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Stowarzyszenie Księgowych w Polsce

Accounting for goodwill in the context of the usefulness of financial statements

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Abstract

Purpose: Accounting for goodwill is one of the most controversial areas of financial reporting. For decades, it has been subject to numerous changes, including options from writing it off to equity to keeping it permanently at cost. In the author's opinion, this instability of the accounting approach results from an insufficient understanding of the economic essence of goodwill. There is a conflict between accounting regulations, where there is a clear trend to extend its useful life, and business logic, which defines goodwill as an unstable and constantly evolving network of relationships between resources. The aim of this article is to analyze if the present accounting treatment of this item correctly reflects its economic essence. **Methodology/approach**: Research was carried out based on data obtained directly from the financial statements of the top twenty listed entities in Poland, the UK, the USA, and Germany. **Findings**: Appropriate ratios have been calculated to substantiate the view that the entities take advantage of accounting regulations and, in practice, useful life ranges from 20 to over 100 years, depending on the country. **Originality/value**: Research has proven that the present accounting treatment in terms of recognition and measurement of goodwill is not in line with the economic essence of this balance sheet item.

Keywords: goodwill, useful life, accounting treatment, usefulness, financial statements.

Streszczenie
Ujęcie i wycena dodatniej wartości firmy
w kontekście użyteczności sprawozdania finansowego

Cel: Ujęcie księgowe nabytej wartości firmy to jeden z najbardziej kontrowersyjnych obszarów rachunkowości finansowej. W ciągu ostatnich dziesięcioleci było ono obszarem bardzo istotnych zmian – od podejścia opartego na natychmiastowym spisywaniu wartości firmy w korespondencji z kapitałami własnymi do permanentnego utrzymywania jej w bilansie. Zdaniem autora niestabilność podejścia księgowego wynika z niedostatecznego zrozumienia istoty ekonomicznej goodwillu. Istnieje konflikt między regulacjami księgowymi, gdzie widoczny jest trend do wydłużania okresu jej ekonomicznej użyteczności, a logiką biznesową, definiującą ją jako niestabilną i nieustannie ewoluującą sieć powiązań między zasobami. Celem artykułu jest analiza zgodności księgowego ujęcia i wyceny wartości firmy z istotą ekonomiczną tej kategorii. **Metodyka/podejście**: Badanie zostało przeprowadzone na podstawie danych pozyskanych bezpośrednio ze sprawozdań finansowych największych dwudziestu spółek notowanych na giełdach w Polsce, Wielkiej Brytanii, USA, w Niemczech. **Wyniki**: Obliczone na tej podstawie wskaźniki

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pozwoliły udowodnić tezę, że jednostki wykorzystują istniejące regulacje księgowe, aby wydłużać księgowy okres użyteczności wartości firmy, który waha się od 20 do nawet 100 lat. **Oryginalność/wartość**: Przeprowadzona analiza dowodzi, że obecne podejścia do ujmowania i wyceny wartości firmy nie są zgodne z istotą ekonomiczną tej pozycji bilansowej.

Słowa kluczowe: wartość firmy, okres ekonomicznej użyteczności, ujęcie księgowe, użyteczność, sprawozdanie finansowe.

Introduction

Financial accounting is subject to numerous conventions that are aimed at ensuring the true and fair view of a company's financial position and performance. Financial reporting regulations are developed by trying to find a consensus between different user groups and, at the same time, correctly reflecting the economic essence of a transaction. It should also fit into the generally accepted framework. It is, therefore, a complex process that needs to reconcile different priorities and interests (Goliszewski, 2015, p. 61). Consequently, the adopted solutions may give rise to controversy among stakeholders, who argue that the model potentially simplifies or distorts the complexity of a given phenomenon.

One of the most debated issues is the recognition and measurement of purchased goodwill. It represents all the acquired resources of a subsidiary that fail to meet both the definition of asset and criterion of identifiability as described by IAS 38 "Intangible assets". It is commonly agreed that this category includes employees' knowledge and experience, good relationships with suppliers, faithful customers, market share, brand recognition, and an efficient distribution network, among others. These items may well be crucial success factors of an enterprise or key reason for its acquisition, but they must not be individually recognized in the books or financial statements.

According to IFRS 3, goodwill is calculated as the difference between the fair value of the consideration transferred and the fair value of the net identifiable assets of a subsidiary. The amount gets capitalized, requiring no recoverability test on initial measurement. It is, therefore, assumed that the surplus amount paid over an acquiree's individually recognized assets is always justifiable, and it supposedly exactly reflects the value of resources outside the scope of the balance sheet. Goodwill, as per IAS 38, is an intangible asset with an indefinite useful life, and it cannot, therefore, be amortized. Instead, the premium on acquisition is annually tested for impairment as part of a cash-generating unit (CGU).

The logic of the test is explained by IAS 36, which makes it necessary to compare the book value against the recoverable amount, which is usually based on discounted future cashflows of a CGU. This procedure may potentially lead to situations where no impairment of goodwill is required for many years, as long as an entity is convinced of the CGU's ability to generate benefits in the periods to come. In the light of the above,

it can be concluded that the prescribed accounting treatment for goodwill is designed in favor of managers who prepare financial reports for their investors, allowing them to capitalize all the amount paid in business combination and to potentially roll it over many years on the basis of financial forecasts. This may potentially distort the financial picture.

