



## Economic and financial role of depreciation

Oumar Bah <sup>1\*</sup>, Mohamed Traore <sup>2</sup>, Etienne Mamadou Coulibaly <sup>3</sup>

<sup>1</sup> Assistant Master of CAMES, Doctor in Management Sciences, University Sup' Management, Mali

<sup>2</sup> Professor in Public Management, FSEG and Sup' Management, Mali

<sup>3</sup> Doctoral Student in Management Sciences, FSEG and Sup' Management, Mali

\* Corresponding Author: Oumar Bah

---

### Article Info

**ISSN (online):** 2582-7138

**Volume:** 03

**Issue:** 05

**September-October 2022**

**Received:** 13-08-2022

**Accepted:** 15-09-2022

**Page No:** 305-313

**DOI:**

<https://doi.org/10.54660/anfo.2022.3.5.13>

### Abstract

This article is a research on the economic and financial role of depreciation. Depreciation is seen as the recognition of a decrease in the value of an asset resulting from use, time, change in technique or anything else. The depreciation of an asset represents the difference between its gross value and its net book value. The difficulties in measuring this depreciation lead to the spread over a probable lifetime of the value of goods normally depreciable according to a depreciation plan. If the current value is significantly lower than the value calculated according to the depreciation plan, the loss is recorded either by way of exceptional depreciation, the remainder of the depreciation plan being modified accordingly, or by a provision when this depreciation is not considered final. Thus, depending on the priorities of the company, the costs can be treated as depreciable fixed assets, or as expenses. The company can charge the purchases of materials and tools, software, office equipment and furniture whose unit price does not exceed a certain threshold. There are two options available to the company, namely: pass its investments in fixed assets or treat them as an expense. These two situations are made possible thanks to the economic and financial role of depreciation.

**Keywords:** Depreciation, straight-line depreciation, declining balance, economic role of depreciation, financial role of depreciation, SYSCOA

---

### Introduction

Depreciation is defined as the accounting recognition of the loss in the asset value of fixed assets that depreciates over time. It is therefore the recognition of the decrease in the value of an asset resulting from use, time, change in technology or anything else. The impairment of an asset represents the difference between its gross value and its net book value. It is precisely because of the difficulties in measuring this impairment that depreciation generally consists of spreading the value of assets that are normally depreciable over a probable life in the form of a depreciation schedule. The depreciation plan is a forecast schedule of reductions in the values recorded in the balance sheets over a given period and in successive instalments. When the useful life of the asset in the enterprise is significantly shorter than its probable life, account is taken of a residual value reasonably estimated at the time the depreciation plan is drawn up.

If the present value is significantly lower than the value calculated in accordance with the depreciation schedule, the impairment loss is recognized either by way of an exceptional write-down, with the remaining part of the depreciation schedule being modified accordingly, or by way of a provision when the impairment is not deemed to be definitive.

Thus, depending on the company's objectives, expenses may be treated as depreciable fixed assets or as expenses. Similarly, the company has the right to expense purchases of office equipment and tools, software, hardware and furniture whose unit price does not exceed a certain amount. This unit value may even relate to materials and tools, which are separate elements constituting an item of equipment, and not to the overall price of the latter. The company may therefore be faced with two possible scenarios:

If its priority is to show more results, it can deal with its investments in fixed assets;

If its objective is to reduce corporate tax, then it treats some of its expenses as expenses.

**General objective:** The general objective of this exercise is to highlight the economic and financial role of depreciation.

**Specific objectives:** The specific objectives of this research will be to look at depreciation along two axes according to the company's objectives. In this way, the company can decide:

**OS1** - To spend its investments in fixed assets (profit-oriented);

**OS2** - Or to treat some of its expenses as expenses (corporate tax reduction approach).

**Methodology:** the methodology of this study will consist of looking at the room for manoeuvre available to a company to spend depreciation on fixed assets or as expenses according to its objectives.

**Expected result:** The expected result of this research is to highlight the economic and financial role of depreciation according to the company's priorities.

**Research questions:** This study aims to answer the following questions:

Can the company spend its investments in fixed assets?

Can the company spend some of its expenses on expenses?

### Research hypotheses

**Hypothesis 1:** In order to achieve more results, the company can spend its investments in fixed assets.

**Hypothesis 2:** To pay less corporate tax, the company can write off some of its expenses.

## 1 The different types of depreciation

In this section, we will focus on four types of depreciation, namely:

**1.1 Accounting depreciation:** Reduction in the value of a fixed asset that depreciates in a certain and irreversible way with time, use or due to changes in techniques, market developments or any other cause. Due to the difficulty of measuring this reduction in value, depreciation is based on a programmed allocation according to a depreciation schedule for the cost of the asset over its probable period of use. Depreciation consists for the entity to spread the depreciable amount of the asset over its useful life, according to a predefined plan (article 45 of the **AUDCIF**: Uniform Act Relating to Accounting and Financial Information of the **OHADA**: Organization for the Harmonization of Business Law in Africa).

In other words, depreciation is a process of correcting the valuation of a fixed asset whose expected service potential normally and irreversibly diminishes.

