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**IMPACT OF POSSIBLE METHODS TO CLASSIFY
TANGIBLE ASSETS IN THE ACCOUNTING
ON THE AMOUNT OF DEPRECIATION.
EXAMPLE OF SELECTED SAMPLE OF CHEMICAL
COMPANY EQUIPMENT**

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Depreciations, such as a permanent reduction of the value of fixed assets, affect the profit and are an important source of investment financing. It is then important for businesses to select an appropriate depreciation policy in relation to the expected financial and income situation. An important part of the fixed assets of enterprises in the chemical industry are machinery and equipment (separate movable assets and sets of movable assets with a separate technical-economic purpose) that can be classified in different ways. Therefore, the aim of this paper is, by way of an example of a sample equipment, to analyse the implications of alternative classifications of this type of property in the amount of depreciation, then compare the impact of a specific method of repair in terms of replacing the whole equipment registered as a separate moveable asset or replacement of

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segments in the set of movable assets with a separate technical-economic purpose. At the end, selected possibilities of modernization will be analysed depending on the method to keep records of this type of property.

Introduction

Major strategic decisions in enterprises of the chemical industry include decision making on the acquisition of fixed assets. A significant part of the assets of these enterprises are tangible assets greatly determining their focus and manufacturing capabilities. In the observed company, on December 31, 2012 the tangible fixed assets account for more than 33 % of corporate assets. In terms of their structure, the most significant entry was machinery and equipment (separate movable assets and sets of movable assets) that on the same date contributed to tangible fixed assets of the company with more than 45 % [1].

Separate movable assets and sets of movable assets have a separate technological-economic determination, the economic life longer than one year and a minimum amount of appraisal by a designated accounting entity, being subject to the obligations set forth in the Accounting Act, in particular by respecting the principle of significance and a true and fair view of the assets [2].

Pursuant to the Income Tax Act, fixed assets include separate movable assets or sets of movable assets with a separate technical-economic purpose, the acquisition costs of which is higher than CZK 40,000 and have operational and technical functions longer than one year [3]. The category of separate movable assets includes manufacturing equipment, equipment and items pertaining to the operation of outputs (services), special-purpose equipment and items that do not form a functional unit to the building or structure, even if they are tightly linked with it. Sets of movable assets are separate types of tangible assets; again they have to reach the limit value and the minimum required useful economic life. A set of movable assets with a separate technical-economic purpose refers to a sub-part of a production or other unit. The set is thus understood as a sub-part of production equipment or other unit in which contains a few items or equipment, either interconnected or complementary [4].

A set of movable assets must be recorded separately so as to ensure conclusive technical and value data on individual items included in the set, determination of the main functional object and any changes to the set, including information about the date of the change, scope of the change, acquisition costs of each increase or decrease, total value of the set of assets and amounts of depreciations including changes resulting from changes in the acquisition costs of the set of movable assets.

Given that the separate movable assets, or sets of movable assets with a separate technical-economic purpose, usable for more than one year, their wear

and wear is gradually reflected in the costs in the form of depreciation. Depreciations represent a permanent diminution of the value of fixed assets, affecting the profit and being an important source of the investment financing. It is thus important for businesses to choose an appropriate depreciation policy with respect to their current and anticipated financial and income situation. Depreciation is calculated separately for the accounting and separately for the tax purposes. The purpose of accounting depreciation is to correctly take into account the rate of wear and tear of assets for a given period. Tax write-offs primarily affect the amount of the tax assessment base. Depreciation is regulated by Act No. 563/1991 Coll., on Accounting [2], the respective Ministry of Finance Decree No. 500/2002 Coll. [5] and Czech Accounting Standards for Businesses, No. 013 [6], depreciations for the corporate tax purpose are regulated by Act No. 586/1992 Coll., on the Income Tax [3].

The taxpayer establishes the set at its sole discretion. The set is added to a depreciation group according to the main functional object. From the company's perspective, it is therefore essential that if the taxpayers choose to include sub-parts in the set of movable assets, they select their depreciation group according to the main functional segment. Advantages of establishing the set are reflected in the event that the main functional object belongs to a lower depreciation group compared to the other parts of the set [4]. Furthermore, analysed will therefore be the impact of different classification method of the selected sample of tangible fixed assets on the depreciation amount, the impact of the specific repair method in terms of replacing the whole equipment registered as a separate moveable or replacing the segments in the set and the impact of modernization.

