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## Determinants of goodwill: Empirical study from emerging economies

 Ancauța-Anisia Chelba<sup>1</sup>,  Anatol Melega<sup>2\*</sup>,  Veronica Grosu<sup>3</sup>

<sup>1,2,3</sup>Ștefan cel Mare University of Suceava, Romania.

Corresponding author: Anatol Melega (Email: [melega.anatol@gmail.com](mailto:melega.anatol@gmail.com))

### Abstract

Goodwill is increasingly receiving the interest of investors, auditors and other users of financial statements, therefore the need for comprehensive information on this topic has grown over time. The aim of this article is to analyze the determinants of goodwill in companies from emerging economy countries. The research is structured in two stages. The first stage of the research consists of a bibliometric analysis of the literature that is focused on the goodwill topic. The second part of the research consists in building an econometric model in order to assess the determinants of goodwill based on data reported by firms in emerging economy countries in 2021, namely the data reported by 21,977 companies from 100 emerging economy countries, structured into 94 industries. The obtained results are represented by the development of an econometric model that shows the implications of net profit, Economic Value Added (EVA), Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA) and of research and development (R&D) expenses on goodwill fluctuations and vice versa. The results of our research highlight the fact that goodwill fluctuation is generated by the fluctuation of net profit, EVA, EBITDA and less by the R&D expenses. This study adds value to the literature by treating the subject differently, analyzing and evaluating the relationship between net profit, EVA, EBITDA, R&D expenses and goodwill.

**Keywords:** Depreciation, Determinants, Economic value added, Emerging market, Expenses on goodwill fluctuations, Goodwill fluctuations, Goodwill impairment.

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**Transparency:** The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained.

**Ethical Statement:** This study followed all ethical practices during writing.

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### 1. Introduction

Goodwill is an ambiguously treated topic from both the perspective of the accounting norms and of the inner policies of a company. The issue of goodwill has generated a number of controversies, the most important of which are in the area of recognition (accounting) and impairment. In today's global economy, goodwill is becoming increasingly important due to the accelerating allocation and concentration of capital manifested in mergers and acquisitions of entities, as well as capital

ties in various structures and forms. The research in recent years shows that goodwill has an increasingly important position in the assets of capital groups that are part of some of the largest economic organisations, particularly in countries with developing capital markets.

Goodwill should be treated as a right of use of factors not identifiable by the acquirer in the case of the acquisition of a business which results in a profit (excess profit) exceeding its average size (norm) over a homogeneous group of the same business profile or industry. Goodwill is seen as the ability of the entity to produce a profit, which derives either from specific factors capable of contributing positively to the generation of income (being obtained over time, for a consideration, not having an independent value), or by increasing the value of the whole set of assets that the entity owns in relation to the value of each individual asset.

In this context, the aim of this article is to analyze the determinants of goodwill in companies from emerging economy countries. In order to achieve the proposed goal, we have set the following two objectives: the first objective aims to conduct a literature review using the Bibliometrix software, as well as a meta-analysis of scientific papers published on the WoS and SCOPUS platforms, having the topic of goodwill and goodwill impairment; the second objective aims to identify and analyze the determinants of goodwill. The obtained results are represented by the development of an econometric model that shows the implications of net profit, EVA, EBITDA and R&D expenses on goodwill fluctuations and vice versa.

Our paper is structured in two main parts, namely: the first part is devoted to the literature review of the mentioned topic and the second part is focused on the econometric analysis of the determinants of goodwill. In the first section, called Literature Review, we present the methodological process of literature review and examine its results, taking into account the classification and epistemological orientation of goodwill impairment literature and the main theories and methods adopted in the research, the evolution of this topic being also analyzed. In the second section, called Results and discussion, we analyzed the implications of net profit, EVA, EBITDA and of R&D expenses on goodwill fluctuations and vice versa.

## 2. Research Methodology

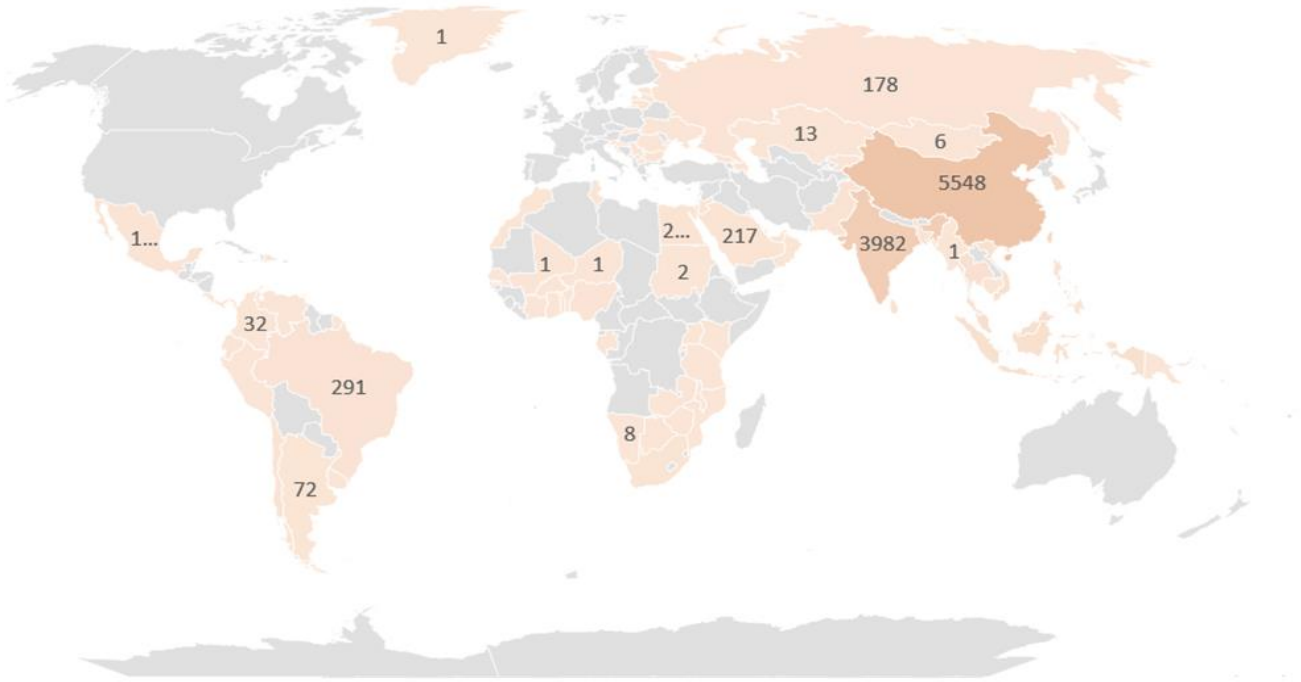
The research methodology consists in applying quantitative and qualitative methods, which aim to analyze the main relevant studies on the topic of goodwill and to complete the scientific palette by analyzing the context of goodwill and its determinants.

