# RECOGNITION OF INTANGIBLE ASSETS UNDER IFRS

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**Abstract**

Over time, intangible assets are increasingly outweighing tangible assets in many of the world's leading and largest companies by market capitalisation. At the same time, new intangible assets are emerging and old ones are transforming and acquiring new features, which complicates the process of accounting for them and adds more uncertainty, which in turn has a significant impact on financial statements. A content analysis was carried out to identify the impact of accounting for intangible assets under International Financial Reporting Standards (IFRS) on financial statements. Summarization, comprasion of scientific literature, content analysis, statistical, structural and scientific abstractions methods were used for the research. This article presents recognition of intangible assets under IFRS and their growing importance in financial statements are examined. Various scholarly interpretations of intangible assets are reviewed, alongside an analysis of the conditions for their recognition under IFRS. The scholarly debate surrounding these recognition criteria and their consequences is also addressed. To assess the impact of intangible asset recognition on financial statements, SAP SE and Siemens AG are used as case studies, demonstrating that financial reporting is significantly affected due to the money and time spent, as well as the inherent subjectivity in recognizing and measuring these assets.

***Keywords:*** intangible assets, International Financial Reporting Standards, valuation, financial statements.

## Introduction

Over the past decades, the importance of technology has been increasing at a rapid pace, which in turn increases the importance of primarily intangible assets of the company. Thus, patents, rights, quotas, AI, software and various applications can cost much more than the company's tangible assets, which leads to an increase in their value in the company's statement of financial position. However, with the increase in the types of intangible assets, development costs, and their evaluation, there is a need for a deeper understanding of accounting for this type of assets. This includes a detailed review of the conditions of acquisition of intangible assets, their initial assessment of value, which in turn includes the correct allocation and recognition of development costs as investments, constant revaluation, amortization, terms of purchase / sale, etc. A correct and clear accounting of intangible assets will make it possible to correctly assess the financial position of the company, its solvency and financial indicators. First of all, this concerns public technology giants that set the trend for the entire economy.

**Research aim:** to identify the conditions under which intangible assets are recognized and the impact of recognizing on the financial position and statement of comprehensive income of companies.

The following **objectives** have been set to achieve the aim:

1. To analyze the concept of intangible assets in an accounting context;
2. To identify the conditions under which intangible assets are recognized and revaluated under IFRS;
3. To study the effect of initial recognition of intangible assets and revaluation on the financial position and statement of comprehensive income.

**Research methods applied:** systemtic and structural, statistical, scientific abstraction; analysis and synthesis, summarization and comprasion of scientific literature; content analysis.

## Results and discusions

### Concept of intangible assets

For a better understanding of intangible assets, their accounting and their impact on financial position and statement of comprehensive income, it is necessary to clearly describe the nature of this type of asset. After analyzing the scientific literature, it can be concluded that there are many interpretations of intangible assets. Most of which agree on the same criteria (Table 1).

**Table 1.** Definition of intangible assets

| Author | Definition |
|---|---|
| Black, Zyla (2018) | Non-financial assets that do not have tangible form, which may be recognized either individually or in a group with other assets. |
| Sacui, Szatmary (2015) | Assets that derive their value primarily from knowledge and information. |
| Kazlauskienė, Bartusevičienė and Tamulienė (2017) | Assets that do not have a tangible form and are capable of bringing financial benefits to the company in the future. |
| Gavrilovsky, Stashenko (2019) | Items that do not have physical form in their essence, which may generate income and can be measured. |

Almost all definitions emphasise in their definitions that intangible assets do not have a physical form. However, Kazlauskienė, Bartusevičienė, Tamulienė (2017) and Gavrilovsky, Stashenko (2019) add to this definition that this type of asset can bring financial benefits to the enterprise that owns it. Gavrilovsky and Stashenko (2019) add that it can be measured. According to Black and Zyla (2018), an important point in the definition of an intangible asset is that it can be recognised individually or in combination with other assets. Contrary to all the previous statements, Sacui and Szatmary (2015) focus not on the direct feature of intangible assets, namely their lack of physical form, but on the source of these assets - information and knowledge.

It is impossible to fully characterise and define the concept of intangible assets without taking into account the interpretation of international accounting standards, namely International Financial Reporting Standards (IFRS) and International Accounting Standards (IAS), which is part of IFRS. According to IAS 38 (2024), an intangible asset is an identifiable non-monetary asset without physical substance. This definition is quite concise, but at the same time highlights their main essence - the absence of physical form and a non-monetary asset.

After analyzing all the definitions mentioned above and combining the key elements, it is possible to formulate a more accurate concept of intangible assets - these are non-monetary assets that do not have a physical form in their essence, which can be evaluated and can bring future financial benefits to the enterprise, the source of this type of assets is necessary technologies and financial costs for their creation.