Any significant change in the conditions of use of the asset justifies the revision of the depreciation plan in progress. The depreciable amount is equal to the difference between the initial value of the asset and its probable residual value at the end of the expected period of use.

**NB:** Not to be confused with capital depreciation or the amortization of a loan, which means repayment.

### 1.2 Amortization of a loan

Repayment of all or part of a borrowed sum; often referred to as financial amortization as opposed to accounting

amortization.

### 1.3 Capital depreciation

An operation by which a company reimburses the partners in part or in full in advance of the proceeds of the future liquidation of the company. In the second case, the shares thus fully amortised are called "share of profit-sharing".

### 1.4 Exceptional depreciation

Depreciation or the fraction of depreciation in the accounts that does not correspond to the normal purpose of depreciation and is recorded in accordance with specific regulations (usually tax-based). Exceptional depreciation is classified as a regulated provision and treated as such. They are therefore recorded under shareholders' equity and do not contribute to the determination of the Net Book Value (NBV) of the asset concerned, unlike book depreciation and provisions for impairment.

## 2. Should the company amortize its investments or write them off?

Depending on the company's priorities, it treats its investments as fixed assets if it chooses the option to show more results. Conversely, if the company's objective is to reduce corporate tax, they must be expensed.

### 2.1 The principle

The depreciation obligation results from the general principle that balance sheets and profit and loss accounts must reflect the company's situation as closely as possible. An asset is depreciated to take account of the fact that it loses value with time and use. As a result, all fixed assets recorded in the balance sheet can and must be depreciated, except for those that do not depreciate irreversibly (such as land and goodwill).

In other words, depreciation is a process of correcting the valuation of a fixed asset whose expected service potential normally and irreversibly diminishes.

Any significant change in the conditions of use of the asset justifies the revision of the depreciation plan in progress. The depreciable amount is equal to the difference between the initial value of the asset and its probable residual value at the end of the expected period of use.

**NB:** Not to be confused with capital depreciation or the amortization of a loan, which means repayment.

### 1.2 Amortization of a loan

Repayment of all or part of a borrowed sum; often referred to as financial amortization as opposed to accounting amortization.

### 1.3 Capital depreciation

An operation by which a company reimburses the partners in part or in full in advance of the proceeds of the future liquidation of the company. In the second case, the shares thus fully amortised are called "share of profit-sharing".

### 1.4 Exceptional depreciation

Depreciation or the fraction of depreciation in the accounts that does not correspond to the normal purpose of depreciation and is recorded in accordance with specific regulations (usually tax-based). Exceptional depreciation is classified as a regulated provision and treated as such. They are therefore recorded under shareholders' equity and do not

contribute to the determination of the Net Book Value (NBV) of the asset concerned, unlike book depreciation and provisions for impairment.

## 2 - Should the company amortize its investments or write them off?

Depending on the company's priorities, it treats its investments as fixed assets if it chooses the option to show more results. Conversely, if the company's objective is to reduce corporate tax, they must be expensed.

### 2.1 The principle

The depreciation obligation results from the general principle that balance sheets and profit and loss accounts must reflect the company's situation as closely as possible. An asset is depreciated to take account of the fact that it loses value with time and use. As a result, **all fixed assets** recorded in the balance sheet can and must be depreciated, except for those that do not depreciate irreversibly (such as land and goodwill).

### 2.2 - Room for manoeuvre

They are associated with the notion of fixed assets. In certain circumstances, an investment may not be considered as a fixed asset, depreciable over several years, but as an expense, fully deductible in the operating account for the financial year in question. This is the case for non-storable supplies.

In the first case, the costs are treated as depreciable fixed assets, in the second case as expenses. Likewise, the company is entitled to expense purchases of materials and tools, software, office equipment and furniture whose unit price does not exceed a certain threshold. This unit value may even concern, for materials and tools, separate elements constituting an item of equipment, and not the overall price of the latter.

In other words, if you buy a piece of equipment with a total value of 6,000 francs, for example, made up of three items each costing 2,000 francs, you can write off the 6,000 francs as an expense. For example:

If the company's priority is to show more results, treat your capital investments as fixed assets. Conversely, if the company's objective is to reduce corporation tax, you should write them off as expenses.

### 2.3 - How can you benefit from this?

**If the company's priority is to post the best possible results for the year 2020** (because the financial year is not going to be very bright, or because you need to impress your bankers or shareholders favorably), your interest is to reduce your expenses as much as possible. Whenever you can, treat your capital investments as fixed assets and amortize them over several years.

**If the company's objective is to reduce the Corporate Income Tax (CIT)** it will have to pay for the year 2020, you should, on the other hand, inflate your expenses as much as possible for that year. Therefore, write off your investments as expenses, whenever they qualify as such.

### However, be careful!

"For **Research and Development (R&D)** costs to qualify as fixed assets, there must be a good probability that what is being developed is technically feasible and will ultimately

make money for the company. The company director must be able to prove this with solid arguments" stresses Yves BERNHEIM, partner at Mazars & Guerard.