Thus, this article aims to:

1) present how accounting's treatment of goodwill has changed over the decades,
2) evaluate the economic essence of goodwill and to verify it against the asset definition and recognition criteria provided by the Conceptual Framework,
3) present the results of research carried out by the author aimed at analyzing the role of goodwill in consolidated financial statements of the top twenty listed entities in Poland, Germany, the United Kingdom, and the USA.

The methodology used included obtaining the necessary financial data directly from the published financial statements of the above-mentioned entities and calculating key ratios regarding goodwill, including its useful life and its share in total assets, among others. This made it possible to draw conclusions on its usefulness for users and how the practice reflects the theory.

1. Overview of the historical accounting treatment of goodwill

The birth of the goodwill concept can be linked to the evolution of companies to their present shape. Family businesses gradually developed into enterprises that are present on international markets. This meant that the owner's personal reputation became distinguishable from that of his corporation, and thus, it became transferable (Hughes, 1982, pp.18–19). May noticed that between 1880 and 1929, which could be described as the period before the first formal regulations, many accounting practices aimed to capitalize additional amounts in balance sheets under the wide interpretation of goodwill. This trend can be divided into four major categories:

1) the purchase of another business unit that is a going concern (acquired goodwill based on present understanding);
2) a regular expenditure made on advertising and promotion (capitalizing on what is now defined as an operating expense – capitalizing on internally developed goodwill);
3) the capitalization of initial losses made by an entity (start-up costs);
4) revaluations of items held at historical values (subjectively and irregularly made due to lack of regulation) (May, 1961, p. 90).

At that time, Dicksee believed that goodwill should be immediately written off and reduce equity, even though he admitted that it does represent an asset, although its recognition in the balance sheet is not desired. He argued that for any item presented in a statement of the financial position, it is necessary to reflect its change in value over

time with a corresponding entry made to the profit of subsequent periods (Dicksee, Tillyard, 1906). His considerations were based on the argument that goodwill revaluation (both up or down) is difficult – or even impossible – to perform.

Several years later, Montgomery opted to capitalize goodwill without any amortization (Montgomery, 1913). This became an increasingly popular treatment due to similarity of tax regulations at the time. It was argued that goodwill does not get consumed, and therefore, accounting for expense is not necessary. This view was not shared by other authors, like Hatfield and Paton, who claimed that no resource is eternal, and value should be gradually reduced (Hatfield, 1913; Paton, Stevenson, 1922).

Yang described goodwill as the ability to generate additional benefits. In order to establish its value, it is necessary to compare profits that could be earned by individual assets and an entity as a whole. The surplus represents goodwill. He tried to prove that nobody would be willing to pay a premium (above the value of net assets) if there was no ability to create additional profits (Yang, 1927). It must be noted that the proposed explanation did not distinguish between purchased and internally developed goodwill, and his model can be used in both cases. As a result of conceptual chaos, goodwill soon lost its credibility in the eyes of users of financial statements, who considered it to be a very subjective item. In particular, banks as capital providers claimed that intangible assets became subject to such manipulation that they represented more of an obstacle and had no meaning for users of financial information (Yang, 1927, p. 184).

The real breakthrough came in the early 1930s, when the economic crisis began. This was a lesson that there is no clear relationship between an enterprise's book value and market value. Consequently, three out of the four categories described above were disallowed, which was part of a conservative trend in American accounting not to recognize internally generated intangibles (Sanderset al., 1938, p. 67).

An important step was made in 1944, when ARB 24, on intangible assets, was issued and officially sanctioned the historical cost approach, prohibiting revaluations and capitalization of internally made expenditure. ARB 43, published in 1953, explained that goodwill should not be immediately written off but instead amortized over its useful life, if determinable. Technically, this did not exclude permanent presentation in a balance sheet, which was a common practice at that time. It should be noticed that, for the first time, ARB 43 included a provision to establish the fair value of acquired net assets. An argument often raised against capitalizing goodwill was the conviction that it does not meet the definition of an asset. Spacek explained that goodwill is neither a resource nor a legal right that is consumed to generate benefits. It is more the result of profit forecasts and investors' expectations.

However, amortizing goodwill is also incorrect and misleading as it is not a productive asset. Goodwill represents anexpenditure that gives the buyer access to future profits, although they are not guaranteed (Spacek, 1964, pp. 35–40). In 1970, the Accounting Principles Board issued APB 17 on intangible assets, which stated that intangibles should be accounted for like other non-current assets – initially recorded at cost, and subsequently amortized. Since useful life cannot be determined in some cases, it was

decided to set a maximum limit of 40 years, which prohibited it from being maintained permanently as an asset. Since then, there have been relatively few changes, with the exception of 2001, when amortization was replaced by impairment tests, and 2007, when the distinction was made to calculate not only proportionate goodwill but also full goodwill, by measuring the non-controlling interest at market value on the acquisition date (Flood, 2016, pp. 367–369).

