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Goodwill Impairment versus Goodwill Amortization: Which regime reflects better the underlying economic attributes of goodwill?

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Goodwill Impairment versus Goodwill Amortization: Which regime reflects better the underlying economic attributes of goodwill?

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ABSTRACT

Accounting for goodwill has been a controversial issue amongst researchers and academics, as well as for accounting standards setting professional bodies, given the difficulties concerning its definition, measurement and subsequent evaluation. This debate mainly lies on the contradictory views as regards to which accounting regime (amortization vs impairment) better reflects goodwill underlying economic characteristics and value. The aim of this thesis was to investigate the usefulness of goodwill subsequent accounting treatment methods used in order to receive information about the market value of companies taking into account that according to IFRS goodwill accounting treatment changed in 2005 and treatment of goodwill is provided by impairment tests replacing the amortization regime. In order to do so, a panel data methodology was applied for a total sample of 264 German companies for a period extending from 2000 to 2010. According to research findings, the results showed that the impairment regime is more value relevant than the amortization one, indicating that although investors take into account the accounting information provided by goodwill, they do not find amortization regime value relevant. Although, impairment regime reflects more in their valuation of stock prices and therefore also for their decision making process.

Keywords: goodwill, amortization, impairment, IFRS.

ΠΕΡΙΛΗΨΗ

Ο υπολογισμός της υπεραξίας έχει υπάρξει επίμαχο και αμφιλεγόμενο θέμα ανάμεσα στους ερευνητές και τους ακαδημαϊκούς, όπως και για τους επενδυτές, δεδομένου των δυσκολιών για τον ορισμό, τη μέτρησή και την αξιολόγησή της. Αυτός ο διάλογος έγκειται κυρίως στις αντικρουόμενες απόψεις σχετικά με το ποιο λογιστικό καθεστώς (απόσβεση vs απομείωση) αντανακλά καλύτερα την επίδραση στη τιμή μιας μετοχής. Ο σκοπός αυτής της διπλωματικής εργασίας είναι να ερευνήσει τη χρησιμότητα της υπαραξίας και τις ακόλουθες λογιστικές μεθόδους με σκοπό να λάβουμε πληροφόρηση για την διαπραγματευτική αξία των επιχειρήσεων. Πρέπει να λάβουμε υπ' όψη πως βάσει των Διεθνών Λογιστικών Προτύπων πως η λογιστική αντιμετώπιση της υπεραξίας άλλαξε το 2005 και ο τρόπος που πλέον αντιμετωπίζεται είναι μέσω των ελέγχων απομείωσης οι οποίοι αντικατέστησαν το καθεστώς της απόσβεσης. Για την έρευνα, χρησιμοποιήθηκε η panel data μεθοδολογία σε συνολικό δείγμα 264 Γερμανικών εταιρειών για την περίοδο 2000 έως και το 2010. Σύμφωνα με ερευνητικά ευρήματα, τα αποτελέσματα για το αν το καθεστώς της απομείωσης καταγράφει καλύτερα την αξία σε σχέση με την απόσβεση είναι σαφή, επισημαίνοντας πως οι επενδυτές λαμβάνουν υπόψιν τη λογιστική πληροφορία που τους δίνεται μέσω της υπεραξίας. Αντίθετα, δεν βρίσκουν την απόσβεση χρησιμότερη στην αξιολόγηση των χρηματιστηριακών τιμών και αυτός είναι και ο λόγος που δεν τους επηρεάζει στη διαδικασία λήψης αποφάσεων.

Λέξεις κλειδιά: υπεραξία, απόσβεση, απομείωση, Διεθνή Λογιστικά Πρότυπα.

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INTRODUCTION

The accounting treatment of goodwill has been a source of much debate amongst practitioners, researchers and accounting standards professional bodies, taking into account the significant difficulties concerning its definition, measurement and subsequent treatment, as well as that goodwill is an important asset for many companies nowadays. In fact, given the complexity, sensitivity, and need for significant judgement, companies continue to experience issues accounting for goodwill. In practice, this accounting debate regarding goodwill is mainly centered on how it should be treated financially after the time of the acquisition, since acquired goodwill is the most representative type, as internally generated goodwill is difficult to measure and cannot be presented in a firm's balance sheets.

Accounting for goodwill radically changed with the introduction of International Accounting Standards (IAS) and especially with International Financial Standard (IFRS) 3 (Business Combinations), which came in effect in the year of 2005. According to IFRS, amortization is no longer allowed for companies, since the useful life of goodwill and the pattern by which it diminishes are usually not predictable. In this way, goodwill should be annually tested for impairment. In parallel with the evolution of IFRS regarding to the accounting treatment of goodwill, the FASB (Financial Accounting Standards Board) in the US announced a reform in 1996, leading after five years to the publication of two SFAS (Statement of Financial Accounting Standards), SFAS No 141(Business Combinations) and No 142 (Goodwill and Other Intangible Assets), replacing goodwill amortization by impairment tests.

As it can be seen in the aforementioned accounting principles, it is obvious that goodwill accounting treatment has entered a phase of harmonization around the globe, as IFRS and US GAAP are the most widely applied accounting standards, taking into account that professionals in the field have tried to promote a shared vision of accounting. As regards to goodwill accounting treatment, IFRS adoption transformed it radically, since instead of amortizing it, firms now test for its impairment and write off impairment losses against income. Accounting standards setting professional bodies claim that the impairment regime reflects better the underlying economic value of goodwill in comparison to the amortization regime. This claim is also supported by the vast majority of researchers, since it has been well documented that goodwill

amortization adds noise to the valuation of companies' stocks, although there are also contradictory findings.

Given the aforementioned debate, the aim of this thesis is to evaluate the usefulness of goodwill subsequent accounting treatment methods used in order to receive information about the market value of companies based on the fact that according to IFRS goodwill accounting treatment changed in 2005 and the reduction in goodwill value is provided through goodwill impairment tests replacing the goodwill amortization regime. In order to do so, a panel data methodology is applied for a total sample of 35 European companies of three countries (Germany, United Kingdom, and Greece) for a period extending from 2000 to 2009, taking into account that 2005 was the year of the obligatory adoption of IFRS for European listed companies.

This thesis is structured as follows: chapter 1 discusses the main theoretical considerations regarding goodwill, chapter 2 analyzed the issue of accounting treatment of goodwill, chapter 3 examines empirical findings concerning the subsequent accounting treatment under the amortization and the impairment regime, chapter 4 presents the research methodology used for the purposes of this thesis, chapter 5 analyzes the research findings and, lastly, conclusions are made. The contribution of this thesis is to add information to the existing knowledge on goodwill accounting treatment as regards to the proper accounting regime that betters reflects goodwill underlying economic value.

CHAPTER 1

GOODWILL: THEORETICAL CONSIDERATIONS

1.1 THE CONCEPT OF GOODWILL

Given the complexity, sensitivity and need for significant judgment, companies today continue to experience various issues as regards to assessing goodwill for impairment, taking into account that accounting for goodwill is a contentious issue that has generated a debate for several decades and for various practitioners and researchers. Bloom (2009) points out that the accounting treatment of goodwill in companies' financial statements has been a controversial and frequently discussed issue among experts around the world. In practice, this accounting debate regarding goodwill is mainly centered on how it should be treated financially after the time of the acquisition, an issue that is greatly influenced by the different accounting systems applied in several countries and mostly by the International Financial Reporting Standards (IFRS) and the US Generally Accepted Accounting Principles (GAAP).