**The possibility of expensing purchases of office furniture** is subject to a twofold condition: these purchases must concern a small number of units, and result from the current renewal of the furniture installed (but not from the initial equipment or the complete renewal).

### 3 Shortening or lengthening depreciation periods

The deadline must be assessed according to the lifespan of each piece of equipment and the recommendations of the tax authorities.

#### 3.1 The principle

An asset is depreciated for tax purposes over its "normal period" of use. How is this determined? The General Tax Code stipulates that depreciation "is only deductible within the limits of those generally accepted according to the practices of each type of industry, trade or business". And, for each type of property, the Administration publishes a duration or a range of commonly accepted durations. For example, it uses a depreciation period of twenty years for industrial buildings, five to ten years for tools, four to five years for vehicles, etc.

#### 3.2 Room for maneuver

Please note that these durations are given for information purposes only. The Administration admits that special circumstances can lead a property to depreciate more or less quickly than normal," says Alain GONDOUX, from the accounting firm E3C. For example, a machine used in "three-shift operation", equipment exposed to cold or bad weather, etc., can be depreciated over shorter than average periods". The same applies to investments that are likely to be quickly rendered obsolete by technical progress or market developments, such as certain machines using advanced computer technology.

On the other hand, equipment that is intended to be used sparingly and installed in a room that is perfectly protected from the weather can have a maximum payback period.

The period should be assessed according to the life span of each piece of equipment and the recommendations of the tax authorities.

#### 3.3 - How to take advantage of it?

**If the accounting result and its good performance** are the company's main concerns, adopt the longest possible depreciation periods. When the tax authorities give a range (five to ten years for office equipment, for example), opt for the upper end of the range. And with each new investment, ask yourself whether there are special circumstances that might allow you to depreciate it over a longer period than the norm.

**If paying less tax** is the company's main concern, set the shortest possible depreciation periods. This time choose the lower end of the ranges recommended by the Administration, and see whether, due to special circumstances, you can accelerate the depreciation of certain acquisitions.

### However, be careful!

**If you invoke special circumstances** in order to apply a depreciation period that differs from the usual practice in the

sector (e.g., by depreciating a machining lathe over six years instead of ten, due to intensive use), you must be able to prove that these circumstances exist and that they justify the difference in depreciation period used.

**Except in very exceptional cases** (increase in the rate of operation of a machine during use, equipment rendered obsolete, etc.), it is impossible to go back on the depreciation period initially set. Tactics consisting in playing on this period are therefore advisable only if you intend to maintain the same objective (either to improve the accounting result or to minimize tax) over the next few years.

**The tax authorities** require a certain homogeneity in the depreciation periods adopted for comparable assets. If, for example, you acquired a photocopier in 2019 that is depreciated over four years, you will find it difficult to justify depreciating over six years another copier acquired in 2020.

#### 4 Exploit the flexibility of declining balance depreciation

Each year, the depreciation rate will be applied to the declining residual value of the property.

##### 4.1 The principle

Tax regulations authorize two main types of depreciation: straight-line and declining balance. The first system gives constant depreciation over the entire useful life of the asset, whereas with the second it is higher in the first few years and lower at the end. All fixed assets can be depreciated on a straight-line basis. On the other hand, only certain assets are eligible for declining balance depreciation.

##### 4.2 - Room for manoeuvre

Opting for the declining balance method at the outset does not in any way oblige the company to depreciate the maximum amount provided for in the multi-year plan; it may very well be content to depreciate an amount corresponding to the straight-line method." The only obligation imposed by the tax authorities is that the total amount of depreciation applied to a fixed asset must always be at least equal to the cumulative amount of the corresponding straight-line depreciation", says Alain GONDoux, from the accounting firm E3C.

When a company applies digressively, it must split its allowance in two. The amount on the straight-line method is transferred to "normal" depreciation, and the rest, i.e., the excess of the declining balance over the straight-line method, is transferred to "special" depreciation. The advantage of this split is that the special depreciation can be reversed at a later date, if necessary, without the company having to justify it. Each year, the depreciation rate will be applied to the residual value of the asset, which decreases.

##### 4.3 - How to take advantage of it?

"Each time the company acquires equipment eligible for the declining balance depreciation, it is in its interest to opt for this system and then use it year after year, according to the evolution of its interests", says Yves BERNHEIM, partner at Mazars & Guerard.

**If the company wants to post good results in 2020**, simply set aside an allocation for that year equal to the straight-line depreciation, and keep in reserve, under deferred depreciation, the excess of the declining balance over the straight-line depreciation. This is because depreciation not "used" in one financial year can be carried forward, without any time limit, to the following years. Thus, if the company

feels the need, in 2021, 2022 or 2023, to reduce the taxable income, it can charge the declining balance depreciation planned for that year, adding, if necessary, part of the depreciation deferred from previous years.

**If the company seeks to reduce its tax in 2020**, it will write off the full amount of the digressive depreciation. It thus retains the possibility, if it needs to improve its accounting result in a subsequent financial year, to write back depreciation equal to the amount of the declining balance depreciation exceeding the straight-line method.

##### Be careful, however!

**The method of depreciation** must be chosen as soon as the asset is entered in the accounts and cannot be changed afterwards.