The research is structured in two stages. The first stage of the research consists of a bibliometric analysis of the literature that is focused on the goodwill topic. For this purpose, published papers indexed in the WoS and SCOPUS databases were analysed. Using as search engine the topic "goodwill impairment", a number of 1170 articles published in the period of 2000-2022 was found. Only articles classified in the categories of business finance, management, business and economics were included (see Table 1). The selected papers from WoS and SCOPUS were processed in the Bibliometrix software in order to identify the main clusters formed by the keywords of the selected papers [1, 2], the links between them and their representation as themes using a two-dimensional diagram.

**Table 1.** Results of the bibliometric analysis.

Database: Institute of scientific information (ISI) Web of Science		Database: SCOPUS	
Topic: "Goodwill impairment"		Topic: "Goodwill impairment"	
Inclusion criteria: <ul style="list-style-type: none"> <li>Research areas: Business finance, business, economics, management, operation research management science.</li> </ul>		Inclusion criteria: Research areas: Economics, econometrics, finance, business, management, accounting.	
Exclusion criteria: <ul style="list-style-type: none"> <li>All other areas of research.</li> </ul>			
WoS results		SCOPUS results	
No exclusion criteria	225	No exclusion criteria	270
With exclusion criteria	207	With exclusion criteria	233
Date of access	24.06.2022	Date of access	24.06.2022
Selected articles	196	Selected articles	233
WoS search link: <a href="https://www-webofscience-com.am.e-nformation.ro/wos/woscc/summary/476fb031-9ab7-41ab-97b8-d7e7b8dfa47e-40e2d9f3/relevance/1">https://www-webofscience-com.am.e-nformation.ro/wos/woscc/summary/476fb031-9ab7-41ab-97b8-d7e7b8dfa47e-40e2d9f3/relevance/1</a>			
SCOPUS search link: <a href="https://www-scopus-com.am.e-nformation.ro/results/results.uri?sort=plf-f&amp;src=s&amp;st1=Goodwill+Impairment&amp;sid=b36933c1acba07bd20de83f2b1297b0c&amp;sot=b&amp;sdt=b&amp;sl=34&amp;s=TITLE-ABS-KEY%28Goodwill+Impairment%29&amp;origin=searchbasic&amp;editSaveSearch=&amp;yearFrom=Before+1960&amp;yearTo=Present">https://www-scopus-com.am.e-nformation.ro/results/results.uri?sort=plf-f&amp;src=s&amp;st1=Goodwill+Impairment&amp;sid=b36933c1acba07bd20de83f2b1297b0c&amp;sot=b&amp;sdt=b&amp;sl=34&amp;s=TITLE-ABS-KEY%28Goodwill+Impairment%29&amp;origin=searchbasic&amp;editSaveSearch=&amp;yearFrom=Before+1960&amp;yearTo=Present</a>			

The second part of the research consists in building an econometric model in order to assess the determinants of goodwill based on data reported by firms in emerging economy countries in 2021, namely the data reported by 21,977 companies from 100 emerging economy countries (see Figure 1), structured into 94 industries, were analysed.



**Figure 1.**  
Geographical representation of companies in emerging economy countries.

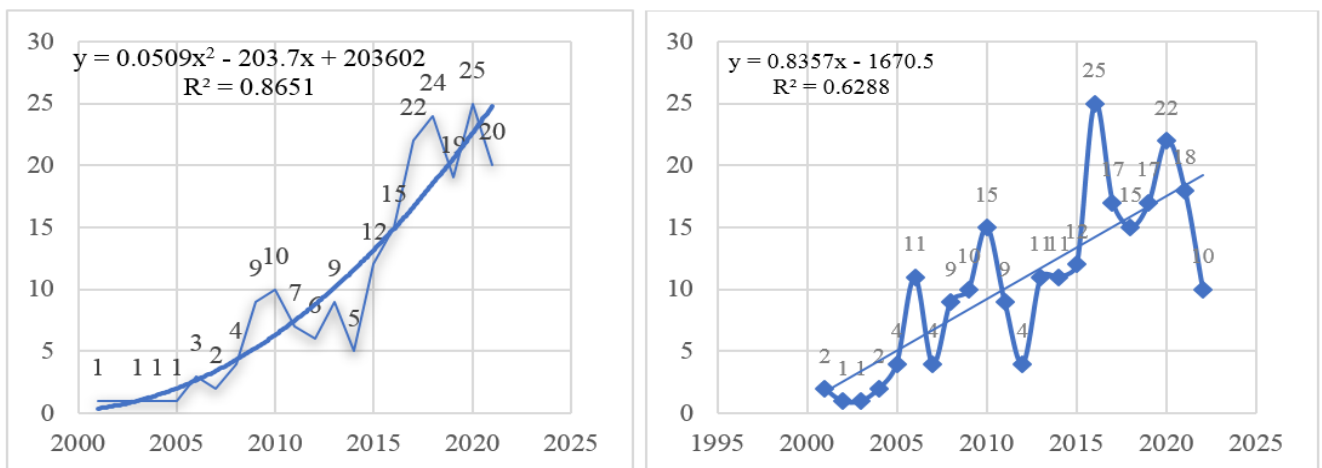
For the construction of the econometric model, the goodwill was selected as dependent variable and as independent variables the following ones were selected: Net income; Economic value added; Capital expenditures; Acquisition; Total debt with leases; Book Value of Capital.

