation principle to the methods of reduction of the residual value and rapid decrease in the residual value that results, according to some scholars' opinions, in the possibility of eliminating the last in NAS 7 "Fixed Assets".

So, alongside of the adoption of the Tax Code of Ukraine the approximation of calculation method and reflection of amortization in the accounting in accordance with the accounting and tax legislation has occurred. Thus, at this stage, five main methods of depreciation are used as in accounting as in tax calculations: direct, reduction of the residual value, rapid decrease in the residual value, cumulative, production.

The systematization of the depreciation methods according to groups of non-current assets (fixed assets) are presented in table no. 3.

Table no. 3: Use of the methods in the calculation of depreciation in terms of fixed assets groups

Group of fixed assets and other non-current assets (Tax Code of Ukraine, 2016)	Methods of amortization				
	Direct	Reduction of the residual value	Rapid decrease in the residual value	Cumulative	Industrial
1	-	-	-	-	-
2	+	+	-	+	+
3	+	+	-	+	+
4	+	+	+	+	+
5	+	+	+	+	+
6	+	+	-	+	+
7	+	+	-	+	+
8	+	+	-	+	+
9	+	-	-	-	+
10	One of the methods set in p. 145.1.6 Tax Code is used				
11					
12	+	-	-	-	+
13	-	-	-	-	-
14	+	-	-	-	+
15	+	-	-	-	+
16	+	+	-	+	+

Source: own development.

Proceeding from the convergence of accounting and tax calculations, we are inclined to believe that members of the fiscal authorities will not oppose the use of the direct and production methods to groups of 10 and 11. With regard to the amortization methods of the reduction of the residual value and cumulative, it follows from the p.p.145.1.6 CLE that their use is also formally possible.

Note that the determination of the amount of depreciation charges is an essential aspect in the reflection of depreciation on the accounts. Several factors affect this amount: the value of depreciated assets, the depreciation methods, the useful life of depreciated object, etc.

Section 145.1. Art. 145 of the Tax Code of Ukraine defines minimum acceptable useful lives according to the classification of fixed assets and other non-current tangible assets, and it is

said that the useful life is established by the order of the company in recognition of the object to be an asset. (pp. 145.1.2. CLE)

Thus, the procedure for determining the useful life of the amortized facility according to NAS 7 "Fixed Assets" and the Tax Code of Ukraine is almost the same. The only difference is that in the Tax Code of Ukraine the state has determined some restrictions to ensure compliance with the principle of prudence (application of the methods of assessment in accounting, which should prevent lowering the estimation of costs and liabilities and overestimating of the company assets and revenues).

Correspondence accounts of depreciation deductions are given in table no. 4.

Table no. 4: Accrual of depreciation deductions

№	Business transactions	Correspondence accounts	
		Debit	Credit
1.	Accrued depreciation deductions	23, 91, 92, 93, 94	13
		09	–

Source: own development.

The accrual of depreciation is carried out in accordance with the current legislation simultaneously debiting the below-line balance account 09 "Depreciation deductions".

The use of depreciation on the renovation of fixed assets or repayment of loans obtained for capital investment, is reflected on the credit of the account. Today the entire amount of accrued depreciation (wear) of fixed assets for the period under review is displayed on the debit of the account. In our opinion, it is necessary to display not the entire amount of depreciation in this accounting entry, but only the amount of the accrued depreciation in terms of sales (works, services). How can you use the depreciation in renovations that has not found its monetary expression in sold products yet? The calculation of the depreciation amount in terms of sales can be made by using the average rate of depreciation multiplying it by the production cost of sales (works, services).

We offer to count the average rate of depreciation according to the formula (1):

$$ARD = \frac{Db+Dm}{Cb+Cm} \quad (1)$$

where:

- ARD - the average rate of depreciation;
- Db - the amount remaining on the account "Depreciation deductions" at the beginning of the month;
- Dm. - the amount of accrued depreciation per month;
- Cb. - the cost of finished goods at the beginning of the month;
- Cm - the cost of finished products per month.

Taking into consideration above said, we believe that a sinking fund with real cash security has to be set up to ensure an effective depreciation policy of the company.