Regarding the specific terminology of goodwill, firstly, the term was used for indicating the value created by customer loyalty, a term that was later criticized. In the following years, the term was broadened to cover other intangible assets that give, a company, the ability of generating profits in excess of the normal yields of other identifiable assets (Qasim et al, 2013). In general terms, the first theoretical approaches of goodwill were based on its measurement as a present value of the future excess earnings of a company acquired. In this frame, measurement of goodwill was difficult, as one cannot predict future earnings in a certain way (Seetharaman et al, 2004). Consequently, the current definitions lie in the central idea that goodwill is the excess of the purchase price over the fair value of the net assets acquired (Arnold et al, 1992).

In other words, goodwill represents the expected future economic benefits from intangible assets that are not individually identifiable and, as a consequence, they are not exclusively recognized in the financial statements and balance sheets of companies. In this view, goodwill can be generated by two main streams, firstly, internally and,

secondly, in the course of business combinations and in particular when the intangible assets transferred in the entity go beyond the fair value of the net identifiable assets. Of course, goodwill's recognition that is generated internally is difficult to identify and measure and, thus, goodwill is traditionally viewed as externally generated, mainly by acquisitions. In the same way, goodwill is expected to be positive but, on the other hand, negative goodwill can arise when the aggregate fair values of the assets acquired exceed the respective acquisition costs.

As Wines et al (2007) suggest, goodwill by definition cannot be seen separately from a business entity and, thus, is only recognized when a company has acquired another entity or part thereof. In this frame, goodwill is defined by IFRS as "an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized" (International Accounting Standards Board – IASB, 2005). This term, as defined by IFRS 3 (Business Combinations) is the current widely accepted definition of goodwill, affecting the way that is treated in accounting terms. It should be also noted that goodwill is measured as the excess of the cost of the business combination over the fair value of the net identifiable assets acquired, an issue that will be later discussed in detail.

1.2 HISTORICAL OVERVIEW

The debate surrounding goodwill accounting treatment has largely focused on the issue of acquired goodwill, since this form is the most representative one, taking into account that internally generated goodwill is difficult to measure and cannot be presented in a company's balance sheets, so a crucial distinction should be made. According to Garcia (2006), the historical debate for the various ways of the accounting treatments of goodwill is based on two basic assumptions. In particular, the first one considers if the accounting principles and treatment should be primarily focused on the representation of flows, that is to say the annual income, or the representation of a stock, i.e. the net worth, and the second one refers to whether goodwill meets the definition and the characteristics of an asset.

Ding et al (2005), examining the comparative history of accounting treatment of goodwill in four countries, including USA, UK, Germany and France, and taking into account the influences of various stakeholders in this field (investors, managers, creditors, tax authorities), classified four alternative ways of accounting treatment that have been used historically:

i. recognition as an asset at cost and amortization over useful life,
ii. no recognition as an asset or immediate write off against reserves,
iii. recognition as an asset and permanent retention in the balance sheet, possible adjustments of value, and
iv. immediate or rapid expensing.

Ding et al (2005) highlighted the fact that the legal background of each country and the different models of corporate governance are crucial for explaining the respective differences as regards to the diversity of goodwill accounting treatment.

In this light, the historical evolution of the phased of goodwill accounting has been significantly influenced by the corporate governance models applied worldwide, especially regarding the "stakeholder" and the "shareholder" model, which explain the properties of timeliness and conservatism about accounting of earnings (Ding et al, 2008). The stakeholder model refers to corporate governance regimes that are characterized by highly concentrated shareholders who are actively involved in the company management, while the shareholder model refers to regimes where ownership is dispersed and shareholders are separated from the management. Ding et al (2008) argue that the transition from the stakeholder to the shareholder model can explain the historical evolution of accounting treatment of goodwill, a view also suggested by Driver & Thomson (2002), who highlight the interconnections between corporate governance and accounting through the stakeholder debate.

Richard (2005), investigating the history of goodwill accounting since 1880s, divided is into four distinctive phases:

- the pure static phase, which implies that goodwill is a fabricated asset, suggesting immediate expensing or rapid amortization,

- the weakened static phase, meaning an adjusted form of non-recognition of goodwill by applying a write-off against equity,
- the dynamic phase, assuming that goodwill has a finite life and amortization should applied over a long period, and
- the actuarial phase, which recognizes goodwill as an asset and impairment is based on discounted cash flows.

Ding et al (2008), examining the evolution of goodwill accounting treatment around the world, confirm these phases, characterized by immediate or rapid expensing (static phase), write-off against equity (weakened static phase), recognition with amortization over a long period (dynamic phase) and recognition without amortization but with impairment (actuarial phase).

All in all, it can be concluded that changes in the goodwill accounting treatment around the world has been affected by the respective accounting theories, which in turn have evolved in the light of the several corporate governance regimes. In particular, the transition from the stakeholder to the shareholder model, taking into account the rise of the modern capital markets and the complexity of businesses, has led to the current domination of the actuarial view, which is based on the recognition and impairment testing principles. Of course, this convergence to a common accounting treatment of goodwill has been significantly influenced by a common vision of accounting acting, as a shared base of communication, leading to the rise of a standard accounting setting process and principles, as expressed mainly by IFRS and US GAAP accounting standards.

1.3 THE RISE OF IFRS AND SFAS

As previously mentioned, all throughout the last century, accounting bodies and professionals in the field have tried to promote a share vision of accounting in order to manage the various and often contradictory interests of different stakeholders, by codifying the accounting principles, methods of treatment and respective conceptual frameworks. These initiatives had a great impact on the accounting treatment of goodwill. More specifically, the rise of IFRS, which are now applied to over 120

countries around the world, provide a comprehensive basis for the presentation of financial statements and the treatment of key accounting figures and issues, leading to a global harmonization of accounting practices (Mansfield & Lorenz, 2004).

According to Hung & Subramanyam (2007), the adoption of IFRS provides several advantaged, resulting in the increase of market efficiency and the reduction of the cost of capital for companies, since financial information provided to stakeholders is now comparable and reliable. Zeghal & Mhedhbi (2006) argue that IFRS implementation is directly related to the current best practices of corporate governance, supporting firms as regards to the useful and reliable presentation of their economic reality and reducing information asymmetries among different stakeholders.

In 1989, the IASB issued the common framework for the preparation and presentation of financial statements, which has latter adopted in 2001, serving as a guide for the formulation of the accounting standards in order to provide useful financial information needed for decision making, especially for investment decisions, and improve the quality of financial reporting. Regarding the accounting treatment of goodwill, IFRS 3 (Business Combinations), came in effect in the year of 2005, radically changing the way companies account for goodwill (IASB, 2005).

Firstly, following the definition of goodwill, the IASB suggested that goodwill satisfies the general definition of an asset. In particular, it argues that goodwill is an intangible asset, as defined by IAS 38, which states that an intangible asset is an identifiable non-monetary asset without physical substance which is a resource that is controlled by the entity as a result of past events (for example, purchase or self-creation) and from which future economic benefits (inflows of cash or other assets) are expected. In addition, the three critical attributes of an intangible asset are: (1) identifiability, (2) control (power to obtain benefits from the asset), and (3) future economic benefits (such as revenues or reduced future costs) (IAS 38, par. 8).

The recognition of goodwill as an asset was crucial for the subsequent harmonization of goodwill accounting practices according to IFRS, taking into account that academics also support this view, i.e. the fact that goodwill meets the preconditions to be categorized as an asset (Johnson & Patrone, 1998). Secondly, IFRS set the basic principles for the accounting treatment of goodwill. More specifically, according to

IFRS 3, amortization is no longer allowed for companies, since the useful life of goodwill and the pattern by which it diminishes are usually not predictable. In this way, goodwill should be annually tested for impairment. Following the IASB definitions, after the initial recognition, the acquirer shall measure goodwill acquired in a business combination at cost less any accumulated impairment losses (IFRS 3, par. 54).