**The Administration imposes a certain homogeneity** in the depreciation methods used for similar assets. If the company has five conveyors, it must avoid having three depreciated on a straight-line basis and two on a declining balance basis: in the event of a tax audit, it would be exposed to a painful adjustment.

#### 5 Damping systems

The depreciation method used should reflect as closely as possible the rate of consumption of the economic benefits expected by the company from the fixed assets. Different depreciation methods may be used to systematically spread the depreciable amount of an asset over its useful life.

##### Article 45 of the AUDCIF provides for

- The straight-line method, which results in a constant charge over the asset's useful life;
- The declining balance method, which results in a decreasing charge over the asset's useful life;
- The production unit or work unit mode (number of parts produced, hours of operation, number of kilometer's travelled, number of hours worked, etc.) which results in a charge based on the expected use or production of the asset; and- Any other more suitable mode. However, a depreciation method based on the revenues generated by the use of the asset is prohibited for property, plant and equipment. Similarly, financial amortization, which consists of depreciating a fixed asset at the same rate as the cost of financing it, is not permitted. The depreciation method used is applied consistently from one period to the next, except in the event of a change in the expected pattern of consumption of the asset. There are generally three (3) depreciation methods:

##### 5.1 - Straight-line or constant amortization

This is a method of calculating depreciation, spread equally (on a straight-line basis) over the useful life of the asset. In principle, all depreciable assets can be depreciated on a constant basis, which is the default method of depreciation.

##### Calculation principle

The principle for calculating the linear or constant annuity is as follows:

$$a = VO \times tl \text{ or } a = V.O. / n$$

With: a: annuity; VO: original value; tl: linear rate; n: duration in years

For properties brought into service during the year.



Depreciation of assets brought into service during the year is measured in proportion to the economic benefits consumed during the year.

The calculation of the first partial year's depreciation takes into account the period between:

- The date on which the asset is put into service;
- And the date of the end of the financial year by application of the "Prorata temporis" rule.

#### **Annuity 1 (a) = $VO \times tl \times n / 360$**

With: a: annuity; VO: Original Value; tl: linear rate; with n: duration in days.

By agreement, unless otherwise stated, the date of 31-12, the end date of the calendar year, is used as the year-end date.

#### **Please note**

- Prorate calculation in days (30-day month and 360-day trading year).
- The last annual instalment is the complement of the first in order to obtain a nil book value.
- According to the straight-line method, the depreciation period can therefore be spread over a number of years of accounting periods greater than the number of years of depreciation.
- For software, the starting point is the date of acquisition because it is considered that the.

The impairment loss began on that date and not on the date of entry into service.

Thus, under the straight-line system, the asset is depreciated equally over its useful life, applying a constant rate to its original value. By way of illustration, if a capital asset cost 100,000 francs and its annual depreciation rate is 20% (corresponding to a depreciation period of five years), it is depreciated by 20,000 per year.

#### **Depreciable assets**

##### **Assets depreciable on a straight-line basis**

- All assets because this is the "ordinary law" system,
- Passenger vehicles,
- Second-hand goods.

#### **5.2 - Accelerated depreciation**

This is an optional tax depreciation method, consisting of doubling the first straight-line depreciation annuity. The useful life is thus reduced by one year.

Pursuant to the provisions of the CGI (Article 10-1° of the CGI), accelerated depreciation can only benefit:

- New equipment and tools;
- Used exclusively for industrial operations of manufacturing, handling, transport, tourism, fishing, breeding and farming, or fulfilling an anti-pollution function, provided, in the latter case, that the equipment has been approved by the competent ministerial department; and
- With a useful life of 5 years or more.

#### **5.3 Declining balance depreciation**

It is also a method of tax depreciation, whereby annuities decrease over time (SYSCOHADA, 2017, p 66). It is based on greater depreciation of depreciable assets in the early years. It thus makes it possible to generate greater self-financing capacity in the early years, which is important, especially in periods of inflation.

In accordance with the tax provisions in force (*Article 51 A of the CGI: General Tax Code of Mali*), the declining balance depreciation is only applicable to:

- Capital goods, other than residential buildings, building sites and premises used for the practice of the profession;
- Acquired or manufactured by industrial enterprises; and
- With a useful life of 5 years or more.

The depreciation annuity is obtained by applying the following formula:

Annuity = NCV at the beginning of the financial year x Straight-line depreciation rate x coefficient.

This coefficient varies according to the useful life. It is set at:

- 2 when the useful life is 5 years; and;
- 2.5 when this term is more than 5 years.

The calculation of the first annual instalment is also prorated, in proportion to the time elapsed between the first day of the month of acquisition (regardless of the date of acquisition or the date of entry into service) and the balance sheet date.

In the final years of depreciation, when the degressive annual instalments become less than the quotient of the net book value (NBV) by the number of instalments remaining to be paid, this quotient is chosen as the annual instalment. In other words, when the degressive rate becomes less than the linear rate (1/Number of annuities remaining), the latter is applied to the NAV.