**Initial recognition of intangible assets and revaluation**

In order to fully analyze the impact of intangible assets on a company's financial statements, it is necessary to clearly define the conditions and recognition mechanism for this type of asset, as well as its initial valuation. International accounting standards were used as a basis for more universal use.

Accourding to IAS 38 (2024) to recognize an intangible asset, it must meet the following criteria:

1) meets the definition of an intangible asset, i.e. has no physical form and is non-monetary asset;
2) there are clear reasons to believe that this asset will bring economic benefit to the enterprise in the future;
3) it is possible to clearly define the cost.

Such strict requirements for the recognition of intangible assets, which already make up a considerable share of costs in companies, have led to numerous discussions. Thus Mazzi et al. (2019) in their research for the years 2005-2015 examined 20,475 companies and concluded that 62.2% of the sample fully recognized expenses for the research and development stage of intangible assets instead of capitalization. This indicates a rather low level of recognition of intangible assets that were created within the company itself.

Intangible assets that were purchased should be recognized in the balance sheet as the amount that was spent on the acquisition and all cumulative costs associated with the acquisition (for example, the costs of an IT specialist who will install and configure the purchased accounting program will be included in the cost of the asset) or the fair value of this asset.

If the intangible asset was developed internally, this adds several more criteria necessary for recognition. According to IAS 38 (2024), in order not to confuse the cost of acquiring an intangible asset with the cost of maintaining or enhancing the entity's internally generated goodwill or of running day-to-day operations, an intangible asset must have research and development stages.

Research stage: during this stage, the company does not produce any assets, only collects information, plans something, etc. All expenses incurred during this phase are recognized as expenses at the time of their occurrence.

Development stage: during this phase, the intangible asset itself is already created, the costs incurred in this phase are already transferred to the initial cost of the asset, this includes the cost of materials, services, wages to employees and other obligations to them, administrative costs for registering the right ownership and amortization of patents, licenses that were used to create the asset. However, during this phase, an entity may recognize an asset if it meets the following criteria: the intention to complete the intangible asset, for further use or sale, the condition of the asset in which it can be used or sold, the presence of an element of economic benefit that is demonstrated to be similar or similar asset on the market or the method of use within the company, the availability of all the necessary resources for the completion of the project and the ability to clearly allocate costs for the development of an intangible asset. For these reasons, a brand, for example, cannot be an intangible asset, as it is worked on every day.

As it is already clear, intangible assets created internally are quite difficult to value correctly, as, for example, it is a challenge to estimate the exact time spent by specialists on the development of certain software, etc., while working on other projects and daily tasks. Only after knowing the exact time spent on the creation of a particular intangible asset will it be possible to allocate part or all of the costs incurred as a result of the employees' work.

Companies are required to provide the most truthful information in their financial statements, so it becomes necessary to periodically (in accordance with local laws and accounting policies) assess the value of assets after they have been recognised to clarify their value. Intangible assets are not an exception. According to IAS 36 (2024), there are 2 models that a company can use: cost model and revaluation model.

1. Cost model - in this model, intangible assets are measured at cost less accumulated amortisation and impairment losses.

2. Revaluation model – IAS 36 (2024) stipulates that after initial recognition, an intangible asset should be carried on the balance sheet at its revalued amount, which is its fair value less accumulated amortisation and impairment losses, while the fair value should be determined based on an active market. There is no prescribed number of revaluations required, but at the end of the reporting period, the carrying amount should not differ materially from the fair value. It should be noted that if a company decides to use valuation model to this particular asset, it should apply it not only to intangible assets, but also to all other assets.

At this point there is also a problem, as it is quite difficult to find an active market for intangible assets. It is problematic to evaluate something that no one has yet bought, for example, a program for artificial intelligence or patents for the design of a phone, etc. Thus, Ma and Zhang (2023) point out that under such circumstances the fair value will have a high level of subjectivity and uncertainty, which in the end raises questions about the reliable display of information, and the assessment of fair value may lead to double accounting future cash flows. However, it should be noted that there is still an active market for some intangible assets, such as the purchase of various permits and licenses from the state for the use of extraction of natural resources or quotas for environmental pollution, which are sold both at the level of entire states and by various companies. Therefore, if there is simply no active market for this type of intangible asset, then the cost is calculated in the same way as the cost model. According to Mrša (2018), an additional problem with the methods of measuring the value and valuation of intangible assets is that a large share of them is in the structure of intellectual capital, which is quite problematic to measure in monetary terms. The structure of such capital can include people, knowledge that has no future financial benefit, etc., make the result unpredictable: from complete failure to huge profits. Individually, all of these elements do not qualify as intangible assets that can generate income, but in their synthesis, the result can be radically different from expectations. In turn, this leads to companies either reporting intangible assets at a lower value than they are actually worth or writing them off as expenses to avoid unnecessary problems.