Characteristics of Sample of Tangible Fixed Assets

In the company, tangible fixed assets refer to assets of the useful economic life longer than one year, whose acquisition cost exceeds CZK 5,000. When determining depreciation amounts, the company proceeds from the acquisition costs of the assets and their estimated useful economic lives, specifically with the entry of separate movable assets and sets of movable assets it is 2-21 years [7].

The sample of tangible fixed assets worth almost CZK 35.5 million comprises 79 facilities included in 12 smaller sets according to their use. The estimated useful economic life of each component in the sample is 8 and 15 years [7]. In tax, a minimum economic life of equipment is based on Annex 1 of the Act on Income Tax at 5 and 10 years [3]. The selected sample of equipment is used as a whole for treating wastewater, contaminated by waste materials that result from the production of nitrocellulose. The useful economic life of each device exceeds one year, the cost of acquisition of individual devices is higher than CZK 5000 and individual items of the assets operate separately. For these reasons, the sample can

be accounted for, appreciated and depreciated as separate movable assets. In addition to the records of individual equipment, such as separate movable assets, we can set up several smaller sets, since individual devices are connected to each other and serve a single purpose. As a whole, all devices are used for wastewater treatment, so it can also be included in a set of separate movable assets with a separate technical-economic purpose (hereinafter referred to as the set). It is therefore entirely at the discretion of the company to decide how to register, appreciate and depreciate these assets.

First, analysed will be the effects of different ways of classifying the sample in the amount of depreciation. For the sake of clarity, the sample of assets is amortized as of January 1, 2013. Analysis of the results will be made only on straight-linear accounting depreciation basis. In addition, we are to compare the impact of the specific method of repairs in terms of replacing the whole device registered as a separate moveable asset or replacement of the segments in the set. At the end, selected possibilities of technical appreciation will be analysed depending on the method to keep records of this type of property.

Analysing the Impact of Method of Classifying a Sample of Fixed Assets in the Accounting Records on the Amount of Depreciation

For the given sample of devices, the total depreciations are compared calculated as the sum of each separate movable asset (V1) and of the set of separate movable assets with a separate technical-economic purpose (V2). Other variants — dividing the property into two groups according to their useful economic life or dividing the property into several smaller sets according to their purpose result in the same results for the property as with the separate movable assets, from both the accounting and tax perspective.

Figure 1 shows the amount of depreciation in each year of the economic life of the sample of assets for both variants for the straight-line method of depreciation. The straight-line method is used in the company and is suitable due to the almost uniform wear of the property in each year. For the set, we used the option to determine its useful economic life as a whole for 8 years in relation to the life of the main segment. Figure 1 shows that the set will be fully depreciated at the end of 2020, while for the variant of separate movable assets the smaller amount of equipment will be depreciated for more 7 years. Taking into account the time values of money at the chosen discount rate of 5 %, the difference between the two variants is more than CZK 1.2 million in favour of the set.

In terms of tax accounting, the equipment belongs to the second and third depreciation groups, i.e. the economic life is at least 5 and 10 years. The equipment with the life set by the company for 8 years belongs in most cases to the

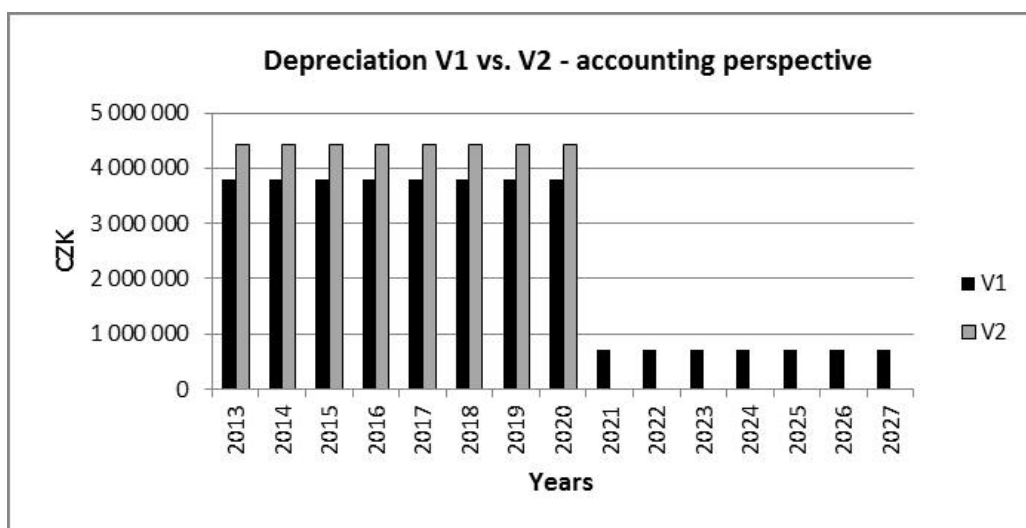


Fig. 1 Comparison of the amount of depreciation variants V1 and V2 – the accounting perspective