Regarding the inclusion criteria, only indicators reported by companies from emerging economy countries in the 2021 financial year were selected and only those indicators that directly influence goodwill were included in the analysis. As exclusion criteria, those indicators that have little or no influence on goodwill were excluded. The data has been processed using the International Business Machines (IBM) Statistical Package for Social Sciences (SPSS) version 26 software.

The reporting and analysis period was the year of 2021, which is considered the year when the COVID-19 pandemic entered into decline and world economies entered a post-crisis recovery period.

### 3. Literature Review

Intangible assets - including goodwill - are now of great relevance to stakeholders, being considered an important part of value creation. Goodwill is increasingly receiving the interest of investors, auditors and other users of financial and accounting information, therefore the need for comprehensive information on this topic has increased over time. The topicality and importance of this theme is confirmed by the large volume of papers published in the WoS database - 207 papers - and in SCOPUS – 233 papers - for the Business, Management and Accounting categories (see Figure 2).



**Figure 2.**  
Evolution of the number of publications with the topic goodwill impairment on web of knowledge and SCOPUS.

As a topic discussed for decades among accounting professionals and researchers, the "goodwill impairment" concept has been a controversial one, being widely debated in the literature. Thus, most publications were made during the period

of 2015-2020, this period being represented by a total of 117 publications in the WoS database and of 108 publications in the SCOPUS database. The increase in the number of studies on the topic of goodwill is mainly due to its role in the value of the firm and there is an ongoing debate between researchers and accounting professionals on how to recognise it, how to depreciate it, or how to write it off. Goodwill is an important mechanism in adjusting the firm's income and in achieving management's goals. Initially, the vast majority of research was limited to defining the concept of goodwill and its valuation [3, 4], but nowadays, goodwill is analysed from several perspectives: from the way it is recognised to a manipulative tool of financial statements.

The importance and validation of a research is given by the number of citations it receives (see Table 2). The most cited paper with the topic "goodwill impairment" is the paper written by Ramanna and Watts [5] with the title "Evidence on the use of unverifiable estimates in required goodwill impairment" with a number of 187 citations, on average being cited 17 times per year. In this paper, the author examines how managers use the "opportunity to incorporate goodwill fair value estimates into practice", testing also the agency theory that supports the idea that managers will make goodwill fair value estimates in an opportunistic way in order to manipulate financial statements' information. The research results validated the hypothesis that managers "use, on average, unverifiable discretion in accounting standards to avoid timely goodwill write-offs in circumstances where they have agency theory-based reasons." In their paper "Accounting Discretion in Fair Value Estimates: An Examination of SFAS 142 Goodwill Impairments", with 187 citations, [6] analyzed how the goodwill impairment costs and also other expenses that are generated by this impairment are recognised, highlighting the economic incentives that generate goodwill impairment recording.

**Table 2.** Most globally cited documents.

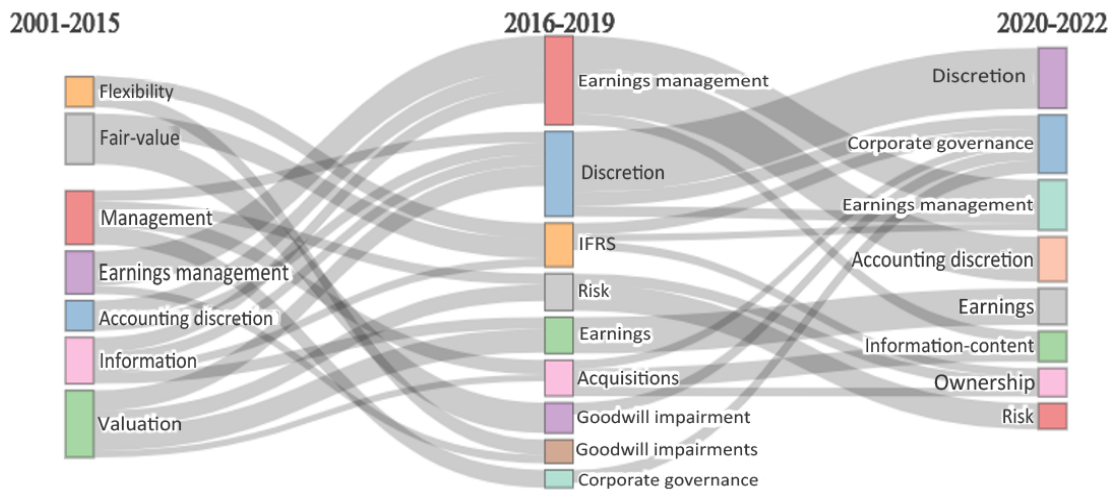
No.	Paper	DOI	Total citations	TC per year	Normalized TC
1	Ramanna and Watts [5], rev account stud	10.1007/s11142-012-9188-5	187	17	4.2824
2	Beatty and Weber [6] J accounting res	10.1111/j.1475-679X.2006.00200.x	185	10.8824	2.8316
3	Glaum, et al. [7], account bus Res	10.1080/00014788.2012.711131	130	13	6.0622
4	Horton and Serafeim [8], rev account stud	10.1007/s11142-009-9108-5	103	7.9231	5.8523
5	Li, et al. [9] rev account stud	10.1007/s11142-011-9167-2	87	7.25	1.75
6	Gu and Lev [10] account rev	10.2308/accr-10131	82	6.8333	1.6494
7	Chen, et al. [11]	10.1111/1911-3846.12380	77	15.4	7.7322
8	Benson, et al. [12], aust J manage	10.1177/0312896214565121	72	9	3.0638
9	André, et al. [13], J Bus finan account	10.1111/jbfa.12105	66	8.25	2.8085
10	Li and Sloan [14], rev account stud	10.1007/s11142-017-9401-7	64	10.6667	5.4363

Source: Made with bibliometrix.