In the 1970s, goodwill also became a subject of interest in British accounting. The first step was made by the Accounting Standards Steering Committee, when two working groups were established to investigate the issue of the treatment of goodwill in accounting. The two bodies presented vastly different conclusions. One group was in favor of capitalizing goodwill while the other was against it. Due to this fundamental disagreement, the project was abandoned. A new impulse came in 1978, when the Fourth Council Directive was issued requiring member countries to develop uniform accounting regulation. In 1980, a Discussion Paper was published that proposed that goodwill be recognized as an asset and amortized over forty years. There was a mixed reaction to this idea. Another initiative was Exposure Draft 30, published in 1982, which recommended amortizing goodwill over 20 years or its immediate write-off against equity. This second alternative was based on the assumption that there is no difference between purchased and internally developed goodwill; hence, accounting treatment should be the same. Table 1 below shows how entities approached the issue of goodwill over time when no clear accounting guidance was available (Elliot, 1993, p. 439).

Table 1. Accounting policies for the goodwill of British entities in the 1970s and 1980s

Accounting treatment	1973–1974	1977–1978	1980–1981
Held at cost	72*	98	29
Amortized over useful life	64	43	30
Written off against equity	71	81	195
Other	2	0	0
No accounting policy	91	78	46
Total	300	300	300

* Number of entities subject to the survey.

Source: Elliot, Elliot (1993, p. 439).

In 1985, SSAP 22, "Accounting for goodwill", explained that goodwill can be distinguished from other assets in the balance sheet as it is the only resource that cannot be individually sold or realized, and it provides economic benefits separately from the rest of an entity. The standard also points out other characteristics that may question goodwill recognition in financial statements:

- there is no relation between goodwill and cost, or expenditure made,

- specific items that comprise goodwill (for example, the company's reputation, employees' experience) cannot be individually recognized,
- the valuation of goodwill may be subject to significant fluctuation over a short period due to internal and external factors.

SSAP 22 stated that entities must not recognize goodwill in financial statements other than the purchased one, meaning there is a clear prohibition to capitalize internally developed goodwill. Purchased goodwill was to be calculated as the difference between the fair value of consideration and the fair value of the acquired assets. This logic does not significantly vary from what is currently defined by IFRS 3. In subsequent periods, two alternatives were available:

1) immediate write-off against equity,
2) amortization over useful life with a charge made to operating expenses (Jennings, 1990, p. 594).

The first approach assumes that goodwill represents expenditure made by the new owner with a view to enjoying the future benefits of the acquiree. Consequently, goodwill is closely linked to a capital commitment in the purchased entity. An alternative treatment, borrowed from the USA, follows the idea that a cost was made to acquire the rights to future benefits. As those benefits begin to materialize, there should be a corresponding expense; otherwise, the profit would be overstated (Glautier, Underdown, 1991, pp. 175–176).

SSAP 22 was widely criticized by allowing two completely different treatments that had a significant impact on financial ratios. In the accounting practice of that time, i.e., by 1986, about 98% of companies followed the concept of immediate impairment (Nobes, 1992, pp. 142–167). This was seen as an attractive option since post-acquisition profits were not impacted by amortizing goodwill. Furthermore, the full write-off made on the acquisition date not only did not impact profits, but it made it possible to show lower equity and thus better ROCE (profit for the year divided by total equity), which at that time was one of the key financial ratios (Quasim, 2013, p. 66).

Arnold argued that immediate write-off cannot be justified from the theoretical point of view. It also gave the impression that companies that grow through acquisition provide better returns than those whose strategy is based on organic growth and who heavily invest in depreciable tangibles (Arnold, 1992, p. 59). The accounting practice of that time also included capitalizing various intangibles as a substitute for goodwill. As there was no specific accounting standard, such items were permanently held at cost. Since there was no clear guidance regarding the measurement and identifiability of acquired assets, their creative accounting thrived (Grynier, 1991, pp. 51–55).

In 1993, the Accounting Standards Board issued a Discussion Paper regarding goodwill and other intangibles. It was the first time that the concept of the impairment test appeared, and significant effort was made to develop appropriate procedures. The outcome of this work came in 1997 when FRS 10 "Goodwill and Intangible Assets" was published, sanctioning obligatory annual tests for items (including goodwill) with

an indefinite useful life. The standard put an end to the debate and practical dilemmas. FRS 10 allowed the impairment of goodwill to be reversed if indicators were no longer present. In 2004, the EU adopted IFRS as accounting regulations for all the member countries, and the UK accounting practice had to comply with international regulation whose development is described below.

In 1974, IAS 1 briefly mentioned that goodwill was to be recognized if it met the definition of an asset. Two years later, IAS 3 "Consolidated financial statements", defined goodwill as the difference between the cost of investing and a share of the acquired identifiable assets that could be valued at book or market value. There was a choice regarding the accounting treatment of the surplus paid on business combination (debit balance):

- as an asset that wassubject to amortization, although it wasn`t necessary,
- netted off against equity without impact on the period's profit,
- as a period expense.

Consequently, there was a wide range of acceptable treatments both in terms of calculation (based on book or market values) and presentation in financial statements (Ignatowski, 2012, pp. 123–124). This accounting model was far from uniform.

The next important impulse came in 1985 with IAS 22 "Business combinations", which made clear reference to fair values of acquired net assets, which increases the value of information from the management accounting perspective (Michalak, 2016, p. 73–79). Of the three alternatives mentioned above, only the first two did not indicate a preferred accounting treatment. The option to show the acquired assets at their book value also remained available, which resulted in big discrepancies in terms of measuring goodwill.