In parallel with the evolution of IFRS regarding to the accounting treatment of goodwill, the FASB (Financial Accounting Standards Board) in the US announced a reform in 1996, leading after five years to the publication of two SFAS (Statement of Financial Accounting Standards), SFAS No 141(Business Combinations) and No 142 (Goodwill and Other Intangible Assets). In 2000, goodwill amortization was replaced by impairment tests, following the changes introduced by SFAC (Statement of Financial Accounting Concepts) No 7 (Using Cash Flow Information and Present Value in Accounting Measurements).

The final standard issued in 2001 states that goodwill should be permanently retained at cost and its present value being checked at least every year by an impairment test. In 2007, FASB issued the revised SFAS 142, redefining goodwill as an asset representing the future economic benefits arising from other assets acquired in a business combination that are not individually identified and separately recognized (SFAS 142R, par. 2). SFAS 142 proposes that the impairment test must be conducted annually and, additionally, between the annual tests, if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount (SFAS 142, par. 28).

As it can be seen in the aforementioned accounting principles, it is obvious that goodwill accounting treatment has entered a phase of harmonization around the globe, as IFRS and US GAAP are the most widely applied accounting standards. It should be also noted that IASB amended IFRS 3 in 2008, in the frame of a common project between IASB and FASB. Despite the individual differences existing between the two standards, the goodwill accounting practices are now harmonized, especially as regards to the replacement of amortization by impairment tests. The revised IFRS 3 came in effect in 2009, stating that all assets and liabilities, including goodwill (although not explicitly referred), acquired in a business combination are accounted in accordance with other standards of the item (IFRS 3 Revised, par. 54). In addition, both FASB and

IASB have added reviews for the post-implementation phases of IFRS and SFAF, respectively, concerning goodwill accounting. More specifically, the IASB published in 2014 a request for information on experience with and the effect of implementing IFRS 3, in order to improve financial reporting.

1.4 GOODWILL ACCOUNTING UNDER IFRS

The development of accounting standards for the treatment of goodwill under IFRS followed the US GAAP, in general terms (Boennen et al, 2014). According to Camfferman & Zeff (2007), the IFRS goodwill accounting agenda was affected by the initiatives taken place in the European Union regarding the consolidation of financial statements, along with respective attempts in UK, in order to harmonize the heterogeneous accounting practices in all European countries. Currently, the accounting treatment of goodwill under IFRS is described by the following relevant standards:

I. IFRS 3: Business Combinations
II. IAS 36: Impairment of Assets
III. IAS 38: Intangible Assets.

Van Hulzen et al (2011) argue that the most important topics addressed by IAS 36 and 38 include the accounting treatment of intangible assets with a finite or indefinite useful lifetime (IAS 38, par. 89), the annual impairment testing and measuring of the recoverable goodwill amounts (IAS 36), the recoverable amount of the cash-generating units' id fair value cannot be determined (IAS 36, par. 66) and disclosure requirements regarding the impairment test (IAS 36, par. 126).

IAS 36 states that goodwill is the combined amount of all intangible assets that are not identifiable in an acquisition (IAS 36, par. 10-11) and for such as asset to be identifiable, it either has to be separable from the entity or arise from a contractual or other legal right (IAS 36, par. 12). In accordance, in IFRS 3 it is stated that goodwill is recognized as the different between the fair value of the transferred consideration and the net of the fair values of the identifiable assets and liabilities acquired (IFRS 3, par.

32). More specifically, goodwill is measured as the difference between (1) the aggregate of (i) the value of the consideration transferred (generally at fair value), (ii) the amount of any non-controlling interest (NCI, see below), and (iii) in a business combination achieved in stages (see below), the acquisition-date fair value of the acquirer's previously-held equity interest in the acquiree, and (2) the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. This difference can be written as follows:

Goodwill = Consideration transferred + Amount of non-controlling interests + Fair value of previous equity interests - Net assets recognized (1)

Furthermore, IFRS does not allow the capitalization of internally generated goodwill, stating that is not recognized as an asset, because it is not identifiable resource, controlled by the entity that can be measured reliably at cost (IAS 38, par. 48-49). At the time of the acquisition, goodwill must be allocated to Cash-Generating Units (CGUs) of the acquirer that are expected to benefit from the synergies of the respective business combination (IAS 36, par. 80). Each unit or group of units to which the goodwill is so allocated shall represent the lowest level within the entity at which the goodwill is monitored for internal management purposes and not be larger than an operating segment determined (in accordance with IFRS 8 Operating Segments).

Concerning the subsequent treatment of goodwill, the recommendations of IAS 36 are similar to those under US GAAP. Goodwill in no longer amortized but rather should be subjected to an impairment test at least annually and to test for impairment, goodwill must be allocated to each CGU (IAS 36, par. 96). The accounting for an intangible asset, such as goodwill, is based on its useful life, given the fact that intangible asset with a finite useful life is amortized (IAS 38, par. 97–106), and an intangible asset with an indefinite useful life is not (IAS 38, par. 107–110). Several factors are considered for determining the useful life of an intangible assets, but for those that arise from contractual or other legal rights shall not exceed the period of the contractual or other legal rights, but may be shorter depending on the period over which the entity expects to use the asset (IAS 38, par. 94).

Additionally, when applying an impairment test, the carrying value of the asset or CGU is compared with the recoverable amount, which is defined as the higher of the fair

value less cost of disposal and the value in use (IAS 36, par. 8). Thus, if the carrying amount of CGUs of goodwill exceeds its recoverable amount, the impairment is first allocated to the goodwill item and any remaining impairment loss is allocated to the individual assets that comprise the CGUs in question (IAS 36, par. 104). Is should be lastly noted that, although IFRS 3 and IAS 36 and 38 follow in general terms the US GAAP recommendation, there are some differences, mainly regarding the one-step impairment test proposed by IAS 36 in contrast to the two-step impairment condition under SFAS. Overall, the most important aspect of goodwill accounting treatment under IFRS is that those accounting standards and principles do not allow for amortization, although there is still no consensus on its measurement. This "goodwill debate" regarding its accounting treatment, discussed in the following chapters, is based on the contradictory views regarding which regime, i.e. impairment or amortization, reflects better the underlying economic attributes of goodwill, as well as other accounting issues, such as valuation, recognition and goodwill value relevance.

CHAPTER 2

ACCOUNTING FOR GOODWILL

2.1 RECOGNITION AND VALUATION

One important aspect of goodwill accounting is the purchase price allocation after the acquisition, when its cost goes beyond the fair value of the target company, taking into account that when the opposite happens, that is to say when the net recognized assets exceed the acquisition cost, then goodwill is negative. Of course, negative goodwill is actually rare. Lys et al (2012), investigating the conditions under which the accounting-based acquisition goodwill disclosed in the US represent an asset to the firm, found that none of the 2.123 cases reported a negative goodwill, pointing out that goodwill is also an adequate predictor of future operating performance.

It should also be noted that in this research study, it was found that acquiring firms with economic losses after the acquisition, according to the stock market returns during the announcement and after the acquisition completion, allocate higher rates of the purchase price to goodwill than acquirers with profits. Accordingly, in Europe, Glaum & Vogel (2009), evaluating Mergers and Acquisitions (M&A) disclosure by European companies in 2007, predicted that only 5% of cases there is a negative goodwill.

During the phase of the purchase price allocation following a business combination, firms have a significant level of discretion regarding the recognition of goodwill, given their obligation of measuring all assets and liabilities of the target company at the fair value, as well as identifying internally generating assets that constitute goodwill and are not presented in the balance sheets. Boennen et al (2014) argue that frequently firms choose not to identify as asset, thus increasing the cost of the acquisition that assigned to the goodwill, while discretion also exists regarding the measurement of fair values.