Applying the methodology of Cobo, et al. [15] and using the Bibliometrix software, we grouped keyword networks from abstracts of articles published on WoSc and SCOPUS and performed an analysis on the evolution of publications with the topic of "goodwill impairment" (see Figure 3). The purpose of this thematic map is to highlight the research trends that are specific to the analyzed topic. In the period of 2001-2015, the predominant research topics in relation to the "goodwill impairment" topic were flexibility, fair value, management, earnings management, accounting discretion, information and valuation. Basically, in this period, the research was limited in the analysis of how to record goodwill and value creation, as well as treating goodwill as a tool to achieve management objectives. The predominant research themes from 2016-2022 are earnings management, discretion, IFRS, risk, acquisitions, corporate governance, ownership, shareholding and discretion. From the keywords treated by the researchers, it is evident that how to treat, evaluate and quantify goodwill is still a concern for the scientific community. However, it is worth noting that recent research focuses in particular on the analysis of the determinants of goodwill and its role in value creation, as well as the identification of the sources of goodwill creation.

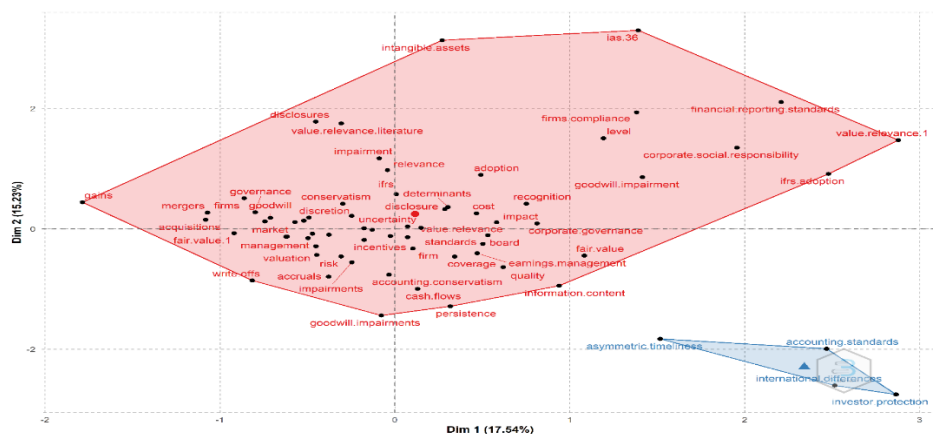
To map the conceptual structure and analyze the multiple correspondence analysis (MCA) of the "goodwill impairment" topic, we used the keyword co-occurrences [16] used by researchers in articles published on WoS and SCOPUS (see Figure 4):

```
Method = "MCA" CS <- conceptualStructure (M,field="ID", method="MCA", minDegree=4, clust=4 ,k.max=8,
temming=FALSE, labels=10, documents=10
```



**Figure 3.**  
Thematic evolution.  
Source: Made with bibliometrix.

According to the two-dimensional graph, the keywords in the article abstracts were grouped into 2 clusters. The largest cluster is formed by the co-occurrences of concepts such as intangible assets, IAS 36, value, relevance, firms compliance, goodwill impairment, risk, acquisition, goodwill, cash flows, determinants, corporate governance, etc. The next cluster is formed by the co-occurrences of concepts such as accounting standards, investor protection, asymmetric and international differences. The size of the clusters indicates the concentration and relevance of the research topics.



**Figure 4.**  
MAP conceptual structure - MCA method.  
Source: Made with bibliometrix.

Corporate goodwill has been a key and interdisciplinary theme for corporate finance in the economic community since the 19<sup>th</sup> century. Over the years, several approaches to the definition of enterprise goodwill have been developed. The first approach was "legal direction" - at first, goodwill described as part of processes. The second approach was the "economic direction"; this second approach predominates to this day.

With regard to the second approach, namely the "economic direction", Catlett and Olson [17] described goodwill as "abnormal earning capacity." Author Hughes [18] who historically wrote the most comprehensive study focusing on accounting goodwill, testified that research around goodwill took place since, although the provenance of goodwill can be established, its nature will always be inclined to analysis. Peasnell [19] described corporate goodwill as "the value that a good corporate reputation adds to its overall value." Shenkar and Yuchtman-Yaar [20] argued that in various subjects such as accounting, economics, sociology and marketing the notions of prestige, image, reputation and goodwill are used in order to indicate the general place of organisations among their peers. Maly [21] described goodwill as representing "the good reputation of the enterprise to its business partners, financial institutions, the public and customers at home and also abroad." In general, goodwill has often been defined as the company's reputation, image, correct name, prestige and brand. It can be observed in the connection between the organization and other market participants and in the vision of the enterprise in the eyes of its customers [22]. Another definition says that goodwill is rendered by the firm's ability to make a profit, which comes either from specific factors that are able to positively participate in the creation of income (being obtained over time, for a consideration, not having an independent value), or by increasing the value for the entire set of assets that the entity owns, in relation to the value attached to each individual asset [23]. "The goodwill or reputation of the firm should be treated as a right of use of factors that cannot be identified by the acquirer in the case of the acquisition of a firm that leads to a profit (excess profit) that exceeds its average size (norm) over a homogeneous group, of the same



profile of enterprises or industry" [24]. Goodwill is measured and recorded as the amount paid to acquire a business that exceeds the fair value of its identifiable net assets and also it refers to "the potential economic value that can earn excess profits for the business operation in the future or the capitalized value that the expected profitability of a business exceeds the normal profitability of identifiable assets, such as the average rate of return on investment" [25]. Other authors have considered goodwill to be an unique accounting asset generated by mergers and acquisitions [26], an intangible asset on a firm's balance sheet that may have resulted from acquisitions, or an essential part of the purchase price, representing the difference between what an acquiring firm pays for a target firm in an acquisition and the book value of the target firm [27].

Goodwill and goodwill impairment have been and still are important issues in accounting research due to the importance of goodwill in the balance sheet and the subjectivity of assessing the fair value of goodwill [28]. "Goodwill consists of intangible items, including contract rights, i.e. the amount paid or due to the previous lessee for the transfer to the buyer of rights arising from both covenants and commercial property law, intangible items that are not subject to separate valuation and recognition in the balance sheet and that contribute to maintaining and developing the potential of the business" [29]. Goodwill is analyzed in the broader context of intangible assets and the issue of consolidation of accounts. An intangible asset is a non-monetary, identifiable asset without physical substance. It is identifiable if: it is protected by legal or contractual rights; the asset in question is separable.