It was not until 1993 that the concept of fair values as the only acceptable approach was introduced. The amortization of goodwill was determined to be no longer than five years unless it could be linked to a specific asset, in which case it could be extended to a maximum of twenty years. The International Accounting Standards Committee was of the opinion that goodwill's value declines over time, which reflects its reduced ability to generate economic benefits. In 1998, IAS 22 was revised, and procedures for impairment testing were introduced. It can be clearly noticed that in the last two decades of the twentieth century, there was a constant trend to extend the period over which goodwill was maintained in financial statements – from immediate write-off against equity to amortizing over twenty years.

The beginning of the new millennium brought more changes when revised IAS 36 prohibited the reversal of previous impairment losses in 2003 (Ignatowski, 2012, p. 123), and when IFRS 3 superseded IAS 22 in 2004. Major changes included replacing amortization with an annual impairment review and negative goodwill with bargain purchase gain (Bonham et al., 2006, pp. 78–79).

Goodwill once again was in the center of the International Accounting Standards Board's attention in 2008. The revision of IFRS 3 made it necessary to account for the

purchase consideration, excluding transaction costs. Since then, goodwill is calculated as the difference between consideration increased by the non-controlling interests less identifiable net assets of an acquiree, all measured at fair value. This formula makes it possible to calculate also the "full" value of goodwill, and not only the "proportionate" value, as was the case before, and which is still a common practice under some of the local GAAPs, for example, in Poland (Godlewska, Fołta, 2016, p. 112). Step acquisition logic was replaced by the concept of calculating goodwill only once – at the timepoint when control is obtained (Gierusz, 2016, p. 25). The appearance of IFRS 10 in 2011 and its new definition of control based on the three attributes gave rise to the present shape of the regulations.

This overview of developments to the accounting treatment of goodwill over the last century clearly shows that it was subject to significant changes:

- capitalizing even internally generated goodwill,
- writing off against equity with no impact on profit,
- amortizing over useful life determined between 4 and 40 years,
- maintaining permanently at cost.

Those frequent revisions of the regulations made users of financial information very distrustful of goodwill, especially bearing in mind that solutions developed by regulators often went against accounting practice, like in the UK in the 1980s (compare with Table 1). Furthermore, there is a clear trend to extend the period over which goodwill is maintained in the balance sheet and to protect this category from impairment write-offs by making it possible to estimate future cashflows generated by a CGU. Those forecasts can be updated and inflated by CapEx additions made to CGUs. This leads to a paradox where a historical figure that is shown as goodwill is explained by cashflows generated by subsequently purchased assets. The author calls this phenomenon the "rollover of goodwill". In order to explain why this could be a questionable accounting practice, it is necessary to investigate the economic essence of this category.

2. Goodwill – the economic essence

The author believes that this instability of accounting regulation is primarily due to the insufficient understanding of what this balance sheet category actually represents. It is, therefore, necessary to step back and investigate what is actually meant by goodwill. What is the economic essence of this item? At the same time, it is crucial not to forget the asset definition and recognition criteria provided by the Conceptual Framework:

- it is the result of a past event,
- it is a resource controlled by an entity,
- it is the source of future economic benefits,
- there is a probability of benefits that need to be virtually certain,
- it is a reliable measurement of the item.

The economic ideas for goodwill include:

1. An enterprise's above-average ability to generate benefits in the future.

   This effect is possible due to the cooperation of tangible resources with intangible and non-financial factors (Cieciura, 2012, p. 5). This could be perceived as a bonus that can be earned thanks to the unique combination of those components. This explanation, though attractive, cannot be considered satisfactory for the following reasons:
   - How can one determine a standard, average level of returns, and hence the potential surplus?
   - If the concept refers to profits, then these are future profits, and therefore unrealized and uncertain. This would lead to recognizing items in the balance sheet that do not yet exist.
   - An entity's ability to generate profits cannot be considered a separate asset, as this is a feature of every single asset in financial statements. It is effectively double counting.

2. A component of an entity's valuation.

   Maximizing wealth for shareholders should remain the primary goal of all profit-focused organizations (Copelandet al., 1997, p. 3). To determine the price for which a business could be sold, the authors recommend two groups of methods:
   - those based on discounted future cashflows,
   - those based on economic profit defined as the relationship between invested capital and the difference between the actual return on investment and the weighted average capital cost (Szymański, 2015, pp. 279–323).

   The above-mentioned models, along with numerous variations, are widely known and used, especially as supporting tools in mergers and acquisitions to set an acceptable price level. From the financial reporting perspective, such an approach would technically be feasible. The valuation of an entity based on those models would be simply compared against the total assets to arrive at the valuation of goodwill. In this concept, it represents a residual amount, i.e., it is the difference between the valuation of an entity and the book values. However, it must be stated that:
   - some assets are held at historical cost rather than fair value;
   - certain items, especially intangibles, remain unrecognized in the balance sheet;
   - financial accounting presents only the effects of past transactions based on the accruals concept, which does not make it possible to present the consequences of future events (for example, signed but not yet performed contracts).