Indeed, Shalev et al (2011), examining the interconnections between CEO compensation and fair value accounting in cases of purchase price allocations while accounting for goodwill, found that the amount that is allocated to goodwill is almost

55% of the value of the deal of acquisitions undertaken, attributing this to the fact that for many assets and liabilities, estimation of their fair values is based on unreliable data, leaving the management of firms with a high level of discretion. In accordance with these findings, Glaum & Wyrna (2011), investigating goodwill accounting during the financial crisis in Europe and examining 322 listed firms, reported that the proportion of goodwill with regards to purchase price varies significantly across firms and in particular is dependent on the industry in which acquisitions take place, as high ratios of goodwill were found in entertainment industry and low in industries of basic consumer goods. From these findings, it can be concluded that measuring fair values and, consequently, defining goodwill is a task that is not homogenous across firms.

Another important topic of goodwill accounting during the initial phases of recognition and valuation is its allocation in the individual CGUs, according to IFRS and IAS directions. Glaum & Wyrna (2011) observed that goodwill tends to concentrate in a small number of CGUs according to the firm segmentation and in particular, in the 94% of the business combinations (acquisitions) examined, goodwill was found concentrated in less than four CGUs. In addition, it is documented that managers' accounting choices play an important role in recognizing and valuating goodwill. More specifically, Shalev et al (2011) argue that managers tend to allocate higher rates of the acquisition cost to goodwill than other assets when the impairment accounting approach is applied, finding that the higher this proportion is the higher the CEO bonuses are.

Consistent with these findings, Brochet & Welch (2011) reported that CEOs with prior transaction experience in business combinations appear to be subject to agency conflicts that affect their propensity to impair goodwill, although such experience is linked to smaller amounts of impairment and higher value relevance of goodwill. In accordance, Detzen & Zuelch (2012), investigating the links between executives' compensation and goodwill recognition under IFRS in a sample of 123 European mergers of listed companies during 2005 and 2008, observed that, indeed, goodwill recognition is positively related to CEOs' cash bonuses, as top executives tend to allocate higher proportions of the acquisition cost to goodwill, signifying the important role of accounting choices taken by managers as regards to goodwill accounting treatment.

Lastly, Boennen et al (2014) argue that discretion is a notion also applicable in the disclosures on the acquisitions made and in particular on the goodwill impairment tests,

as mandated both by IFRS and SFAS, given the fact that empirical evidence suggests that firms following business combinations often do not meet these preconditions of disclosure. Shalev (2009), researching for the information content of business combination disclosure level in a sample of listed companies in the US, reported that only 13% of the firms disclose properly the factors that affect the recognition of goodwill and the same inadequacies of disclosures exist also for the full purchase price allocation of the acquisitions examined, thus concluding that firms do not provide adequate information to investors.

Astolfi et al (2012) examined purchase price allocations for 455 cases of acquisitions in the US and found that financial analysts' forecasts precision about the stock returns and the firms' performance are negatively influenced by abnormalities of goodwill accounting. In Europe, Glaum et al (2013) studied the level of compliance with IFRS 3 and IAS 36 required disclosures across 16 European countries taking into account the company and country level determinants, observing that a large proportion of firms examined do not report the cost of the acquisitions fully, as well as the required explanations regarding the recognition and the impairment tests of goodwill.

All in all, accounting treatment of goodwill during the initial phases of business combination concerning its recognition and valuation differs significantly among firms, a fact that can be attributed to several factors, such as the level of discretion about price allocation and fair value estimations, CEO's accounting choices and disclosure practices.

2.2 GOODWILL VALUE RELEVANCE

Empirical evidence suggests that there is an important link between goodwill and stock prices, highlighting the goodwill "value relevance". These studies usually employ econometric regressions, testing whether goodwill is reflected in the changes observed in the market value and, respectively, in investors' decisions and providing evidence that information provided in the firms' financial statements is crucial for stock returns. Although different types of models are applied in value relevance studies, there is consistent proof that goodwill is significantly correlated with the value of the firms that

are involved in business combinations, as well as that impairment also influences that value, as examined in this thesis. But in order to examine the impact of the subsequent accounting treatment of goodwill (amortization VS impairment), investigating its value relevance firstly is needed.

In this frame, one of the earlier and most influential studies in this field was that of Jennings et al (1996), who investigated the relation between accounting goodwill numbers and equity values for a sample of 259 companies in the US from 1982 to 1988, employing a regression analysis. Researchers found that goodwill is statistically significantly and positively correlated with the market value of common equity of the firms examined, as well as that its impact on the market value is larger in comparison with other assets, such as the book value of property, plant and equipment, leading to the conclusion that investors value goodwill beyond its book value.

Another important study in this field was that of Henning et al (2000), who empirically tested the value relevance of goodwill in a sample of US acquisitions for five years (1990-1994) by decomposing goodwill in several components (the difference between the fair value of the acquired companies' net assets and their net book values, the difference between the fair value of assets recognized and the target company's pre-acquisition market value, the cumulative abnormal returns of acquiring and the target company around the acquisition announcement date, the excess of the recognized goodwill over the aforementioned components). Henning et al (2000) found that goodwill has a significant impact on firms' value, although this impact is differentiated among its different components, as the difference between the fair value of the acquired firm net assets and their net book values has a lesser importance than the synergy component, measured by the cumulative abnormal returns of acquiring and the target company around the acquisition announcement date.

These findings about the value relevance of goodwill have been verified by a significant number of studies in several countries, extending latter the research on how the adoption of IFRS regarding the impairment-only accounting practice has influenced the goodwill impact on market value, as discussed in the next chapter. For example, Al Jifri & Citron (2009) investigated the value relevance of financial statement recognition versus note disclosures regarding goodwill accounting in a sample of listed firms in the

UK and concluded that both recognized and disclosed goodwill is statistically significantly and positively correlated with the companies' stock prices.

In the US, Ahmed & Guler (2007) examined the effects of SFAF 142 that imposed the impairment method on the reliability of goodwill write-offs (the difference between the fair value of the acquired companies' net assets and their net book values), proving that goodwill has a statistically significant and positive association with the respective market value. In Europe, Aharony et al (2010) tested for the impact of mandatory IFRS adoption on equity valuation for security investors across 14 countries-members of EU and for 2.298 companies, documenting that there is a positive link between goodwill and firms' value, although the pointed out that goodwill value relevance is greater after the adoption of IFRS, meaning that the impairment-only approach had an important impact on this value.

In Australia, Godfrey & Koh (2001) investigated the relevance to firm valuation of capitalizing intangible assets, including goodwill, supporting previously mentioned findings, as they documented that investors give greater value to reported goodwill in comparison with other assets and that capitalization of identifiable intangible assets adds value to large firms. Chalmers et al (2011), also in Australia, verified the goodwill value relevance, arguing that goodwill capitalization is very important to investors' decision-making and that goodwill accounting treatment has significant financial consequences both for firms and other capital market stakeholders.

Given the fact that goodwill influences firms' value, it can be expected that it has also an impact on their future performance. Indeed, Boennen et al (2014) find evidence from previous research literature that goodwill can be seen as a predictor of performance of firms following business combinations, taking into account that information provided to investors from firms' financial statements is crucial for their users. Lee (2011) examined the effect of SFAS 142 on the ability of goodwill to predict future cash flows and found that there is strong relationship between precise prediction of cash flows and goodwill, especially after the adoption of SFAS 12 which imposes the impairment accounting approach. Lys et al (2012) also found that goodwill is highly correlated with companies' future performance, measured by operating performance indexes (EBIDTA and operating cash flows). Lastly, Schultze & Weiler (2010) outlined the link between value creation, performance measurement and goodwill under the IFRS and US GAAP

regimes and concluded that goodwill can be used to design a performance measurement system which provides useful information about value and its future realization.