Goodwill is "a framework asset that arises as the difference between the amount paid and the acquirer's share of the net fair value of the legal entity's assets, liabilities and contingent liabilities" [30]. From an economic point of view, goodwill is the diminution of expected future profitability into surplus [31]. Goodwill is the residual values, calculated as the difference between the fair value of the consideration paid and the fair value of the acquired company's net asset [32]. According to Xu, et al. [33] in practice, "the fair value of paid consideration is allocated to the following items: fair value adjustment, book value of acquired net assets and goodwill" [33]. The inclusion of goodwill in financial statements can be important for investors and other users of financial statements because it represents the premium paid for a business above its tangible assets and liabilities. Also, because of its increasing relative weight in the assets of the company, goodwill is becoming increasingly important as a financial element of accounting, being defined as a remainder of the difference between the overall value of the firm (its true value as an entity) and the benchmark value (the true value of identifiable assets) [34]. According to the present value view of superprofits, goodwill is "essentially the present value of future superprofits, which can be viewed as a premium paid by a company for an acquired entity's ability to outperform industry profitability" [35]. In general, the higher the value of goodwill, the higher the value of superprofits will be and corporate performance can be improved by achieving synergies through mergers and acquisitions.

Thus, goodwill can be defined as a firm's ability to produce profit due to both objective and subjective factors. Normally, this ability is reflected by the potential of the entity to produce superior value to other competitors operating in the market. Thus, goodwill represents the highest value attributed to the entity as a whole. The objective factors that can increase this value are Grosu and Socoliuc [23]:

- "Ownership of trademarks and patents in the entity's estate.
- Organisational and management structure.
- Market position.
- Quantity and quality of customers."

This value may also be determined by other subjective factors, especially in the case of small and medium-sized enterprises, whose activity is mainly focused on the quality and entrepreneurial capacity of those managing the core business. The goodwill can have a positive or negative value, but in general, a "negative goodwill" is unusual and rarely encountered [36]. The accounting treatment of goodwill is critical because it can be intentionally and improperly manipulated by management, fact that could threaten the reliability of financial reporting. The Statement of Financial Accounting Standard (SFAS) 142 and the International Accounting Standard (IAS) 36 set out the requirements for the accounting treatment of goodwill and other intangibles after they are first recognized in the financial statements [37]. To enhance the decision-making usefulness of the financial statements and as part of their convergence project, the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) changed the accounting treatment of goodwill amortisation by introducing only the impairment approach. Therefore, the adoption of the IFRS framework has transformed the accounting treatment of goodwill in many countries [38], meaning that instead of amortising goodwill, companies test it for impairment and write off impairment losses against profits. Goodwill is treated by International Financial Reporting Standard IFRS 3 *Business Combinations (Combinations)* and is presented as the unidentifiable part of the payment made by the acquirer in a business combination. Accounting standards require all companies to review their goodwill each year for possible impairment. Under current accounting guidance, i.e. the 36th International Accounting Standard (IAS) on *Impairment of Assets*, goodwill impairment testing shall be performed once a year and if an event occurs or there is a change in circumstances that could reduce the fair value of a unit carried below its carrying amount, an additional review for possible goodwill impairment shall be performed during the year."

Traditionally, we distinguish two types of goodwill:

- a) Generated internally by the entity.
- b) Acquired by the buyer in the case of a purchase of a firm or acquired in a business combination [22].

Under the International Accounting Standard 38 *Intangible Assets (IAS 38)*, internally generated goodwill cannot be recognised as an asset. Arguments in favour of this statement are: internally generated goodwill is not an identifiable resource (it is not separable) and it cannot be measured reliably at cost. As for the acquisition of a firm and business combinations, these are considered important ways of integrating capital market resources. Thus, mergers and acquisitions

play a significant role in improving the efficiency of capital allocation, rapidly expanding the size of firms and increasing competitiveness. With the rapid growth of mergers and acquisitions in recent years, the value of goodwill, as an accompanying product of mergers and acquisitions, has been soaring [39]. In terms of goodwill valuation, this asset is "considered to be among the most difficult assets to value on the balance sheet. The accounting method of goodwill valuation is usually based on estimates of future cash flows" [40]. Goodwill impairment is considered to be an operating expense because it is a non-cash charge that reduces the value of a company's assets. When a company recognizes goodwill impairment, it is acknowledging that the value of an acquired company or its assets has decreased, which has a negative impact on the company's current performance. "Impaired goodwill is less able to create future profits and ignoring a short-term impairment increases the probability of subsequently experiencing an extremely large impairment, which could significantly affect firm performance" [41]. Previous studies on goodwill impairment can be classified into two major categories [42]. The first category examines the effects of goodwill impairment on the stock market and various firm characteristics. The second category examines the specific factors of goodwill impairment. Some studies [9, 33, 43-45] have found that "goodwill impairment is a market-relevant value and that investors normally view goodwill impairment as negative news." For example, Li, et al. [9] observed that investors respond negatively to goodwill impairment and conclude that goodwill impairment is an important indicator of declining firm performance. Regarding the impact of impairment on firm traits, Darrough, et al. [46] "examine the relationship between goodwill impairment losses and Chief Executive Officers (CEO) compensation and document that goodwill impairment losses lead to reduced CEO compensation." Some studies investigate and establish that the reason for many goodwill impairment losses is that the target company is overpaid at the time of acquisition [6, 9, 10, 47, 48]. Characteristically, Beatty and Weber [6] investigate a sample of firms that may have experienced a goodwill impairment loss and the study finds that a company's decision to accelerate or postpone loss recognition is related to managerial incentives. Olante [48] estimates that "about 40% of goodwill impairment losses are caused by overpayment on acquisition."

Table 3. Meta-analysis.