   If the following logic were to be applied, a goodwill valuation would effectively cover all the above-mentioned components. An interesting consequence of this idea is that it can be applied to both purchased and internally developed goodwill, and it makes it possible to take a comprehensive look at an enterprise. There are, however, strong reasons that make this logic unacceptable from a conceptual point of view:

- The scope of such valued goodwill is too wide, covering not only valuation mismatch to fair value but also missing intangibles, and anticipated profits.
- The volatility of enterprise valuation, since the forecasts of future cashflows may be subject to significant fluctuations, which would presumably impact profits of subsequent periods.
- Those revaluations of goodwill through the profit of a specific period would often result from the perception of future accounting periods by managers – this would consequently impair information provided by the income statements which are prepared under the accruals concept.
- Subjectivity in terms of the choice of a particular valuation method and the selection of mostly unobservable inputs to the models.

3. Intangibles unrecognized in the balance sheet.

   Low and Kalafut defined twelve components that could be a source of competitive advantage. They cover leadership, realizing a chosen strategy, communication and transparency, brand recognition, reputation, networks and alliances, technologies and processes, human capital, organization and work culture, innovation, faithful customers (Grajewski, 2016, pp. 70–74), intellectual capital, and flexibility (Low, Kalafut, 2004, pp. 138–146). Those factors create an enterprise's value. To maintain an advantage over competitors, they need to be well understood and wisely managed. In the presented concept, goodwill represents all these elements. However, at the same time, they fail to be individually recognized and measured in an entity's books.

   It appears, however, that such an interpretation is too wide (Klimczak, 2015, p. 109). Furthermore, all those items fail to individually satisfy the criterion of identifiability, as defined by IAS 38. The standard explains that an intangible is identifiable if it meets one of the following:
   - it can be individually sold or transferred to another entity,
   - it represents a legally binding contract.

   If the above items are not identifiable and cannot be recognized in financial statements, then the question arises of how it can be proven that goodwill, which is the total of the twelve components, can be identifiable (Lew, 2016, p. 21).

4. Processes that take place in an organization.

   In this concept, goodwill is a network of connections between assets, which makes it possible to generate positive net cashflows. An enterprise's resources are not a random group but a carefully selected combination that is capable of producing above-average returns. This can be achieved by skillful management. This logic is closely linked to the Value-Based Management concept, which focuses on determining the key factors that drive a business's success (Rappaport, 1999). The author

of the value generation index for entities that operate in a knowledge-based environment indicated the following components: innovation, quality, customers, management, alliances, technology, brand, employees, and environment. They are all an essential part of everyday operations, including project and quality management, product and process design, modeling supply and distribution chain, forecasting, production, and stock planning.

The concept under which goodwill encompasses all the processes in a business unit, though interesting, consistent, and rational from a management theory point of view, has no practical application from the financial reporting perspective. The main difficulty is the inability to quantify the value of internally developed processes. Like prohibiting the capitalizing of marketing expenses, it is impossible to determine how much of the expenditure relates to daily operations and how much contributes to the value of the processes because of their repetitiveness. This difficulty could potentially be overcome if the concept were to be limited to mergers and acquisitions.

Even though measuring such goodwill could be determined as the difference between consideration and net assets, as is presently the case, this logic does not include the most fundamental feature of the processes, which can be compared to a spiderweb built around an acquired entity's resources. It appears that such a web is extremely unstable – although processes take place in an entity all the time, they are constantly being restructured and redefined. This constant evolution is a fundamental aspect of the ability to adapt to changes in both internal and external factors.

One of the greatest turbulences that can be experienced is a takeover. A buyer usually needs to adapt a recently acquired business unit to his group's standards, including replacing management, renegotiating key business contracts, restructuring, and retraining (Żurek, 2016, pp. 69–81). This represents a shock, which gradually destroys the old network, which is then replaced by new solutions. Consequently, such an approach would lead to a paradox where the goodwill presented in the balance sheet relates to a non-existent item, namely the purchased network of processes in an entity which, from acquisition day, is replaced by a new, internally developed one.

5. Benefits arising from synergies.

Synergy is a term that originates from the Greek "sunergos", meaning the cooperation of factors that makes it possible to achieve better effectiveness compared to separate actions. The term was used for the first time in a management context by Ansoff, who presented his idea as 2+2 = 5. On one side of the equation are resources and processes, and the missing "one" is goodwill, which represents:

- economies of scale,
- a reduction in capital cost,
- the complementarity of goods and services,
- vertical integration,
- diversification.

It must be emphasized that the majority of these effects can only be achieved through mergers and acquisitions. This is consistent with economic logic – a buyer is prepared to pay more for an entity than the value of its net assets because he sees this extra potential for his existing business. In this case, goodwill can not only be measured as a difference, but it is also much more narrowly defined compared to previous approaches. The premium paid is the subjective expectation regarding future synergy benefits. This logic, however, fails to satisfy accounting requirements:

- How can it be proven that the synergies are controlled by the acquirer if they fail to satisfy the identifiability criterion (i.e., they can be individually sold, or they represent a legal contract) as required by IAS 38?
- Synergies can only materialize if certain actions take place in the future, requiring additional investment. This would mean that a takeover does not automatically trigger synergy benefits and, thus, the recognized goodwill is only a hypothetical item that depends on future events.

To sum up, none of the five proposed explanations of goodwill meets the definition of an asset, as per the Conceptual Framework:

- above-average abilities to earn benefits,
- a component of an entity's valuation,
- intangibles unrecognized in the balance sheet
- processes that take place in an organization,
- benefits that arise from synergies.