Declining balance depreciation, like accelerated depreciation, is purely optional. However, if a company uses the declining balance system, the total of the declining balance depreciation at the end of each financial year must be at least equal to the accumulated linear depreciation. Otherwise, the company loses the right to deduct the fraction of depreciation that has been irregularly deferred in this way. Straight-line depreciation is therefore the mandatory minimum (*article 51 A of the CGI. SYSCOHADA, 2017, p 66*).

The declining-balance method or SOFTY method (sum of the year's digits) consists in depreciating the asset according to a decreasing arithmetic sequence by applying a decreasing rate to the depreciable base. Diminishing balance depreciation at a decreasing rate is used when it best reflects the rate of consumption of the expected economic benefits. This accounting and economically justified method of depreciation leads to a decreasing charge over the useful life of the asset.

##### **Declining rate**

This decreasing rate is obtained by dividing the number of years remaining until the end of the useful life of the property by the sum of the serial numbers of all the years.

**TD = (number of years remaining until the end of the useful life of the property) / (sum of the serial numbers of all the years).**

**Depreciation annuity = Depreciable base x decreasing rate for the year**

Here is a summary of how each of these two options works.

**Another specific feature of the digressive mode:** each year, the depreciation rate is applied to the residual value of the asset, which decreases. In the above example, depreciation will be 40,000 francs (100,000 francs x 40%) in the first year, 24,000 francs (60,000 francs residual value x 40%) in the second, 14,400 francs in the third (36,000 francs residual value x 40%), and so on.

NB: Compared with linear depreciation, digressive depreciation is therefore higher in the first years and lower in the last.

#### Capital goods depreciable on a declining balance basis

The following capital goods may be depreciated on a declining balance basis for companies placed under a normal regime (real or simplified):

- Equipment and tools used for manufacturing, research, processing or transport operations.
- handling equipment, warehousing and storage facilities;
- Installations intended for water purification, atmospheric purification or for the production of steam, heat and energy.
- Safety or medico-social installations.
- Office machines.
- Hotel buildings and equipment.
- Industrial buildings, provided their useful life does not exceed 15 years.

**Please note:** these goods, which may have been either manufactured by the company or acquired from a supplier, must also meet two conditions: they must not be used, and their useful life must not exceed three years.

#### 5.4 Accounting for depreciation and amortization

		Date		Debit	Credit
682	29	Depreciation and amortization Depreciation		X	X

The depreciation charge thus recorded in account 682 will affect the company's operating income shown in account 83. Depreciation and amortization: decrease in value of a fixed asset

Depreciation is a reduction in value for a fixed asset recorded in a specific account attached to the account for the asset concerned. The fixed asset account is not credited with the amount of depreciation. This is an indirect method of depreciation. Depreciation is therefore credited to a Class 2 account with code 8 in the 2<sup>nd</sup> position of the number.

28: Depreciation of fixed assets

280: Amortization of intangible assets

2803: Amortization of research and development costs

2805: Amortization of concessions, rights, patents, software

2807: Amortization of goodwill

281: Depreciation of tangible fixed assets

2811: Depreciation of deposits

2812: Depreciation of fixtures and fittings

2813: Depreciation of buildings

28154: Depreciation of industrial equipment

28182: Depreciation of transport equipment

28183: Depreciation of office equipment

28184: Depreciation of furniture

28186: Depreciation of identifiable recoverable packaging

Possible depreciation adjustments

Certain adjustments may be made at the end of the financial year following the audit of the accounts in order to correct certain anomalies.

Adjustment of depreciation in the event of an excessive allocation for the current financial year:

**Principles:** The accounting treatments relating to the depreciation of fixed assets take place at the end of the financial year. Entries are entered in the "Miscellaneous Transactions" sub-ledger or generated automatically from fixed asset management software.

#### Depreciation: calculated charge, not disbursed

Depreciation is a **calculated, non-disbursed expense** recording the consumption of an asset, its loss in value and therefore the impoverishment of the company, recorded as a **debit to a class 6 expense account by nature**.

68: Depreciation, amortization, impairment losses and provisions

681: Depreciation, amortization, impairment and provisions operating expenses

6811: Depreciation and amortization of property, plant and equipment and intangible assets

686: Depreciation, amortization, impairment and provisions - Financial expenses

687: Depreciation, amortization, impairment and provisions Exceptional charges.

**Example of the accounting treatment of the allocation for the financial year:** the depreciation of depreciable items is considered as a normal operating expense that must be recorded as follows in the journal:

		Date		Debit	Credit
28	6811	Depreciation Depreciation and amortization fixed assets		X	X

Adjustment of depreciation for excessive allocation during a previous financial year:

		Date		Debit	Credit
28	7811	Depreciation Reversals of depreciation Fixed assets		X	X

#### 6. Role of depreciation

Damping plays several roles, among others, we will retain four (4), namely:

##### 6.1 Accounting role

Accounting for depreciation and amortization has a double impact on the financial statements, in accordance with the convention of prudence:

- The asset accounts are adjusted for the depreciation they incur;
- The income statement is reduced by the same amount.

Any underestimation of depreciation leads to an overvaluation of the asset and the accounting result. Even in the absence or insufficiency of profits, it is an obligation for companies to make the necessary depreciation (SIBY, 2019).