Authors	Title of the paper	The purpose of the research	Results	Impact of research
Satt and Chetioui [49]	Does goodwill improve firm performance? Evidence from the MENA region. risk governance & control: Financial markets & institutions,	The purpose of this paper is to analyse the impact of goodwill on business performance.	The research results show that the high value of goodwill has a positive influence on business performance. At the same time, the researchers found that large firms, which have a high level of performance, invest in goodwill, while small firms are focused to invest in tangible assets.	The article is relevant for investors and managers who want to improve their performance and secure their investments.
Kliestik, et al. [50]	Searching for key sources of goodwill creation as new global managerial challenge	The aim of this research is to determine the significant sources of company's goodwill creation in Slovak enterprises.	Research has shown that in a company, the net income is one source of goodwill creation in addition to five other sources.	The research has a high impact because the results presented in this study provide a deeper insight into the dimensions of goodwill valuation, not only under Slovak specific conditions, but also globally.
Sierpinska-Sawicz, et al. [51]	Where the EBITDA metric is used in coal companies	The paper aims to show how EBITDA is used in different areas of corporate decision making	EBITDA is a measure of a company's financial health and EBITDA-based ratios are used to assess the profitability of a company's restructuring and goodwill in mergers and acquisitions.	The impact of the research is medium due to the short time period over which the selected sample was analysed.
Tahat, et al. [52]	The impact of intangibles on firms' financial and market performance: UK evidence	The current study also aims to examine the impact of intangibles (in particular goodwill and R&D) on the current and future financial and market performance of firms.	The results of this study indicate that goodwill (GW) has a statistically positive effect on current and future firm performance, while research and development (R&D) is only associated with future firm performance.	The research is high impact because the results of this research provide practical implications for policy makers and managers.
Xiang and Xu [53]	Dynamic cooperation	The aim of this research	R&D increases the value	The impact of the

Authors	Title of the paper	The purpose of the research	Results	Impact of research
	strategies of the closed-loop supply chain involving the internet service platform.	is to explore different cooperation scenarios to provide decision support.	of goodwill, alongside green advertising.	research is high because the results encourage companies to increase the value of goodwill in the ways demonstrated in the study.
Herciu and Şerban [54]	Measuring firm performance: Testing a proposed model.	The current study also aims to develop and test a model to measure firm performance	Firm performance is a very complex and comprehensive concept and can be related to many factors such as: research and development expenditure, intangible assets such as goodwill and other factors.	The impact of the research is medium as the authors themselves state that "firm performance is very difficult to measure, is a very subjective concept and can be influenced by hundreds of factors".
Cavero Rubio, et al. [55]	Economic effects of goodwill accounting practices: Systematic amortisation versus impairment test.	The purpose is to determine whether there are significant differences between the methods applied to goodwill (Depreciation and impairment test) that may affect the comparability of financial statements and their ability to accurately represent the firm's performance	The results of this research show that the better the company's performance, the greater the goodwill impairment will be.	The research has a high impact because the value it brings extends existing research and informs current debates.
Glaum, et al. [56]	Goodwill impairment: The effects of public enforcement and monitoring by institutional investors	This study investigates the determinants of the goodwill impairment decision by firms applying IFRS	Findings indicate that the incidence of goodwill impairment is negatively associated with economic performance.	The impact of the research is high because these findings "provide specific contextual evidence that helps us understand how and to what extent public and private enforcement mechanisms discipline the influence of managerial incentives, thereby enhancing the effectiveness of IFRS implementation".
Han and Tang [41]	The potential harms of goodwill impairment avoidance: Evidence based on future performance and stock prices	The current study also aims to investigate the financial consequences of avoiding goodwill impairment based on future firm performance and stock prices.	The results of this research show that avoiding goodwill impairment negatively affects a firm's performance growth	The research has a high impact because the results are useful to regulators on how to prevent hidden risks in recognising goodwill impairment and maintain stable financial market development.
Negara, et al. [57]	Psychological effect of brand image and brand reputation on sustainable firm performance in Indonesian logistics	The study examines the relationship between brand image, brand reputation, brand goodwill and sustainable firm performance (FP).	Findings indicate that goodwill plays an important role in sustainable firm performance (FP).	The impact of the research is high due to the fact that this relationship addressed in the study is a clear contribution to the literature as it has not been examined in the literature before.

Based on the literature review and meta-analysis presented in Table 3, and the objectives of the paper, the following hypotheses were formulated:

H1: There is a positive relationship between goodwill and firm performance [49].

H2: Firm value (EVA) is positively influenced by goodwill [58].

H3: R&D expenditure has a positive influence on the value of goodwill.



#### 4. Results and Discussions

Goodwill is an important intangible asset for the company, which has direct implications on its value. The development of information technologies and the process of innovation in the economies of the world, as well as the increase in investment in such techniques and processes, has highlighted the importance of intangible assets for the enterprise, as they play an important role in the performance of the enterprise [49, 59]. Goodwill is not a fictitious asset, as it is assigned a value and is recorded on the balance sheet, with implications for asset value growth. A positive goodwill, is a signal that the business is financially sound and is able to produce income over time, thus ensuring sustainability of the business. Goodwill increases the value of the business and is valued more than positively by shareholders and potential investors.

The value of goodwill is influenced by several factors, both endogenous and exogenous, which contribute to fluctuations in the value of goodwill. Among the determinants of goodwill that have been reviewed in the literature are: firm location, profit trend, risk factors, management efficiency [27], capital structure [60] firm performance [49] etc. Location plays an important role on the customer niche and hence on the profit trend. High-performing firms are more likely in goodwill impairment, while lower-performing firms will avoid such impairment to avoid a decline in earnings. At the same time, the level of disclosure about goodwill impairment is higher for better performing firms, as it does not affect their credibility with investors to a very large extent compared to poor performers.

In order to analyze and evaluate the implications of net profit, R&D expenses, EBITDA and EVA on the fluctuations of goodwill, we have developed an econometric model, which highlights the relationship between the factors listed above.