Even if it could be proven that criteria for recognizing and valuing assets are somehow satisfied, another key consideration needs to be made. It has been shown that some common features are apparent no matter which of the five explanations is used:

- goodwill is not a resource like any other; it is more about the relationship between other resources,
- the network of relationships is subject to constant redesign; every action taken by the business redefines it,
- the split between internally developed and purchased goodwill is an accounting convention that has little economic justification,
- goodwill is primarily about future expectations and plans; it reflects an entity's potential that is yet to be released; consequently, its amount should be subject to fluctuations,
- under no approach can goodwill be valued directly; it is always a residual amount of one number (the purchase price paid or future discounted cashflows) over another (net assets acquired or balance sheet total).

If, as explained above, goodwill represents a fragile network that continuously changes and creates the potential to earn over average profits, it must be concluded that its life in the balance sheet should be short. This is particularly true about purchased goodwill, which can be compared to information in a newspaper and how

quickly outdated it becomes. If one considers that reading news from some time ago is not useful in everyday life, the same is true for business, which would not be able to generate profits based on out-of-date operating logic – the "old" and unchanged purchased goodwill. In the next part of the article, the results of research on goodwill carried out by the author will be presented.

3. The role of goodwill in consolidated financial statements – research results

There is a fundamental conflict between accounting theory and business logic in terms of goodwill. As presented in the first part of the article, there is a trend to extend the useful life of goodwill by replacing regular amortization with impairment tests, which logically allows us to include benefits generated by assets purchased after an acquisition. This phenomenon was called the "rollover of goodwill". At the same time, economic interpretations of goodwill all emphasize that this item is extremely prone to changes and constantly evolves. It is, therefore, necessary to analyze how this conflict of potentially unlimited accounting useful life against apparent economic sensitivity is resolved in practice. How do enterprises resolve this issue and account for premiums that are paid on acquisitions in practice? To answer this question, research was carried out based on data obtained directly from published financial statements. This task was divided into the following steps:

1) selecting entities for the research,
2) defining the scope of the research and its limitations regarding the availability and comparability of data,
3) calculating ratios,
4) drawing conclusions.

In the first step, the top twenty entities from Poland, the United Kingdom, Germany, and the USA were chosen based on their stock capitalization.

In the first three countries, companies prepare their consolidated financial statements under IFRS, whereas in America, companies follow US GAAP. Those two regulations, whose development was presented in the first part of the article, are currently very similar in terms of the accounting treatment of goodwill. The entities represent different sectors, including banking, manufacturing, retail, telecommunications, and the provision of services. The choice of the top twenty entities was made under the assumption that they play a key role in terms of mergers and acquisitions in their business sectors. However, analyzing goodwill based on industry exceeds the scope of this article.

In the second step, the entities were analyzed in terms of the balance sheet, income statement, cashflows, and numbers presented in additional notes.

In total, the author examined the data of twenty entities from four countries over a period of ten years, which gives 800 financial statements. An important aspect was that those big entities report total assets and revenues counted in hundreds of millions or even billions in their respective currencies, which means that details regarding individual takeovers were not always available due to materiality. It should also be noted that there are significant differences between economies and the scale of the groups that operate in the four countries. Biggest entities listed on the stock exchange in Warsaw report assets and revenues in millions of PLN, whereas American giants report amounts exceeding billions of dollars. It can be assumed that depending on the scale of operations, the role of goodwill in terms of nominal and relative values may differ. Therefore, the results for the four countries are presented separately, which may also provide an opportunity to draw additional conclusions, especially in terms of cultural influences on accounting. Germany is an example of the continental model, the UK and USA represent the Anglo-Saxon model, while Poland is regarded as a mixed model. Table 2 shows the financial data for the analyzed sample.

Table 2. Financial data of the sample entities
(all numbers in billions) in years 2008–2017

Country	Average			
	revenue	**equity**	**assets**	**operating cashflows**
Poland	15.493 PLN	13.096 PLN	50.008 PLN	2.230 PLN
United Kingdom	53.027 GBP	36.753 GBP	366.067 GBP	7.211 GBP
USA	40.315 USD	28.116 USD	58.302 USD	9.850 USD
Germany	50.541 EUR	23.785 EUR	117.484 EUR	5.293 EUR

Source: authors' own research based on the financial statements of the analyzed entities.

These numbers prove that Polish entities have only a fraction of the potential of those in the other three countries. However, disproportions between the other three are also apparent – American entities have the biggest potential in terms of generating operating cashflows. It is almost twice as big as in Germany, which is especially interesting considering that German entities report assets twice as high as American businesses. This may potentially be explained by the fact that Germany is usually associated with traditional manufacturing, whereas American enterprises are leaders in information technologies, and they presumably may rely to a greater extent on intangible resources outside the scope of their balance sheet. The highest total assets can be found in the British entities, which is primarily due to several banks, which may have distorted the results, to some extent. Nonetheless, British entities have by far the highest level of equity. Summing up, entities on the three stock exchanges (excluding Poland) have huge potential to play a part in mergers and acquisitions on a global scale. Table 3 presents the nominal values for goodwill.

Table 3. Nominal amounts of goodwill (in billions)

Description	Poland	United Kingdom	USA	Germany
Average in 2017	1.178 PLN	8.767 GBP	12.736 USD	9.949 EUR
Average in 2008	0.241 PLN	5.691 GBP	4.270 USD	6.632 GBP

Source: own research based on the financial statements of the analyzed entities.