If, after the valuation, the book value of the intangible asset is less than the revalued value, then according to IAS 36 (2024) the company must adjust the amount in one of the proposed ways.

1. The book value is adjusted to correspond to the revalued value, also the accumulated amortization on the revaluation date must also be changed to correspond to the difference between the gross carrying amount and the carrying amount of the asset after taking into account accumulated impairment losses.

2. The accumulated amortisation is eliminated against the gross carrying amount of the asset.

The next important step is to recognize the effect of the revaluation as profit or loss. If the book value is lower than the revalued value, then the company will recognize other accumulated income and accumulated in equity under revaluation surplus. If, on the contrary, the intangible asset has lost its value as a result of revaluation, then the loss should be recognized in the general comprehensive income or loss, at the same time, such a change should be reflected in the revaluation reserve in equity. Subsequently, the revaluation reserve may be recognized as a loss or profit at the end of the reporting period, or at the time of sale or write-off of the intangible asset.

Another important element of intangible asset valuation is amortization, so if the asset's useful life is uncertain, then no amortization is applied to it at all. For those intangible assets whose useful life can be measured according to IAS 36 (2024), amortization is applied, which best reflects the pattern of future financial benefits from this asset, if it is impossible to determine the pattern, then the straight-line method should be used. The choice of amortization methods for intangible assets is standard.

Amortization directly affects the book value of intangible assets and some complications may arise here. The problem of correctly estimating future cash flows from an intangible asset also leads to difficulties with the development of an amortization schedule (Barker et al, 2021). This causes a situation where amortization is calculated due to the lack of data, also for example in the case of the development of some new technology that takes more than one year, it is necessary to transfer the costs of creating an asset and calculate amortization, but at the same time competitors are also developing the same technology, and if they will be the first, then the company will not receive its financial benefit, then the fair value of the intangible asset will be minimal, despite the accumulated amortization. In the end, regardless of the result: whether it is a profit or a loss, all information will be displayed correctly, but during development there is uncertainty about the amount of amortization that must be calculated. On the one hand, this does not cause big problems, as it is not a cash flow, but it affects the correct presentation of the company's financial condition. It is important to note that another element of intangible assets, namely goodwill, is not subject to amortisation. However, each reporting period goodwill is tested for impairment, whereby if the fair value is lower than the carrying amount, an impairment is recognised and expensed IAS 36 (2024).

Thus, intangible assets are recognised and accounted for primarily in accordance with IAS 38. The criteria for recognising intangible assets are as follows: meets the definition of an intangible asset; it has no physical form and is a non-monetary asset; there are clear reasons to believe that this asset will bring economic benefit to the enterprise in the future and it is possible to clearly define the cost. In the case of internally generated intangible assets, another criterion is added - the existence of research and development stages, which partially allows to determine the value of such intangible asset correctly. Currently, there are two models for determining the value: cost model and revaluation model, based on IAS 36. The choice of amortisation method for intangible assets depends on the company and the way these assets are used, while goodwill is not subject to amortisation at all as well as intangible assets whose useful life cannot be clearly measured.

**Effect of recognizing of intangible assets on financial statements**

Intangible assets are becoming increasingly valuable for the world's largest companies, which is reflected in their financial statements, where this type of asset has already taken a significant place. SAP SE and Siemens AG were chosen to review the impact of intangible asset recognition on financial statements, as these companies are technology giants and use IFRS in their consolidated financial statements. The period for consideration was the following: 2020-2023. This period was chosen to obtain the most up-to-date data, taking into account new global trends after the pandemic and the latest IFRS practices. The following table summarises the neccesary information collected on intangible assets from the financial statements of the companies listed above (Table 2).

**Table 2.** Impact of intangible assets and its expenses on position of financial position and profit/loss statement

| Categories | Years/Companies | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2020 | | 2021 | | 2022 | | 2023 | |
| | SAP | Siemens | SAP | Siemens | SAP | Siemens | SAP | Siemens |
| Value of intangible assets and goodwill in mln. EUR | 31,322 | 25,287 | 35,056 | 40,693 | 36,912 | 46,057 | 31,593 | 42,865 |
| % of intangible assets and goodwill in total assets | 53,57% | 20,4% | 49,26% | 29,14% | 51,15% | 30,4% | 46,23% | 29,55% |
| Research and development expenses in mln. EUR | 4,454 | 4,569 | 5,190 | 4,859 | 6,080 | 5,591 | 6,324 | 6,183 |
| % of research and development expenses in total expenses | 15,48% | 9,02% | 16,67% | 8,63% | 18,5% | 8,38% | 19,98% | 9,06% |