**Table 4.** Model summary.

S	R-sq	R-sq(Adj.)	R-sq(Pred.)
5337.85	78.62%	77.14%	21.76%

According to Table 4, we find that between the dependent variable goodwill and the independent variables EBITDA, Net income, R&D capitalized, EVA, impairment of goodwill and number of firms there is a correlation of 21.76%, and the variation of the independent variables influences the variation of goodwill by 78.62%. Since goodwill is an intangible asset that generates future results, it is difficult to analyze its impact or role on performance indicators at a given point in time. However, in the literature there are some studies that test whether goodwill impairment predicts future company performance. For example, Lys, et al. [61] examine "the predictive power of goodwill by regressing the one and two year forward operating performance of acquired companies (EBIDTA, cash flow) on estimated economic profit or loss, goodwill recorded and the fair value of other assets acquired plus assets held by the acquirer prior to acquisition (all variables are deflated by total assets)." It is found that for the subsample with economic profits, estimated economic profit and goodwill are highly significantly related to future performance.

**Table 5.** Model correlation coefficients.

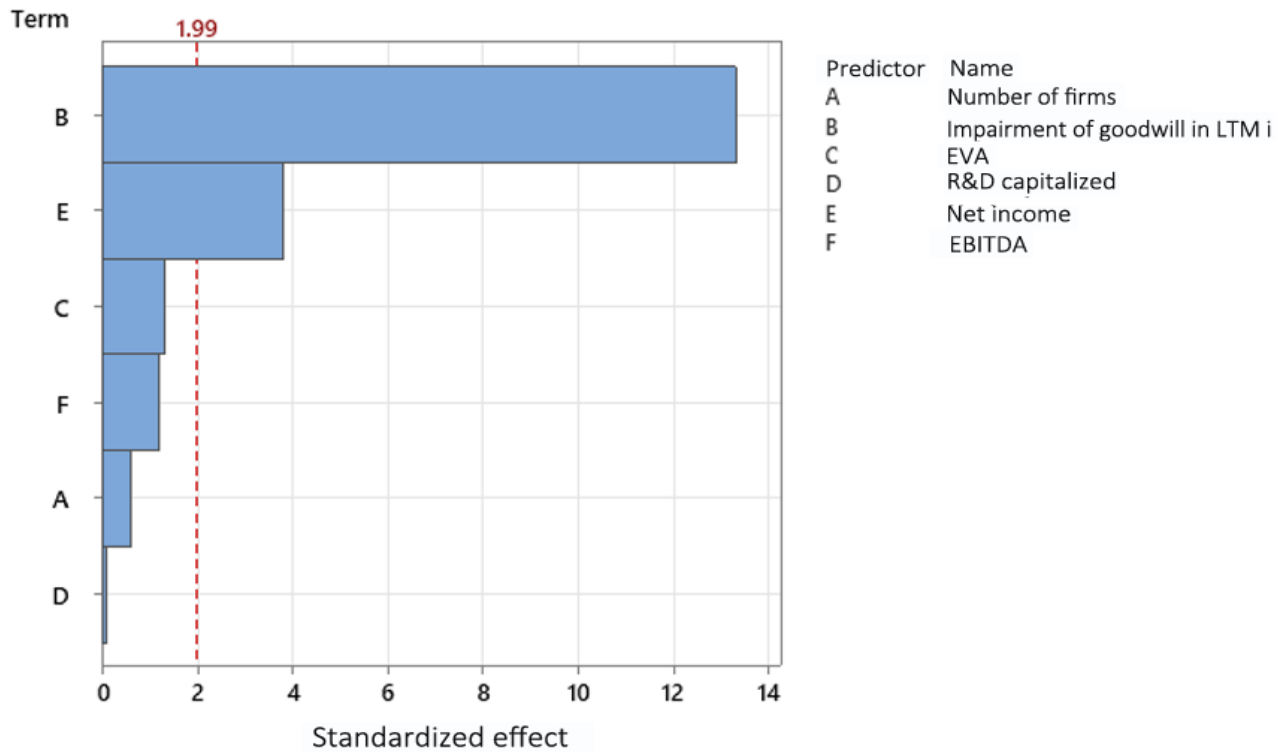
Term	Coef	SE coef	T-value	P-value	VIF
Constant	-60	868	-0.07	0.945	
Number of firms	1.86	2.97	0.63	0.532	1.63
Impairment of goodwill	17.04	1.28	13.29	0.000	1.12
EVA	0.0268	0.0203	1.32	0.191	2.11
R&D capitalized	-0.0034	0.0352	-0.10	0.924	1.64
Net income	0.1638	0.0429	3.82	0.000	16.01
EBITDA	-0.0625	0.0524	-1.19	0.237	18.22

Chalmers, et al. [62] use a different approach to assess the predictive value of goodwill and other intangible assets, examining the association of these assets with the accuracy and dispersion of financial analysts' earnings forecasts, finding that the negative association between amounts of intangibles recognized and forecast error and dispersion becomes even stronger after the introduction of IFRS.

According to the resulting coefficient variables (see Table 5), the following regression equation is obtained:

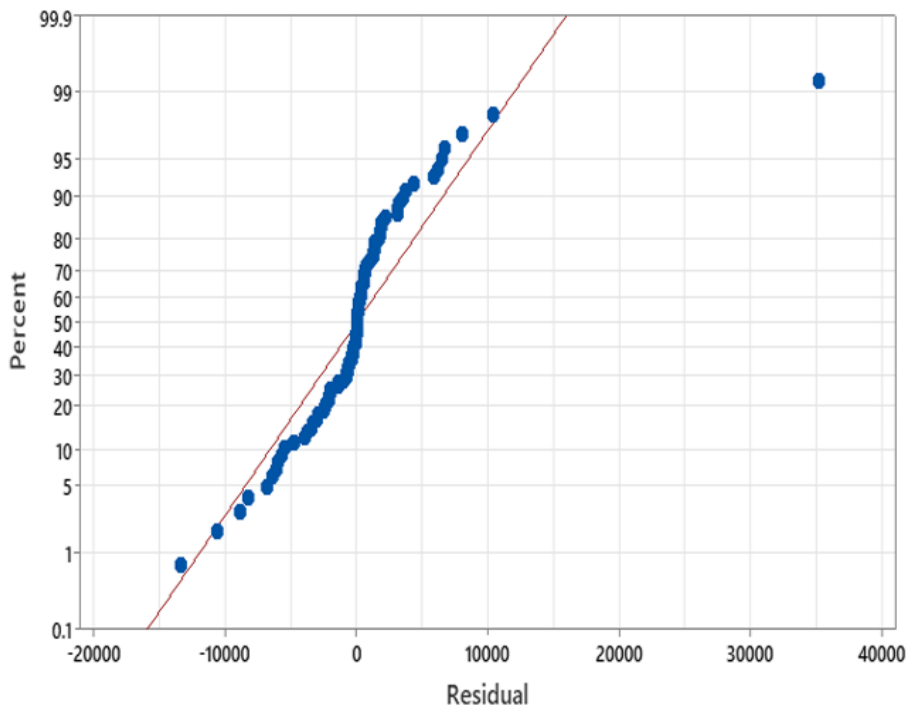
$$\text{Goodwill} = -60 + 1.86 \text{ Number of firms} + 17.05 \text{ Impairment of Goodwill} + 0.0268 \text{ EVA} - 0.0034 \text{ R\&D Capitalized} + 0.1638 \text{ NetIncome} - 0.0625 \text{ EBITDA}$$