The numbers presented in Table 3 allow us to draw the following conclusions:

1. Nominal values reported as goodwill were subject to a significant increase over the last ten years:
   - Poland increased by five times,
   - the United Kingdom increased by 54%,
   - the USA increased by nearly three times,
   - Germany increased by almost 50%.

The numbers in the table relate to year-end balances, which are numbers after impairment losses have been deducted, which, to some extent, netted off additions resulting from new acquisitions. It can be concluded that the role of goodwill in financial reporting increased over the last decade.

2. Polish entities report figures which are only a fraction compared to the other three economies. Even though their numbers increase much quicker, the gap remains very large, which is due to limited resources and the inability to carry out mergers of global importance.

The next step was to analyze the importance of goodwill in relation to other balance sheet items, which is presented in Table 4.

Table 4. Goodwill as a proportion of balance sheet items in 2008 and 2017 (in %)

Goodwill's share in:	Poland	United Kingdom	USA	Germany
Intangible assets in 2017	29.7	49.8	64.8	62.2
Intangible assets in 2008	16.2	58.8	64.9	54.3
Fixed assets in 2017	10.9	21.0	30.5	26.4
Fixed assets in 2008	4.5	21.0	24.8	26.3
Total assets in 2017	4.5	12.5	15.5	16.0
Total assets in 2008	1.7	11.2	12.6	15.5
Total equity in 2017	15.0	50.5	40.6	39.2
Total equity in 2008	4.9	45.8	23.5	48.0

Source: authors' own research based on the financial statements of the analyzed entities.

Based on the table, it can be concluded that:

1. Polish entities present a significantly lower share of goodwill in all balance sheet categories compared to the other three countries. This can be linked to the numbers presented in Table 3, where it was shown that goodwill is considerably lower in nominal terms in Poland than in the other analyzed market economies, which are more mature. At the same time, Polish entities increased the share of goodwill in the balance sheet categories twofold or even threefold.
2. In the other three groups, goodwill accounts for more than 50% of all the recognized intangibles. Based on the IFRS 3 definitions, this would suggest that the majority of intangibles fail to meet the recognition criteria on the acquisition date. This may potentially provide a convenient explanation for the acquirer – whatever premium is paid, it is always attributable to goodwill.
3. The share of goodwill in equity ranged from 40% to 50%. This level appears to be very high, and it gives an insight into the implications of a potential one-off immediate write-off. As explained earlier, this used to be one of the accounting approaches commonly applied in the past.

The next issue to be analyzed is how frequently acquisitions took place between 2007 and 2018 (Table 5).

Table 5. Frequency of mergers and acquisitions between 2007 and 2018

Description	Poland	United Kingdom	USA	Germany
Consolidated financial statements with at least one acquisition	57	108	139	148
Percentage	28.5	54.0	69.5	72.0

Source: authors' own research based on financial statements of the analyzed entities.

The numbers demonstrate that entities in the three more mature economies carried out takeover transactions two or even three times more frequently than Polish entities. Another aspect that is worth consideration is to compare figures for additions for the respective countries, which is shown in Table 6.

Table 6. Nominal additions to goodwill between 2008 and 2017 (in billions)

Description	Poland	United Kingdom	USA	Germany
Total additions to goodwill	22.733 PLN	121.021 GBP	214.663 USD	120.872 EUR
Biggest single addition to goodwill	7.983 PLN	34.313 GBP	23.032 USD	19.425 EUR

Source: authors' own research based on the financial statements of the analyzed entities.

Based on the above two tables, it can be further concluded that:

1. Although German entities carried out most takeovers (Table 5), it is American enterprises that recorded the biggest additions, amounting to 214 billion dollars over ten years (Table 6).

2. Individual transactions may account for a significant portion of total goodwill recognized by all the analyzed entities. This shows that there are single transactions where goodwill amounts to billions.

The next research area was to determine the relationship between consideration paid, identifiable net assets acquired, and goodwill, which is a residual figure (see Table 7).

Table 7. Relationship between consideration, net assets, and goodwill between 2008 and 2017 (in %)

Description	Poland	United Kingdom	USA	Germany
Consideration	100	100	100	100
Average level of net assets	38.4	61.6	36.6	44.8
Goodwill	61.6	38.4	63.4	55.2
Transactions where goodwill exceeded 50% of consideration	57.7	33.3	76.8	58.6

Source: authors' own research based on financial statements of the analyzed entities.

Based on the above, the following conclusions can be drawn:

1. Goodwill (except for the British entities) accounts for approximately 60% of consideration. This means that for every hundred dollars paid, only 40 dollars are attributable to assets and 60 dollars to intangibles, which cannot be proven to be identifiable. This ratio appears to be very high, as goodwill – as explained in the previous part of the article – encompasses all resources that do not meet the definition of an asset.

2. For the majority of transactions (again with the exception of the UK), goodwill was well above 50% of consideration transferred. This proves that the 40% assets and 60% goodwill relationship was not distorted by individual, untypical transactions but is a general trend.

3. If we assume that the amounts capitalized as goodwill on acquisition date are significant, then there should be a mechanism to protect users of financial statements from the over-optimistic and artificial inflation of figures in subsequent accounting periods. This should be reflected in the amounts reported as impairment of goodwill.