2.3 GOODWILL AMORTIZATION

The subsequent accounting treatment of goodwill following its recognition and valuation is a matter of great importance in the accounting literature, as the accounting choice between those two practices has significant implication for goodwill value relevance. Amortization, comprising a fixed expense charge every reporting period over the estimated useful life of goodwill, was the most commonly applied practice for its subsequent accounting treatment, but after the mandatory adoption of IFRS and US GAAP is no longer accepted, due to its significant disadvantages. The underlying idea behind this development is that amortization does not account for the real decrease in the goodwill economic value but instead is based on the false assumption that this decrease is straight over time (van Hulzen et al, 2011).

Regarding the amortization of goodwill, it has been found that there is a negative relation with equity value, meaning that investors perceive amortization as a relevant accounting number that indicates a decrease in the value of goodwill, the value of the company and therefore also its price. Indeed, Bugeja & Gallery (2006) examined the issue of goodwill amortization in the Australian context to determine whether the market attaches different values to the components of 136 Australian firms' goodwill when it is disaggregated into different ages between 1995 and 1999, and proved that investors perceive goodwill as value relevant only if it is acquired in the last two years. The authors concluded that the subsequent accounting treatment of goodwill is very important for investors, as keeping on the balance sheets for long periods is harmful.

In fact, there are contradictory findings regarding the impact of amortization on the firms' value. For example, Jennings et al (2001) investigated the issue of goodwill amortization and its relationship with usefulness of earnings in the US and demonstrated that investors find earnings figures excluding goodwill amortization more relevant for their decisions, concluding that amortization only adds noise to their valuation of stock prices.

Consistent with these findings, Li & Meeks (2006) examined the effects of the impairment of purchased goodwill on the market value of firms in the UK from 1997 to 2002 and verified that although goodwill is value relevant it tends to decrease over time, due to amortization accounting practices applied. In addition, Churyk & Chewning (2003) explored the value relevance of amortization for goodwill for 96 firms in the US, proving that goodwill amortization is negatively correlated with equity values, a finding that implies that the market views goodwill as an economic resource that declines in value, and the decline in value is related to the amortization methods used by firms in the sample.

On the other hand, there is also evidence that goodwill amortization does not have a significant impact of market value. For example, Moehrle et al (2001) tested for how informative are earning figures that exclude goodwill amortization and documented that amortization is not a source of noise, as Jennings et al (2001) suggested. Lastly, Aharony et al (2010), analyzing the value relevance of goodwill from acquisitions, found no evidence that the relative value differs significantly under the amortization or the impairment regimes. However, the disadvantaged of goodwill amortization are well documented and have been taken into account for the development of the respective IFRS and SFAS regarding goodwill accounting treatment.

2.4 GOODWILL IMPAIRMENT

The significant disadvantages of goodwill amortization have led to new accounting practices regarding the goodwill treatment by companies nowadays, following the directives of the FASB and the IASB. As previously mentioned, both IFRS and US GAAP prohibit the amortization of goodwill, suggesting that the impairment-only approach reflects better its economic value. In particular, IFRS 3 obliges managers to test for impairment annually and SFAS 142 noted that the application of an adequate impairment test provides financial information that more precisely reflects the economic impact of the acquired goodwill on the value of an entity than the amortization does. Thus, if the fair value of a firm is less than the carrying value, the goodwill value needs to be reduces so that the carrying value is equal to the fair one and the impairment loss is then reported as a separate item on the income statement and

the new adjusted goodwill value is reported in the balance sheet. Goodwill impairment can be the result of various facts regarding the firms and the market, such as negative publicity or losses in the brand power.

Although impairment of goodwill seems to be a more fair and realistic accounting practice than amortization, it is still a matter under consideration if this accounting choice is value relevant. Indeed, Chambers (2006) examined the impact of the adoption of SFAS 142 in the US on the financial reporting and concluded that the elimination of goodwill amortization had a positive influence on the reporting quality and, consequently, the relevant financial information provided to investors. On the other hand, there is also the opposite view.

One criticism towards impairment is that respective annual testing is difficult to apply. Indeed, the American Financial Accounting Standards Committee (2001) suggested that impairment tests are obstructed by the inability of separating the acquired goodwill from the total entity goodwill in the period after an acquisition. Another important aspect of these controversies is that impairment regime allows for a significant level of discretion on behalf of executives, providing opportunities for different interpretations and accounting judgments (Rammanna & Watts, 2007). Bens et al (2007), examining the information content of goodwill impairment after the adoption of SFAS 142 in the US, concluded that impairment losses presented in the balance sheets introduce new information to the market.

Qasim et al (2013), investigating goodwill accounting in the UK from the prism of the IFRS regime, suggest that impairment provides significant opportunities for accounting discretion, as respective testing requires managers to make various accounting choices, such as the allocation of goodwill in the different CGUs. Abughazaleh et al (2011) confirm this assumption, examining the ratio of purchased goodwill to the acquiring companies' total assets and finding that there is high level of accounting discretion in goodwill impairments in the UK, as managers use this regime in order to convey their private information or mislead the financial figures of the company. Qasim et al (2013) argue that, due to this accounting discretion, it is difficult to determine how goodwill impairment affects the respective losses reported.

In conclusion, regulation on goodwill subsequent accounting treatment has changed by the introduction of IFRS 3 and SFAS 12, as from that moment amortization of goodwill is no longer allowed but, instead, companies have to perform an impairment test on goodwill annually, to test whether the recoverable amount of the goodwill is higher than the carrying amount. Although IASB and FASB argue that the elimination of goodwill amortization has a positive impact on the quality of accounting information provided to users of the companies' financial statements, allowing for better investment decisions, there is still no consensus about the usefulness of its accounting regime. This debate regarding goodwill amortization versus impairment is still present in the research literature and continues with the release of the IFRS for Small and Medium-sized Entities (SMEs), which allows these companies to amortize their goodwill for a maximum period of 10 years, although a revised version is expected at the end of 2015.

CHAPTER 3

THE GOODWILL DEBATE: AMORTIZATION VS IMPAIRMENT

3.1 STUDIES OUTSIDE EUROPE

Much of the debate surrounding accounting for goodwill focuses on whether it should be amortized systematically or written down as it is impaired and as so, whether the economic value of goodwill is reflected better under the impairment or the amortization regime. Although it has been supported by the regulatory bodies (FASB & IASB) that goodwill impairment is the appropriate regime for its subsequent accounting treatment, as amortization method leads to arbitrary accounting, this statement is still under question and not supported by clear academic evidence. A significant number of studies have been carried out in this field, mainly in the US and Europe, but also in other countries around the world, such as Australia, analyzing whether the goodwill value relevance is modified after the SFAS or IFRS implementation.

In the US, Ahmed & Guler (2007) use a sample of firms for the period between 1999 and 2004 and examine the association of goodwill write-offs with stock returns, as well as the links between goodwill balances and stock prices before and after the adoption of SFAS 142. By employing a regression analysis, the authors found that goodwill and earnings are significantly associated with the market value, arguing that investors give great attention to goodwill balances after the adoption of SFAS 142 in comparison with the period before. Finally, Ahmed & Guler (2007) suggest that the impairment-only approach under the SFAS regime is better for reflecting the economic properties of goodwill, noting though that in the post SFAS 142 period, goodwill write-offs and respective balances are more strongly related to the stock returns for companies with a higher number of segments.