Likewise, compliance with the postulate of specialization of

financial years leads to an equitable distribution of the cost of the fixed asset between financial years according to its useful life or rate of use.

Depreciation and amortization recognizes the impairment loss due to the consumption of benefits economic benefits expected to be received by an item of fixed assets. It complies with the general principles of true and fair view, sincerity and regularity defined in the General Chart of Accounts. It shows the residual value of an asset at each year-end and at the date of disposal of the asset for the purpose of calculating an actual capital gain or loss.

## 6.2 Economic role

Depreciation contributes to the *renewal of fixed assets fully depreciated* by the reinvestments that it induces. A fully depreciated asset whose book value is nil and therefore becomes obsolete must be replaced by a new asset. Investment is one of the elements of economic growth.

## 6.3 Fiscal role

**Principle:** Depreciation charges are *tax-deductible expenses*. They therefore enable tax savings to be made if they have actually been recognized. Mandatory minimum depreciation must be measured on a straight-line basis. If, for a given asset, the total amount of depreciation booked at the close of a given financial year is less than the accumulated depreciation calculated using the straight-line method, the company definitively loses the right to deduct the so-called irregularly deferred depreciation annuity.

### Deferred depreciation

#### a) Depreciation regularly deferred in the profit period

The company may, by management decision, refrain from recognizing depreciation and amortization in the profit period if it complies with the "minimum straight-line" rule.

However, if it fails to comply with this obligation, the difference between the cumulative depreciation actually applied and the cumulative straight-line depreciation required is not tax deductible. The company definitively loses the right to deduct.

#### b) Depreciation deemed to be deferred in a loss-making period

When the tax result is in deficit, the company has the possibility of deferring the allocation to the depreciation for the financial year over the following financial years without limitation of duration.

#### c) Exceptional depreciation

These are economically unjustified (accelerated or declining balance) depreciations, booked in application of tax provisions. Exceptional depreciation and amortization are classified as regulated provisions and are therefore included in shareholders' equity. They do not contribute to the determination of the net asset value of the asset concerned, unlike book depreciation (economically justified) and provisions for impairment.

Thus, only the book or economically justified depreciation, which establishes the true depreciation of the asset, should be

*debited to the 681-amounts charged* to operating depreciation and *credited to the 28-amounts charged* to depreciation and amortization.

The difference between the allowance resulting from a tax provision (accelerated or declining balance depreciation) and that which is economically justified (straight-line depreciation) must be recorded:

- If the difference is positive (the tax charge > the economically justified charge), it is debited from the **HAO 851 account** - HAO charges to provisions regulated by crediting the 151-exceptional depreciation account;
- If it is negative (the tax charge < the economically justified charge), a debit is made to account 151-Exceptional depreciation and a credit is made to account HAO 861-Reversals of regulated provisions.

However, in an inflationary environment, the digressive system, in particular, would come closer to economically justified depreciation. This would not require the difference to be recorded as special depreciation (SIBY, 2019).

## 6.4. Financial role

The recognition of a depreciation charge neutralizes part of the profit and therefore a subsequent distribution to the associates, as well as a probable payment of tax. The company's cash position is protected solely by the accounting entry of a non-cash charge. The funds thus protected may be used to replace the fixed asset at the end of its useful life or life expectancy. This is the financial function of depreciation (SIBY, 2019).

Depreciation is a calculated charge that is deductible, not disburseable. It enables the capital initially invested to be recovered over time. The financing of this new investment is partly financed by the self-financing of maintenance or renewal corresponding to depreciation allowances. Thus, the financial nature of depreciation is more conducive to ensuring the replacement value of the fixed asset by deviating from its original value. The financial effect of depreciation and amortization is to enable the company to renew its fixed assets, as it allows the asset to retain a value equal to that which has been deducted from it to measure depreciation. It therefore makes it possible to avoid considering as income what is merely a decrease in capital.

For an accounting period, these depreciation charges are included in the calculation of the company's Cash Flow (CAF), a potential internal resource for financing investments. We will therefore say that depreciation represents equity capital which constitutes a means of financing that the company has free disposal as long as it does not need it to replace fixed assets. Replacement value is defined as "the price that it would cost at the end of each financial year to reconstitute the fixed assets in question in the state in which they were when they entered the assets".

## Summary on depreciation

Table 1

Goods concerned	All: normal or common law mode Second-hand goods Passenger vehicle on the cost including tax (All Taxes Included)
Rates Duration Annuity	Rate = 100 / Duration Duration = 100 / Rate Calculation basis = $V_0 \text{ HT}$ a = $V_0 \times \text{Linear rate}$ or a = $V_0 / \text{Duration}$
Starting point	Date of entry into service of the Property
First annuity	Reduced on a prorata temporis basis for the period between the date of entry into service and the year-end date. Countdown in days (12 months of 30 days)
Last year's annual instalment	Supplement to the first year's instalment an = $V_0 - \sum$ annuities up to n-1 Effective depreciation period = life of the asset
Allocation for the year	Amount of depreciation for the year: calculated charge, not disbursed, deductible.
Net book value	NBV = $V_0 - \sum$ of depreciation and amortization

**Source:** Digital Campus of the IUTs, (consulted on 10/09/2020), "Depreciation: general principles - straight-line economic depreciation". Page 16.