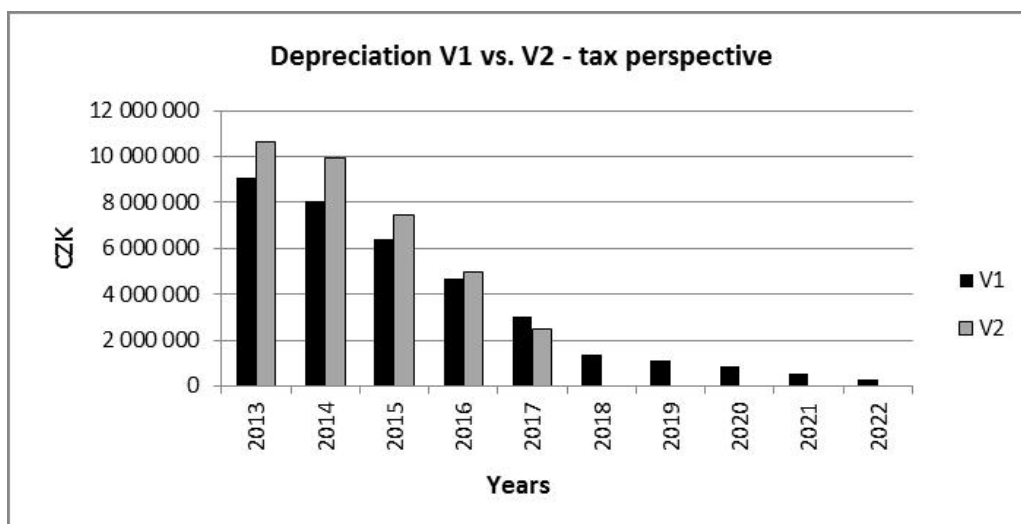


Fig. 2 Comparison of the amount of depreciation variants V1 and V2 – the tax perspective

second depreciation group with at least 5-year depreciation period and equipment with a 15-year life is included in the third depreciation group with a minimum life of 10 years [7]. In this case, it is possible to create a set with the economic life according to the main segment and, if included in the second depreciation group, shorten the depreciation time of the whole set to 5 years. To determine the amount of depreciation for the tax purposes, with regard to the time value of money, the variant of the maximum tax savings in the first years of depreciation was chosen, i.e., accelerated depreciation method with 10 % increase in depreciation in the first year. Individual devices meet the requirements of the Income Tax Act for increases in depreciation in the first year of depreciation. Figure 2 shows the

amount of depreciation in each year of the depreciation of the sample of assets for both variants. It shows that the set will be fully depreciated at the end of 2017, while in the case of separate movable assets a small amount of equipment will be depreciated for 5 more years. Taking into account the time value of money at the chosen 5% discount rate, the present value of tax savings amounts to more than CZK 0.93 million in favour of the set.

Analysis of the Impact of Selected Interventions in the Property in the Form of Repairs

The simplest example is repairs of partially damaged separate movable assets. The expenses of these repairs directly affect the operating costs of the company. If the company depreciates the set, the restoration expenses will also be entered into accounts as incurred directly to costs in case of a partial damage to individual segments in the set.

Often, however, a complete destruction of the set of tangible fixed assets occurs before its full write-off. If the item is recorded as a separate movable asset, the company must in this case carry out an additional depreciation of the device and buy a new one and start depreciating it. In this case it is not a repair, because it is not about restoring the partially damaged device to its original condition, but about purchasing a brand new functional device. With the set, in case of a repair, the essence of which is a replacement of a segment (replacement of a device), we proceed in a different way. Expenditures for new devices are considered maintenance and are directly accounted for to the operating costs. This kind of repairs will not have any impact on the set and its depreciation will continue as if there was no damage to the device.