In addition, Churyk (2005) examined whether the prohibition of goodwill amortization for US companies after the SFAS 142 adoption is appropriate and proved that there is a clear correlation between the impairment tests and the firms' stock prices. In

particular, the found only weak support for the initial impairment of goodwill but strong evidence of subsequent impairment tests, thus supporting the elimination of goodwill amortization by the regulatory bodies and arguing that the impairment-only approach encompasses better the goodwill economic features. On the other hand, Chambers (2006) suggests that a goodwill accounting system that allows both annual impairment testing and systematic amortization, while permitting managers the discretion to choose the best-fitting mix of those two regimes according to its characteristics, is the most appropriate way in order to increase goodwill value relevance. In addition, he concludes that the introduction of SFAS 142 led to higher accounting quality, according to the goals of the regulatory bodies.

A similar study was performed by Chen et al (2004) in the US, leading to analogous conclusions. More specifically, the authors used a sample of companies that reported goodwill in the year 2001, providing evidence on the timeliness and the value relevance of goodwill impairments after the implementation of SFAS 142, and found that the adoption of the impairment-only regime was beneficial for the goodwill value relevance, as it was impounded in the stock prices. Overall, they are in favor of the new regulations regarding goodwill subsequent accounting treatment, pointing out though that the first year of impairment adoption ads new information to the market due to the fact that this one-time impairment carries the amount of all amortization over the past years.

Furthermore, Zang (2008) examined the goodwill information content after the adoption of SFAS 142 and found a negative relationship between impairments and stock returns, suggesting that the new regime is beneficial for the financial information quality, allowing managers to convey their private cash-flow information to the market in a reliable way. Moreover, in Canada, Lapoint et al (2009) focus on the transitional goodwill impairment losses recorded by firms after the adoption of the revised standards on purchased goodwill and find that the impairment-only approach improves the quality of the accounting information provided to investors. They also examine the retroactive impairment methods, in contrast with the cumulative one used by Chen et al (2004) in the US and in line with the directives of IFRS, proving that value relevance of goodwill is advanced under the new regime.

In Australia, Chalmers et al (2008) used a sample of 599 listed firms and compared the goodwill value relevance before and after 2005 when IFRS firstly adopted, finding that goodwill amounts under the IFRS regime are significantly related to the stock prices, in contrast with the respective amounts under the Australian GAAP regime. Overall, they supported that the impairment-only method is more value relevant than the amortization one, providing useful accounting information to investors regarding their decision-making. In New Zealand, Godfrey & Koh (2009) reported a negative association between goodwill impairment losses and companies' investment opportunities, using the concept of IOS (Investment Opportunities Set) which captures a firm's portfolio of growth dynamics. By examining the same concept, Chalmers et al (2011) in Australia indicated that goodwill impairment after the adoption of the IFRS regime reflects better a company's investment opportunities, as there is a negative relationship between the IOS and the goodwill impairment accounting treatment.

3.2 STUDIES IN EUROPE

Similar studies regarding the debate of amortization versus impairment of goodwill have been carried in Europe and in individual European countries after the adoption of IFRS that allow only for the impairment method. Aharony et al (2010) examined the goodwill value relevance before and after the mandatory adoption of IFRS in 2005 in a sample of 2.298 firms from 14 European countries, confirming an increase in the value relevance after IFRS in all countries except one, although this increase is smaller for countries where the already existing regime was similar to the one of IFRS, such as UK and Ireland, and bigger for countries of different regimes about the accounting treatment of goodwill, such as Germany and Austria.

Van Hulzen et al (2011) used a sample of 1289 European firms (Germany, France, Spain, the Netherlands) and made a comparison between the amortization and the impairment method for the periods 2001-2004 and 2005-2010, respectively, that is to say before and after the mandatory adoption of IFRS. Based on the qualitative characteristics of accounting information, the authors indicated that the impairment of goodwill is actually less value relevant that the amortization one, although it leads to more timely information. Contradictory to Aharony et al (2010) results, van Hulzen et

al (2011) concluded that the impairment-only methods does not reflect the economic attributes of goodwill in the best way, although it contributes to a higher level of accounting quality.

In Sweden, Barksjo & Paananen (2006) examine the goodwill value relevance before and after IFRS implementation, and using a sample of listed companies they test respective changes after the switch from the goodwill amortization to the impairment-only approach. The authors found a weak support for the increase in the value relevance of the accounting information among firms with significant goodwill balances in proportion to total assets. They also argued that companies with high amounts of intangible assets benefit from the switch to the impairment method introduced by IFRS, experiencing increased value relevance, although the find no statistically significance in the incremental value relevance which is related to the amortization or impairment charges before and after IFRS adoption. Overall, the suggest that IFRS implementation did not lead to better accounting quality, although it should be noted that the years' sample of this study is very limited, including only two periods (2004-2005) around IFRS adoption. As Van Hulzen et al (2011) state, it should be taken into account that during the first years of the impairment-only approach implementation, firms probably are less familiar to this method, while the same stands for investors.

In Sweden as well, Hamberg et al (2006) investigated how the adoption of IFRS affected the reported goodwill and its value relevance with the stock market valuation of the listed companies and found evidence that aggregated goodwill impairment charges in 2005 were lower than the respective amortization ones. They also proved that goodwill is more persistent than implied in the amortization used prior to IFRS and concluded that their adoption led to more relevant accounting information. In Portugal, Oliveira et al (2010) used a sample of 354 firms for the total period of 1998 to 2008 and investigated the goodwill value relevance before and after IFRS adoption in 2005. The researchers documented although the swift from the Portuguese GAAP applied prior to 2005 to the IFRS regime had no impact on the value relevance of identifiable intangible assets, the empirical evidence suggests that there was a positive impact on the value relevance of goodwill. It worth noting that in this study is was also found that whereas earnings are related positively to stock prices in the pre-IFRS periods, their value relevance declines after the adoption of the impairment-only regime.

In the UK, Horton & Serafeim (2010) investigated whether there is a market reaction to and value-relevance of information contained in the IFRS regime, finding support for the impairment-only approach. More specifically, they test for the value relevance of the individual reconciliation items including goodwill, documenting that goodwill adjustments after IFRS adoption are value relevant. It could be supported that the value relevance increases after the introduction of IFRS in 2005 for listed companies in the UK can partly be explained by the fact that the prior to IFRS regime in this country was similar to the new impairment-only approach. This assumption is also supported by the empirical findings of Aharony et al (2010), who found that increase of goodwill value relevance in European countries is bigger for those where goodwill accounting treatment was suchlike the one provided by IFRS, including the UK.

Indeed, Li & Meeks (2006) used the period between 1998 and 2002, when accounting regulation in the UK allowed firms to use the impairment method along with the amortization one, and documented that in contrast with amortizations, impairments were perceived more relevant by investors, as they tend to overact to bad news or indications of lower future earnings. Iatridis et al (2006) also examined the timeliness of impairments in the US and whether they are correlated with a decline in the equity market values, confirming that impairments are timely due to the statistically significant link between them and negative stock returns in the same or the following year. Lastly, Istrate (2013) investigated the value relevance of goodwill and other intangible assets before and after IFRS mandatory adoption for listed companies by using a sample of 350 firms in the UK and demonstrated that although the amount of goodwill is statistically significantly correlated with the market value, this value relevance does not increase during the post IFRS implementation period.

All in all, the main argument for the implementation of the impairment-only approach is that the traditional amortization practice does not reflect firms' economic reality as well as the specific economic characteristics of goodwill. Seetharaman et al (2005) suggest that if the impairment approach is correctly applied, then it provides investors useful financial information than the arbitrary amortization approach, while Wines et al (2007) argue that this regime provides a more reliable measure of the recognized goodwill as opposed to the arbitrary assessment. Nevertheless, although this is also supported by the accounting regulatory bodies, the empirical evidence discussed above

is mixed, providing contradictory conclusions about goodwill value relevance under the two regimes, amortization and impairment, with the respective debate going on until today.