## 7. Discussion on the economic and financial role of depreciation and amortization

In this section, we will use three practical examples to give the points of view of the heads of accounting firms in order to better highlight the economic and financial role of depreciation.

Three examples of depreciation strategies: Are you Mr. "More Profit" or Mr. "Less Tax"?

Opt for the right strategic decisions.

### 7.1 - Example 1

In 2020, Company X spent 300,000 francs to develop, in-house, sophisticated software that could open up new markets for it

**Mr. "More results".**

Its situation: in 2020, before depreciation and amortization, company X will generate a profit of 200,000.

Its depreciation strategy: it decides to consider the 300,000 francs as a fixed asset, which will be depreciated over five years, from 2020 to 2024 inclusive, at a rate of 60,000 francs per year.

As a result, the company's profit (before tax) for 2020 is reduced by only 60,000. Company X continues to show a profit.

**Mr. "Less Taxes".**

Its situation: in 2020, before depreciation and amortization, Company X will generate a profit of 900,000 francs.

Its depreciation strategy: it decides to treat the 300,000 as an expense, which will be deducted in full, at once, in the operating account for the 2020 financial year.

As a result, the tax base is reduced by 300,000. Given a tax rate of 33.33%, it will pay 100,000 less tax.

Are you Mr. "More profit" or Mr. "Less tax"?

### 7.2. Example n° 2

Company X acquired a brand new machine for 800,000 francs, which it runs in "three-shift" mode. The usual period of use for this type of machine is between five and eight years.

**Mr. "More results"**

Its situation: in 2020, before depreciation and amortization, company X will generate a profit of 900,000 francs.

Its amortization strategy: it decides to amortize the 800,000 francs of the purchase price of the machine over the usual maximum period, i.e. eight years, at the rate of 100,000 francs per year.

As a result, the company's profit (before tax) for 2020 is reduced by only 100,000. Company X continues to show a

profit.

**Mr. "Less Taxes".**

Its situation: in 2020, before depreciation and amortization, Company X will generate a profit of 900,000 francs.

Its depreciation strategy: it decides, given the special circumstance of "three-shift" use, to depreciate the machine over four years only.

As a result, the taxable base of X is reduced by 200,000 in straight-line depreciation mode, and even by 300,000 in declining balance mode (see below).

Are you Mr. "More Profit" or Mr. "Less Tax"?

### 7.3. Example n° 3

Company X purchased research equipment, which is depreciated on a declining balance basis, for 1 million. This investment is depreciated over the usual ten-year period.

**Mr. "More profit"**

Its situation: in 2020, before depreciation and amortization, company X will generate a profit of 200,000.

Its depreciation strategy: it opts for the digressive depreciation system, but for the financial year 2020, it is content to depreciate on a straight-line basis: 100,000 francs. And it is keeping in reserve, as deferred depreciation, the 150,000 of declining balance depreciation that it did not "use" during the financial year.

As a result, the company's profit (before tax) for 2020 is reduced by only 100,000. Company X continues to show a profit. And if things change and its profit explodes in 2021, it will be able to reduce its tax by expensing the digressive depreciation planned for 2021 (187,500), as well as part of the deferred depreciation accumulated in 2020.

**Mr. "Less Taxes".**

Its situation: in 2020, before depreciation and amortization, Company X will generate a profit of 900,000 francs.

Its depreciation strategy: it opts for the declining balance system and, by 2020, will amortize the entire 250,000 on a declining balance basis. The 100,000 francs corresponding to the straight-line method will be converted into "normal" depreciation, and the surplus 150,000 francs into "special" depreciation.

As a result, the tax base of X is reduced by 250,000 in 2020. If the wind changes and the company does not generate much profit in 2021, it will only be able to use the 100,000 straight-line depreciation for that year. In addition, it will be able to increase its pre-tax profit by 150,000 francs by taking over the accelerated depreciation constituted in 2020.

Are you Mr. "More Profit" or Mr. "Less Tax"?



## Conclusion

In conclusion, with regard to the economic and financial role of depreciation, we will therefore say:

It is not possible to measure the decrease in value of a depreciable asset over the course of a year without knowing the total decrease in value that the asset will undergo during its period of use and the time lapse between the acquisition of the asset and its resale.

For this reason, depreciation is established on the basis of an anticipation that anticipates the depreciation realized in future years, the useful life of the asset and its terminal value. Thus the depreciation charge for a financial year is always assessed on a flat-rate basis, even when it is proportional to the use made of the asset during the year (miles, units produced), because the amount of depreciation per unit or per miles is determined by direct measurement of the depreciation incurred based on the estimate of the total depreciation incurred during the period of use and the total number of units produced or miles travelled.