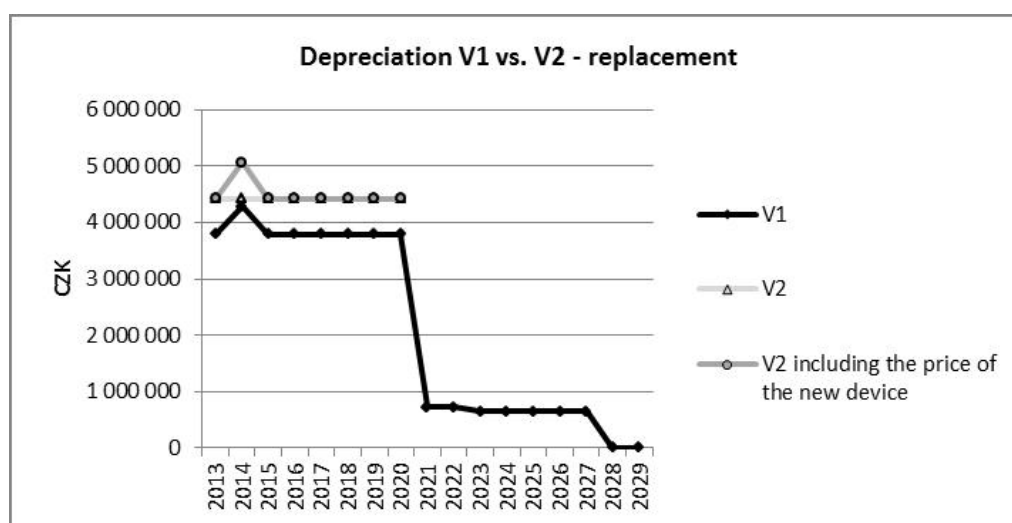


Fig. 3 Comparison of the amount of depreciation variants V1 and V2 - replacement of the device (accounting perspective)

Figure 3 shows a situation where some equipment will be replaced by the end of 2014. A comparison with the original state shows that, in the case of depreciation of individual equipment, the depreciation increased due to an unscheduled write-off of the defunct device and, at the same time, its depreciation period was extended. In case of the set, the replacement has no impact on the amount of depreciation. In terms of comparability, it is necessary to include the cost of the new equipment in expenses. In the year of the repair, the expenses related to the set will be burdened with a greater amount than those related to the accounting records of separate movable assets. When selecting a suitable way to classify the property it is true that, in the case of the set, the business has the possibility to quickly obtain internal financial resources for further development. In the case of separate movable assets, depreciation will take longer.

In terms of the corporate tax accounting, this type of repair will follow the same steps as in terms of accounting. Again, the replacement of a device classified as a separate movable asset leads to an unscheduled write-off of the completely non-functional device and the new device is considered to be tangible property. As for the set, this amount is included in the operational costs of the company.

Analysis of Interferences in the Property in the Form of Technical Improvements

In the case of modernization or reconstruction of the separate movable assets, it is when the company changes the technical specifications (technical improvement takes place) of one segment of the sample of device. As an example, we can give a submersible mixer, when the technical appreciation may be an adjustment to reach a higher rate of speed. The device with the service life of 5 years will be modernized in the course of 2015. The increased purchase price will increase the annual depreciation and extend the depreciation period. When determining depreciations for tax purposes, the company proceeds in a standard procedure under the Income Tax Act. In this case, the depreciations will increase and the depreciation period will extend.

Modernization of a segment in the set will affect the valuation of the whole set. When calculating depreciations, the company will follow essentially the same procedure as in the previous case. The modernization will affect the amount of depreciation and extend the depreciation period. In Fig. 4, it is possible to compare the impact of the way the assets are classified in modernization.

A different situation arises when the company adds additional (and repeatedly) segments into the set, for example, to increase capacity. Examples include adding an additional pump to increase the performance of the filling station. If the property was registered as a separate movable asset, it would be the purchase of a new device, which would be depreciated in the normal way. In the

case of the set, it is a modernization, which has the same effect as a change in technical specifications. Figure 5 shows the impact of adding the device in the years 2014 to 2016 on the amount of depreciation variants V1 and V2.

In determining the amount of *depreciation for the tax purposes*, it is more appropriate to use the straight-line depreciation method for the set with 10% increase in depreciation in the first year. When using the accelerated depreciation method, the depreciation period would be longer.

When deciding how to record the fixed assets, we therefore need to assess whether this type of modernization occurs in the future. If the set is created, the property, including the modernization, is written off earlier than if it is recorded as separate movable assets.