3.3 FACTORS AFFECTING GOODWILL IMPAIRMENT

Arguments in favor of the impairment-only regime are also based on the assumption that this approach does not oblige managers to automatically write down goodwill if its value has not declined, allowing them to consider various economic and business factors when applying the impairment tests, such the business environment, changes in the regulatory framework and other related variables. In fact, there are a significant number of factors that determine the goodwill impairment method. Beatty & Weber (2006) examined the accounting choices made by managers of US listed firms as regards to the adoption of SFAS 142 and argued that this choice is highly affected by the debt-contracting (debt containing motives with debt covenants), the capital market (firms' earnings response and deviation of their stock returns) and the managerial motives related to expected income (existence of earnings-based bonus plans and management tenure), highlighting thus the significant impact of accounting discretion discussed in the previous chapter.

Hayn & Hughes (2005) investigated the leading indicators of goodwill impairment for 1276 acquisitions that take place in the US after the adoption of SFAS 142 and found that the characteristics of the original acquisitions are the more powerful predictors of eventual goodwill write offs, which on average lag behind the economic impairment of goodwill by three to four years. In addition, Ramanna & Watts (2012) analyzed the factors that affect goodwill impairment under the impairment-only regime of the SFAS 12 in the US using a sample of 124 companies for the years 2003 to 2006 and concluded that managerial discretion regarding the respective accounting choices is an important factor, as firms tend to void write-downs if their information about their future performance is positive. They also argue that debt contracting, firms' earnings response to stock prices and managerial incentives are important variables of goodwill impairment method application, as well as other firm's characteristics, such as the

number of reporting units (GCUs under the IFRS regime) and the proportion of unidentifiable net assets to total assets.

The impact of firms' characteristics on the impairment method for goodwill is also supported by Zang (2008), who suggested that leverage is another important factor, as companies who adopted the SFAF 142 impairment-only regime in the US are less likely to report impairment losses if they are highly leveraged and vice versa. Shepardson (2013) highlighted the role of CEO's experience and firms' audit committee in applying the impairment approach for goodwill, investigating listed companies in the US between 2004 and 2009, and found that the likelihood of reporting impairment increases when the audit committee is interconnected with managers of firms that are financially distressed and when executive managers have prior experience with this accounting method.

This assumption is also supported both by the study of Brochet & Welch (2011) for the SFAS 142 regime, who pointed out that CEO's accounting choices depend on their professional experience in acquisitions-related transactions, and that of Hamberg et al (2011) for the IFRS 3 regime, who proved that the existence of an earnings-based management compensation scheme is a factor that should be taken into account when testing for the value relevance of goodwill. Additionally, Abughazaleh et al (2011) found in that leverage, earnings management, CEO change and corporate governance model applied are crucial variables for the reported goodwill impairment losses, which are also associated with other indexes of performance, including ROA and operating cash flows. Lastly, Siggelkow & Zuelch (2013) used a sample of 7268 companies from 15 European countries and documented that goodwill impairment is related to leverage, profitability, operational cash flows and market-to-book (M/B) ratios.

3.4 GOODWILL IMPAIRMENT TIMELINESS

The debate about the impairment or amortization subsequent accounting treatment of goodwill is discussed in the academic literature mainly by applying the value relevance models, as analyzed in the previous chapters of this thesis. Another alternative model followed by researchers is that of the earnings-return model, which highlight the impact

of timeliness. More specifically, timeliness refers to "having information available to decision makers before it loses its capacity to influence decisions (IASB & FASB, 2008). Van Hulzen et al (2011) explain that timeliness concerns the timely recognition of the changes in the economic value of a company in its financial statements rather than the degree to which financial information is used for the market valuation.

Boennen et al (2014) also argue that, given the fact that managers have more reliable information about their firm's performance, if companies recognize goodwill impairment losses timely then the respective impairment announcements should convey to new information to the stock market. According to Francis et al (1996), investors tent to react to goodwill impairment is the announcements have a reliable predictive value for the firm's future cash flows, so that if impairments reflect information about a future decline then a negative reaction in stock prices is expected. In this way, stock market reaction to goodwill impairment announcements depends on the timeliness of the impairments and on how this information is interpreted by the investors.

Hirschey & Richardson (2002), examining 80 cases of goodwill impairments in the US during 1992 to 1996 and applying the traditional event-study model, documented that the market reaction is negative after impairment announcements, although this reaction depends on the type of information provided in the companies' financial statements. In particular, if impairment announcements are combined with negative operating earnings, then negative returns are expected, and vice versa. Li et al (2011) confirm these findings, proving that there is a negative reaction to impairment announcements in the stock market.

Besides the event studies, other researchers have employed the return-earnings model. For example, Chen et al (2008) investigate the timeliness of impairment recognition from the initial adoption of SFAS 142 using a sample of 1763 firms reporting goodwill at the yearend 2001 and the next year after the adoption (2002) in order to provide market-based evidence on the timeliness of goodwill impairments upon the SFAS 142 regime. The authors found that impairments of 2002, the year after the impairment-only regime adoption, are statistically significantly correlated with the stock returns in the previous years (2001 and 2002) but not with the returns of the same year, thus implying

that recognition of goodwill impairments lags the respective economic losses and suggesting that timeliness can improve after the adoption of SFAS 142.

Lastly, van Hulzen et al (2011) also used the earnings-return model for a sample of European firms reporting goodwill after the implementation of IFRS in 2005, proving that the impairment approach leads to more timely accounting information. More specifically, the authors examined this hypothesis by running a regression for two periods before and after IFRS implementation (2001-2004 and 2005-2009) and documented that the impairment expense is timelier that the amortization expense as regards market reactions. On the other hand, although timeliness is better for the impairment-only approach, when it comes to relevance, the second most important accounting quality feature, the empirical evidence of this study does not show significant advancements after switching from the amortization to the impairment regime.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 AIM OF THE STUDY

The empirical implementation of the study focuses on the relationship occurred between accounting information provided by companies and market information. Based on this is examined the influence of goodwill reduction method used by organizations on the market information given to investors in order to proceed in decision making based on adjustments of the general market valuation model provided by Olhson (1995). The main aim is to evaluate the usefulness of goodwill reduction methods used in order to receive information about the market value of companies based on the fact that according to IFRS goodwill accounting treatment changed in 2005 and the reduction in goodwill value is provided through goodwill impairment replacing goodwill amortization. Since the market value is defined as a function of the book value of equity and earnings these two variables are used as proxy in order to investigate the explanatory power of the goodwill reduction method on market value estimation. The econometric model used for examining the nature of the relationship between accounting information provided by companies and market information is illustrated afterwards and is consisted by panel data.

4.2 PANEL DATA

Panel data are data consisted by observations of many stratified units for different time periods. Its advantages, over simple cross-section data or time-series data, are obvious. Usually have large cross sectional dimension so as to provide the researcher large samples to work. The observations are often given in a subdivided (disaggregated) level avoiding the problems of aggregation that are usually displayed in macroeconomic time series. Panel data can also be used to test research questions that cannot be tested using simple cross section or time series data. However, there are also some problems

associated with Panel data. The collection of the data must be done carefully so as to provide a representative coverage of the test population. If this does not happen, the problem of selectivity arises because some groups of the population are not included in it. It is also likely to arise the problem of attrition as observations of the sample can change significantly (Frees, 2004). These problems are likely to create a bias. Finally, Panel data with short time dimension cannot easily measure dynamic effects.