- Furthermore, it should be noted that the residual value of the asset at the time of its disposal is unknown. Indeed, an item of equipment may have reached the point of complete wear and tear (anticipation of breakdowns).
- On the other hand, the pattern of depreciation does not always manifest itself in a uniform manner, as it may be physical wear and tear resulting from normal use of the asset or even the simple passage of time, as it may be sudden wear and tear following an accident.

Depreciation can also result purely and simply from obsolescence. The useful life of equipment is particularly affected by the level of maintenance.

As a result, the useful life of the equipment is not fixed, as a choice is made between repairing the equipment and renewing it.

Thus, the economic and, above all, financial role of a depreciable asset allows the company to opt for strategies, i.e. whether it wants to achieve more profit or pay less tax.

## References

1. Uniform Act on Accounting Law and Financial Information & SYSCOHADA in the Official Journal of OHADA n° special issue of 15; c2017. p. 1246.
2. Bathily M. Academic Year General Accounting Course. Sup' Management - Mali, Branch: Common Core; c2002-2003.
3. Digital Campus of the IUTs. Depreciation and amortization: general principles - straight-line economic depreciation; c2002-2003 [cited 2020 Sep 10]. Available from: [http://public.iutenligne.net/comptabilite/comptabilite-financiere/antraigue\\_januario/CTA-FIN-29/general/toc.html](http://public.iutenligne.net/comptabilite/comptabilite-financiere/antraigue_januario/CTA-FIN-29/general/toc.html).
4. Council of Ministers of the Organization for the Harmonization of Business Law in Africa (OHADA). Uniform Act Relating to Accounting Law and Financial Information; c2017. Available from: <https://www.droit-afrique.com/uploads/OHADA-Acte-uniforme-2017-droit-comptable-information-financiere.pdf>.
5. SIDIBE D. Accounting and Financial Auditing Course. Sup Management - Mali, Sub stream: Financial Engineering, Management Control and Audit; c2008-2009.
6. El Kabir M. Basic Principles of General Accounting. Office for Vocational Training and Labor Promotion (OFPPT) - Research and Training Engineering Department - Theoretical summary and practical work guide [Internet]. [cited 2019 Oct]. Available from: <https://f2school.com/wp-content/uploads/2019/10/Comptabilit%C3%A9-g%C3%A9n%C3%A9rale-1-cours-04.pdf>.
7. El Mallouki L. General Accounting. University Sidi Mohamed Ben Abdelah, Faculty of Economic and Social Legal Sciences - Department of Economic Sciences, Track: Economics and Management, Semester 1, Section A, Module: Introduction to Management Sciences; c2006/2007 [Internet]. Available from: <https://f2school.com/wp-content/uploads/2019/10/Comptabilit%C3%A9-g%C3%A9n%C3%A9rale-1-cours-02.pdf>.
8. Fechtali A, Fouguig B. The General Accounting of Moroccan Companies (Volume 1 and 2). 3rd ed. Edit Consulting S.A.; c2008/2009 [Internet]. Available from: <https://f2school.com/wp-content/uploads/2019/10/Comptabilit%C3%A9-g%C3%A9n%C3%A9rale-1-cours-03.pdf>.
9. Gouadain D, Wade EB. General Accounting, OHADA's Accounting System. ESTEM-Scientific, Technical and Medical Editions; c2005. ISBN: 978-2-84371-146-6.
10. Govoei BD. General Accounting Precise: OHADA Accounting Law and System, Contribution to the Improvement and Popularization of the System of Convergence Towards the IAS/IFRS International Accounting Standards. 2nd ed. Abidjan; Cotonou: Editions Etudis; c2006. ISBN: 978-99919-60-01-2. Available from: [http://biblio.ohada.org/pmb/opac\\_css/index.php?lvl=not\\_ice\\_display&id=3082](http://biblio.ohada.org/pmb/opac_css/index.php?lvl=not_ice_display&id=3082).
11. Hassainate M. General Accounting: The Fundamentals of Accounting. F2SCHOOL course; c2018/2019 [Internet]. Available from: <https://f2school.com/wp-content/uploads/2019/10/Comptabilit%C3%A9-g%C3%A9n%C3%A9rale-1-cours-01.pdf>.
12. Tchokote ID. The influence of IAS/IFRS on the new OHADA general chart of accounts. Journal of Modern Accounting and Auditing. 2019;15(1):465-474.
13. Martor B. Business law in Africa: OHADA and the harmonization process. Kogan Page Publishers; c2002.
14. Perochon C. TQG General Accounting. Foucher; c2001. ISBN: 978-2-216-08770-9.
15. Richard J, Collette C. General Accounting, French System and IFRS. 8th ed. Dunod; c2008. ISBN: 978-2-10-053576-7.
16. Accounting System for the Harmonization of Business Law in Africa (SYSCOHADA). Application Guide; c2017 [Internet]. Revised Accounting System, Final Version. Available from: <http://www.ohada.com/content/newsletters/3504/Guide-application-du-SYSCOHADA.pdf>.
17. Siby CMB. SYSCOHADA General Accounting and Tax Auditing. Harmattan Senegal; c2019.
18. Youssef S, Kabbaj S. General Accounting. 9th ed. Edisoft; c2014. ISBN: 9954-406-66-2.