The issues on reflecting the depreciation charges in the accounting require the urgent determination and legislative regulation in order to ensure the functional efficiency of enterprises in Ukraine.

It is necessary to determine the following ways to solve the existing problems:

1) NAS 7 "Fixed Assets":

- to specify that the term "depreciation" must be understood as the process of depreciation accrual, i.e. the gradual transfer of the property value on the creation of a new product, the term "wear" - as an objective process of impairment of the object utility (its physical and obsolescence). Accordingly, under the "wear and tear" we are aware of that part of the property value which reflects its degree of wear.

2) The instructions for use of accounts number 291 (Instruction, 1999):

- Replace the name of the account 13 "Wear and tear (amortization) of fixed assets" to 13 "Depreciation of fixed assets"; 133 "Accumulated amortization of intangible assets" to 133 "Depreciation of intangible assets"; 134 "Accumulated amortization of long-term biological assets" to 134 "Depreciation of long-term biological assets."

- Replace "the accrual of the depreciation and indexing of the depreciation (accumulated depreciation) of fixed assets is reflected on the credit account 13" Depreciation (amortization) of fixed assets ", the accrual of the fixed assets depreciation through the depreciation of their value and its indexing is displayed on debit - reducing the amount of depreciation (accumulated depreciation)" on "The credit account 13 "Depreciation of fixed assets ", the debit - reducing the amount of depreciation ";

- Replace "On subaccount 133" Accumulated amortization of intangible assets" the information about the amount of accumulated amortization of intangible assets" is summarized to "On subaccount 133 "Depreciation of intangible assets "the information about the amount of depreciation of intangible assets" is summarized;

- Replace "Analytical depreciation accounting (accumulated depreciation) of fixed assets is ..." to "Analytical account of depreciation of fixed assets is ..."; "... the information about the amount of amortization accrued on the long-term biological assets, charged on subaccounts, is summarized ..." to "... summarizes the information about the amount of wear accrued on the long-term biological assets, charged on subaccounts, is summarized ...".

The elimination of shortcomings in the regulatory framework in Ukraine in terms of depreciation is possible by avoiding ambiguity in the interpretation of legislation norms and improving the methods and regulating the process of depreciation accrual. Thus, even eliminating these shortcomings in the legal regulation of depreciation accounting, a number of alternatives to be expected in accounting policy will remain.

Conclusions

The efficiency of the fixed assets use depends primarily on the optimal level of their display and this is possible only because of the accumulation and effective use of depreciation charges.

Based on the presented study the following conclusions have been made:

- Depreciation is one of the most important and debatable categories in respect of which there are a number of significant issues, primarily theoretical ones. First of all the debates about the notion of "depreciation" affirm it. Having examined the different approaches to the interpretation of this concept, we believe that the following definition of the notion of "depreciation" reveals in the best way its nature and meaning - a process of gradual transferring the cost of the means of production as they wear to the cost of manufactured products (works, services) which are sold during the reporting period, by including this cost into the expenditures for the further reproduction of the worn means of production;

- The change of the account name 13 "Depreciation (amortization) of fixed assets" to "Depreciation of fixed assets" will expedite the separate amortization accounting and depreciation of fixed assets. The word "depreciation" must be carried over from the subaccounts titles to the account 13. It is reasonable to operate the account of the accrued and used depreciation on the off-balance account 09 "Depreciation";

- The generalization of amortization on account 13 "Depreciation (amortization) of fixed assets" and off-balance account 09 "Depreciation charges" today does not reflect the totality of the necessary information for the company about it and does not allow you to create and monitor a sinking fund. Consequently, for the rational organization of accounting and formation of qualitative information about amortization and depreciation of fixed assets, the accrual of depreciation should be performed on the loan of account 13 "Depreciation of fixed assets" and at the same time to do a separate entry over the debit of the off-balance account 09 "Depreciation charges" on the amount of accrued depreciation but only in terms of sales (works, services). The presented method of the accounting reflection of depreciation charges, the formation and use of a sinking fund allows the company to make effective management decisions concerning the renewal of fixed assets and ensure the proper use of the fund resources.

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