Consequently, it is necessary to look at the level of impairment write-offs, as goodwill is not subject to regular amortization under either IRFS or US GAAP (see Table 8).

Table 8. Frequency and nominal amounts of impairment write-offs between 2008 and 2017

Description	Poland	United Kingdom	USA	Germany
Consolidated financial statements (total of 200 for each country) in which impairment was recorded	22	50	23	64
Probability of an impairment write-off	11%	25%	11.5%	32%
Frequency of write-offs	once in 9.1 years	once in 4 years	once in 8.6 years	once in 3.1 years
Total additions (in billions) – see Table 6	22.733 PLN	121.021 GBP	214.663 USD	120.872 EUR
Total write-offs (in billions)	2.624 PLN	72.189 GBP*	18.989 USD	30.677 EUR
Additions divided by write-offs	8.66	2.871	11.30	3.94

* Figure for British entities is significantly distorted by a single write-off done by the Royal Bank of Scotland in 2008 for over 30 billion pounds which would reduce total impairments to 42.127 billion pounds.

Source: authors' own research based on financial statements of the analyzed entities.

Based on the above, it can be concluded that:

1. Both the frequency and nominal amounts significantly differ between the countries. The biggest values can be observed for British and German entities. The level is similar, especially taking into consideration the adjustment to British data. Polish and American entities carry out impairment write-off half as often. This is not in line with the traditional split between the continental and Anglo-Saxon models of accounting.

2. For German and British enterprises, the ratio of additions to write-offs is at the level of about 3–4, whereas for Polish and American entities, it is about 10. This provides evidence that the phenomenon of the "rollover of goodwill" does take place. Goodwill cumulates in the balance sheet, and the "old" goodwill is not replaced by the "new" goodwill from more recent acquisitions. The amounts keep building up in the balance sheet – see Table 3.

The final step of the research was to analyze the useful life of goodwill in financial statements based on the frequency and amounts of the write-off, which are presented in Table 9.

Table 9. Average useful life of goodwill in the analyzed entities, 2008–2017

Description	Poland	United Kingdom	USA	Germany
Average level of write-offs (write-off compared to the book value of goodwill)	5.3%	2.9%	0.8%	2.2%
Number of entities (out of 20) with write-offs below 2%	9	13	15	12
useful life of goodwill	19 years	34.5 years	125 years	44.4 years

Source: authors' own research based on financial statements of the analyzed entities.

Based on the above, the following conclusions can be drawn:

1. The average useful life significantly varies between countries. In Poland, it is only 19 years, while in America, it exceeds 120 years. These figures do not fit the economic interpretation of goodwill, which was compared to a delicate web that links all the resources, and which is constantly redefined. Why has it remained unchanged for decades for financial reporting purposes? The answer is that it is rolled over as part of impairment tests procedures – the book value of goodwill is explained by the future cash-flows of a CGU, ignoring the fact that certain assets may have been acquired after the takeover.

2. In the author's opinion, the unrealistic period of useful life provides the key evidence that both accounting theory and accounting practice fail to reflect the economic essence of goodwill. If the web is constantly redefined, then after a few years, purchased goodwill is gradually substituted by an internally generated one, which, according to IFRS and US GAAP, must not be recognized. This is another paradox.

Summary and conclusions

The aim of the article was to analyze three issues:

- the development of accounting regulation regarding goodwill in international regulations,
- the economic essence of goodwill,
- research on goodwill to investigate how accounting theory is reflected in practice.

The methodology used to achieve the main aim of the article was to obtain the necessary financial data directly from the published financial statements of the top twenty listed entities in Poland, the USA, the UK, and Germany, and to calculate key ratios regarding goodwill, including, among others, its useful life and its share in total assets. This made it possible to draw conclusions on its usefulness for users and how practice reflects the theory.

The key findings are as follows:

1. The accounting treatment of goodwill has been subject to numerous changes over the decades – from immediately writing it off against equity with no impact on profit to keeping it permanently at cost as an asset. In the author's opinion, these changes result from an insufficient understanding of the economic essence of this category.

2. There are various economic interpretations of goodwill, including an above-average ability to generate profits, the component of the entity's valuation, intangibles unrecognized in the balance sheet, processes that take place in an organization, and benefits that arise from synergies. As explained, none of the above satisfies the accounting criteria for recognizing assets. However, the common feature of all the economic explanations of goodwill is that it can be perceived as a delicate network, subject to constant redefinition within an organization. In light of the above, its useful life in financial statements should not be long.

3. Empirical data demonstrates that figures recognized as goodwill exceed hundreds of millions or even billions of respective currencies. At the same time, the significance of mergers and acquisitions increases, which results in the growth of nominal values.

4. On average, goodwill accounts for about 60% of consideration paid on the acquisition date, whereas the recognized net assets are only 40%. This suggests that buyers are usually very optimistic about takeovers.

5. The useful life of goodwill in practice is very long (from 20 to 120 years, depending on the country), which cannot be reconciled with the economic essence of this category. Financial accounting fails to properly reflect this phenomenon in financial statements.

It appears to be necessary to once again consider the accounting treatment of goodwill in the light of its economic sense to develop more useful regulations for users of financial statements.

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