According to the above model, it is observed that the value of goodwill is influenced by net profit, EVA and EBITDA, in the sense that the increase in goodwill is directly proportional to the increase in net profit, EVA and EBITDA and vice versa. Basically, when the company records an increase in net profit, there is also an increase in goodwill. A high level of goodwill has a positive impact on firm performance, contributing to an increase in EVA and vice versa, validating hypothesis number two, H2: Firm value (EVA) is positively influenced by goodwill and the first one too: H1: There is a positive relationship between goodwill and firm performance. At the same time, we can state that high performing firms are more concerned with generating intangible assets, while small firms are focused on tangible assets, which generate benefits in the present, but not in the future as in the case of intangible assets. The results of our research are also confirmed by the study conducted by Satt and Chetoui [49] who demonstrated the interdependence relationship between firm performance and goodwill fluctuation. R&D expenses have an insignificant influence on the value of goodwill, in this sense hypothesis number 3 was not validated.

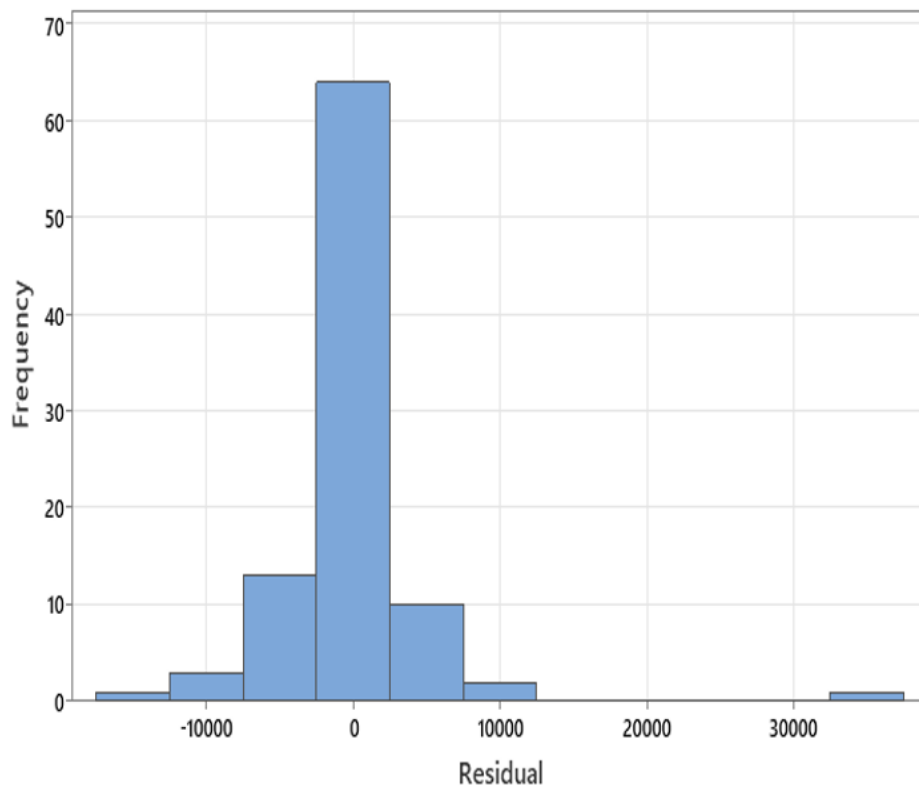


**Figure 5.**  
Pareto chart of the standardized effects.

According to the Pareto diagram of standardised effects (see [Figure 5](#)), 80% of the change in goodwill is explained by Net income, EVA, EBITDA and of course the impairment value of goodwill, and 20% of the change in Net income, EVA, EBITDA is explained by the change in goodwill.



**Figure 6.**  
Normal probability plot.



**Figure 7.**  
Histogram.

The histogram distribution of the dependent variable goodwill is similar on the left-hand side (see Figure 7). As for the distribution of the data, according to Figure 6, we have a normal distribution, with no anomalies distorting the results of the study.

## 5. Conclusions

The goodwill is a never-ending topic of debate, as there is national and international accounting regulation of it. However, we found from our study that goodwill is an ambiguous concept that requires more complex analysis and evaluation, from the factors that generate goodwill to its implications for business performance. The abandonment of goodwill amortisation has led to a change in accounting treatment and therefore changed some of its implications for enterprise value. Being an abstract and immaterial concept, goodwill can be called an indicator that reflects the enterprise's ability to generate profit, or rather an extra-profit that leads to the creation of enterprise value. Handling the value of goodwill has direct implications for the value of the enterprise.

In the literature, most of the studies focus on the recognition and accounting treatment of goodwill and less on its implications for the enterprise. Therefore, our study adds value to the literature by treating the topic differently, analyzing and evaluating the relationship between net profit, EVA, EBITDA, R&D expenses and goodwill. The results of our research, highlight that the fluctuation of goodwill is generated by the fluctuation of net profit, EVA, EBITDA and less by R&D expenses.

The limitations of the research are that due to the small number of studies carried out on our topic, there was not possible to make comparisons of the results with other research. This study can be further developed by identifying and analysing other factors that influence the variation of goodwill, given that there is a correlation of only 21.76% between the variables we analysed.

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