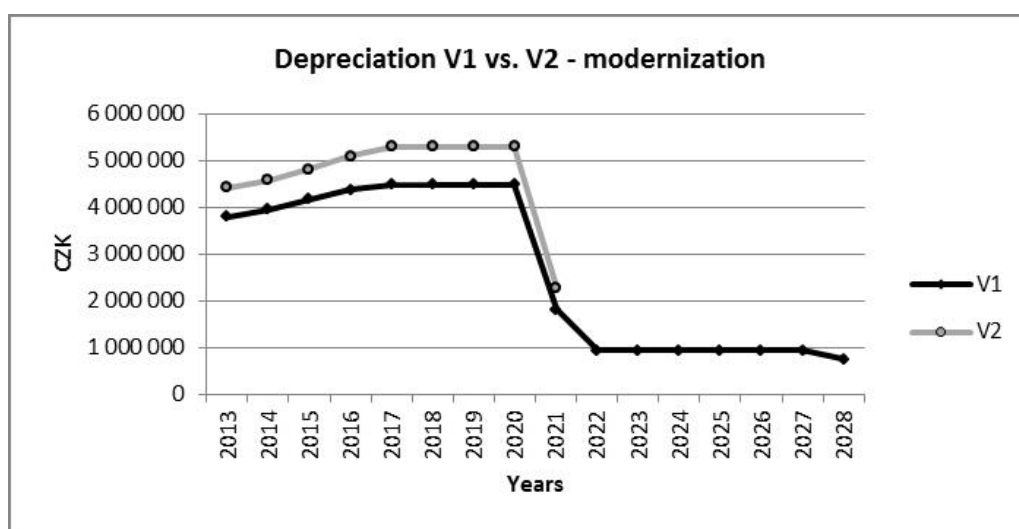


Fig. 4 Comparison of the amount of depreciations V1 and V2 – the modernization (accounting perspective)

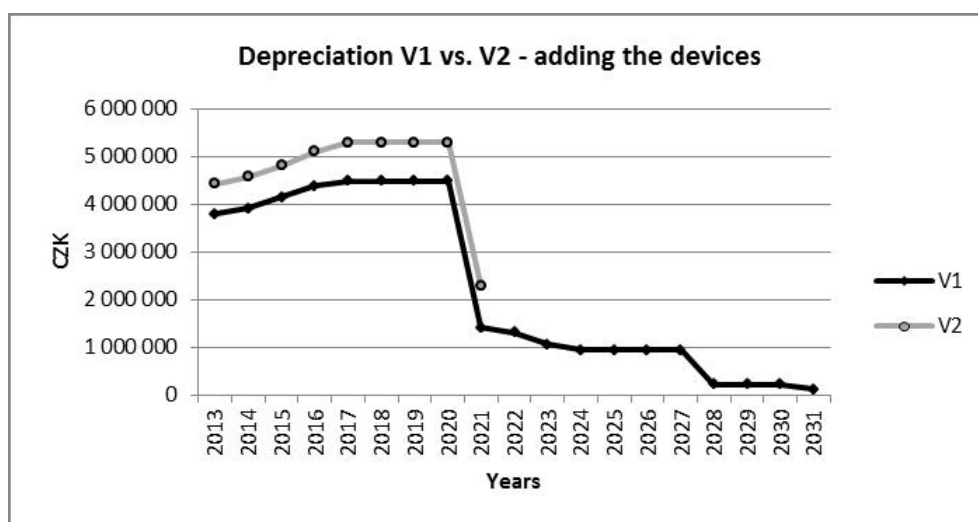


Fig. 5 Comparison of the amount of depreciation V1 and V2 – addition of other devices (accounting perspective)

Conclusion

Classification of assets in the accounts has a significant influence on the financial and income situation of the company. If the company is sufficiently profitable in the long term, it is appropriate to include the wastewater treatment plant in the set, which has several advantages. The company will sooner depreciate the equipment and the acquired internal funds may be used for further development.

If any of the devices in the set is totally destroyed, expenditures for the new device will be directly reflected in the cost. These expenditures are considered maintenance and are directly accounted for to the operating costs. This kind of repairs will not have any impact on the set, and its depreciation will continue without any changes.

In the event that the company decides to change the technical specifications of the whole set, it will have the opportunity to add additional devices through modernization, which will extend the depreciation period of the set substantially less than in the case of the device depreciation as a separate movable asset.

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