Before analysing the impact, it should be noted that according to the financial statements of SAP SE (2023) and Siemens AG (2023), intangible assets other than goodwill include customer relationships, patents, licences, etc. This means that in the case of these two companies, the increase in the amount of assets was simply due to their operations, as it is usually arising from their day-to-day operations to acquire a customer relationship, sometimes need investment but still much lower than in case of other assets. An important point is that intangible assets make up a very large share of total assets, it all depends on the industry in which the company operates, but here we can observe range of 46,23-53,57% of SAP SE within 4 years and 20,40%-29,55% for Siemens AG. The recognition of intangible assets also strongly affects the calculated ratios of the statements. By recognizing an intangible asset, such as customer relationships, we improve the company's financial position, because in this way the company's indebtedness - debt ratio, etc. - decreases. On the other hand, this leads to a partial distortion of the financial result, for example, return of assets (ROA) will fall, since the profit in any case will be the same regardless of whether this intangible asset is recognized or not. In turn, all this can lead to data manipulation, because it is necessary to remember that subjectivity still plays a large role in the recognition of intangible assets.

The next element of accounting of intangible assets is research and development costs, in general at Siemens AG the percentage of total costs is relatively stable and fluctuates from year to year depending on the volume of investment and is around 9%, while SAP SE continues to increase its costs to 20% in 2023. An interesting point is that according to the data of their financial statements, these costs are basically employee benefits, as already mentioned in the previous section, it is quite difficult to fairly estimate how much time the employee spent on the development of a new technology and how much on everyday operations. Therefore, in this case, companies can safely transfer part of the usual costs to research and development expenses, which can later be partially capitalized. In addition to this, not only does the company's data show these costs on a separate line - it allows all interested parties to understand what amounts were spent on the development of intangible assets, so this type of cost is perceived more as an investment by stakeholders, and not just an operating cost.

As already mentioned in the previous section, intangible assets whose useful life cannot be clearly measured are not amortized, that is, a company can add a long-term asset to its balance sheet without amortizing it, which does not lead to an increase in expenses in the income statement, but in the statement of the movement of funds would be imperceptible. It is worth noting that these companies use the straight-line amortization method, having the opportunity to amortize the cost as it will be profitable for them. However, this choice is most likely caused by the impossibility of measuring the cash flow of these assets and time frames. The following table will demonstrate the impact of the recognition of intangible assets on the income statement, and more specifically on the amortization expense of the two companies.

**Table 3.** Amortization of intangible assets and impairment of goodwill

| Categories | Years/Companies | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2020 | | 2021 | | 2022 | | 2023 | |
| | SAP | Siemens | SAP | Siemens | SAP | Siemens | SAP | Siemens |
| Accumulated amortization for the year (intangible assets) in mln. EUR | -719 | -952 | -678 | -1,004 | -766 | -1,256 | -528 | -1,321 |
| Impairment of goodwill in mln. EUR | N/A | +99 | N/A | 0 | N/A | +12 | N/A | +8 |

The data (Table 3) shows that although the amount of amortization is not high, but in any case, it reduces the company's net income in the statement of financial results. So, for both companies, the amount of amortization primarily depends on the amount of assets, but even so, due to the fact that some intangible assets are not amortized, the correlation between accumulated amortization and the value of such assets is not ideal. Impairment has a much smaller signigicance than amortization of other intangible assets, and in the case of Siemens AG, no impairment is deducted at all.

## Conclusion

1. Intangible assets are a type of assets without monetary and physical form, but which can bring future financial benefit to the organization.

2. To recognize an intangible asset, it must meet the following basic criteria: meet the definition of an intangible asset, have clear reasons to believe that it will bring future financial benefits and it is possible to estimate its value. In the

case of the purchase of an intangible asset or the presence of an active market, there are no problems with estimating its value, however, for those that were created within the organization, there are certain restrictions and rules that must be followed to recognize an intangible asset. Many authors here agree that there are many problems with the conditions for the recognition of internally generated intangible assets, primarily subjectivity, inconsistency and false reflection of the company's financial position.

3. Considering the impact of recognition of intangible assets on financial reporting, the impact here is obvious. Thus, from the point of view of the balance sheet, the value of total assets increases and the debt ratio decreases, while some intangible assets do not require additional costs for recognition. The impact on the statement of financial results can be estimated by amortization deductions of intangible assets, impairment losses and R&D expenses, which can be capitalized in the future and in some circumstances can even reduce the costs of the core business. Also, these costs are perceived by investors more as investments than losses, although they also reduce the profitability of the company.

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