Encoding the advantages of Panel data these are:

- Large number of observations
- Increased degrees of freedom
- Reduced multicollinearity between the explanatory variables
- Improved efficiency in econometric estimates
- Greater volatility
- Better predictability
- More reliable and stable parameter estimations

The disadvantages of Panel data are:

- Problems in the collection and management of data
- Problems of selectivity
- Problems of friction

4.3 DATA AND MODEL SPECIFICATION

In this study the targeted data are companies based in Germany. The selection of the above country lies on the fact that Germany is one of the most advanced countries in Europe and in world generally. The data used in the paper were extracted from the financial database DataStream. The variables included in the dataset are the book value of equity excluding the amortization or impairment variable respectively, share price at three months after fiscal year end and either the amortization or impairment amount, depending on the year of the sample. All values have been deflated by the number of shares outstanding. The initial data delivered form DataStream were 1.974

corporations, from which there had been already excluded all the financial and insurance institutions due to their different approach in conducting their financial statements. In advance, we continued by sorting the companies by 'Company Name'. In this step we excluded double data entries which came from the fact that a number of companies had changed their name throughout the timeline. From the above process a number of 203 corporations left out our sample, reaching a sample of 1.771 companies. The remaining data resulted 1.036 corporations with values shown as 'NA' or values not consistent through timeline. They were all excluded reaching a sample of 735 organizations. The final data that will be used for the completion of the research are referred in 264 German organizations for the period from 2000 to 2011. A crowd of 471 companies were eliminated due to the desired dependent variable (MVE) selected being in closing share price three months after balance date.

Based on the above the models that will be examined are the following:

Olhson's Basic Model

$$MVE_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 NI_{it} + \varepsilon_{it} \quad (1)$$

estimated for 2000-2011

Extended Olhson Model (Included Amortization Variable)

$$MVE_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 NI_{it} + \beta_3 Amort_{it} + \varepsilon_{it} \quad (2)$$

estimated for 2000-2004

Extended Olhson Model (Included Amortization plus time Dummies Variable)

$$MVE_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 NI_{it} + \beta_3 Amort_{it} + \beta_i D_{it} + \varepsilon_{it} \quad (3)$$

estimated for 2000-2004 (t=2000, t=2001, t=2002, t=2003, t=2004)

Extended Olhson Model (Included Impairment Variable)

$$MVE_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 NI_{it} + \beta_3 Imp_{it} + \varepsilon_{it} \quad (4)$$

estimated for 2005-2011

Extended Olhson Model (Included Impairment Variable plus time Dummies Variable)

$MVE_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 NI_{it} + \beta_3 Imp_{it} + \beta_i D_{it} + \varepsilon_{it}$ (5)

estimated for 2005-2011 (t=2005, t=2006, t=2007, t=2008, t=2009, t=2010)

Where:

$MVE_{i,t}$: is the market value for company i at time t

$BVE_{i,t}$: is the book value of equity for company i at time t

$NI_{i,t}$: is the net income for company i at time t

$AMORT_{i,t}$: is the reduction in goodwill value for company i at time t under amortization method

$IMP_{i,t}$: is the reduction in goodwill value for company i at time t under impairment method

$D_{i,t}$: is a dummy variable for reduction in goodwill value for company i at time t under, with 0=amortization 1=impairment per year, for years 2000-2004 and 2005-2011

$\varepsilon_{i,t}$: is the error term

Before estimating the model we will proceed with basic econometric analysis of the variables used presenting the descriptive statistics. All values have been deflated by the number of the outstanding shares. The estimation of the model will be firstly carried out by using panel data OLS regression.

CHAPTER 5

RESULTS

5.1 DESCRIPTIVE STATISTICS AND GRAPHS

Initially, are presented the average market value, book value of equity, net income goodwill reduction value for every year for the total sample of companies. As it presented average market value shows negative trend with slight deviations while the rest variables present steady line except book value of equity which increases significantly in 2008.

The following tables present the descriptive statistics of the research variables. More specifically mean, median, minimum, maximum, range, mode, standard deviation, variance, skewness and kurtosis are presented for total sample (Table 1), 2000 to 2004 (Table 2) and 2005-2009 (Table 3). As it is shown the average market value, book value of equity and net income are higher in 2000-2004 than 2005-2009. Also the average goodwill reduction is higher according to amortization method (2000-2004) than according to impairment method (2005-2009).

Table 1: Descriptive statistics of the research variables for 2000-2010

	MVE_defl	BVE_defl	NI_defl	Goodwill_Value
N	2899	2899	2899	2899
Minimum	0,00	-149,82	-4045,26	0,00
Maximum	7344,00	1600,00	36824,39	18449,65
Mean	6,03	20,58	35,11	112,14
Std. Deviation	189,71	87,12	754,64	886,24
Variance	359,91	759,87	569,11	785,79
Skewness	37,82	10,62	41,55	12,56
Kurtosis	1436,32	134,06	1967,91	189,97

Table 2: Descriptive statistics of the research variables for 2000-2004

	MVE_defl	BVE_defl	NI_defl	Goodwill_Value
N	1317	1317	1317	1317
Minimum	0,00	-149,82	-4045,26	0,00
Maximum	7072,00	1600,00	36824,39	18449,65
Mean	6,2641	17,82	51,56	115,23
Std. Deviation	195,05	77,88	109,84	999,20
Variance	380,37	6063	1128,96	998,39
Skewness	36,17	12,57	29,98	13,69
Kurtosis	1311,66	197,43	987,14	212,54

Table 3: Descriptive statistics of the research variables for 2005-2010

	MVE_defl	BVE_defl	NI_defl	Goodwill_Value
N	1582	1582	1582	1582
Minimum	0,00	-89,60	-323,48	0,00
Maximum	7344,00	1294,55	5641,66	9705,28
Mean	5,84	22,89	21,41	109,57
Std. Deviation	185,21	94,08	226,17	780,14
Variance	343,10	885,74	516,72	608,43
Skewness	39,39	9,51	19,79	9,82
Kurtosis	151,41	103,50	430,49	104,37

5.2 REGRESSION ESTIMATIONS

It was mentioned earlier that the introduction of the impairment method of goodwill accounting by the IASB was motivated by the belief that the method of amortization

led to arbitrary accounting (IASB 2005). The information that is reported on the basis of such a method is therefore expected not to be relevant for investors in decision-making, because the information does not reflect the underlying (change in the) financial position of the firm. As it is the goal of the IASB to make accounting information more relevant, new accounting standards are therefore expected to add relevance for decision makers. More specifically, the introduction of IFRS 3 and the amendments to IAS 36 and IAS 38 are expected to increase the relevance of goodwill accounting numbers. This means that the impairment expense on goodwill should be more relevant than the amortization expense. Evidence for this statement regarding SFAS 142 is among others provided by Lapointe et al. (2009), Chambers (2006), and Chen et al. (2004). Barksjö and Paananen (2006) find no evidence for this statement however, in examining the effects of IFRS in Sweden. In this light our first hypothesis examined here is:

H1: The value relevance of goodwill impairment expense is higher than the value relevance of goodwill amortization expense.

One specific element of relevance mentioned in the framework is timeliness. This measure considers the gap between the economic decline in goodwill and the recognition of this decline in the financial statements. Under the amortization method, the reported value of goodwill steadily declined following the amortization expense that was subtracted from the balance sheet amount every report period. Any decline in the underlying economic value of the goodwill was not recognized. Therefore, it could be possible that the reported amount was higher or lower than the economic value. Under the impairment method, firms are required to do an annual impairment test. This should lead to a timelier recognition of the decline in economic value of the goodwill, as it is now reported when it actually occurs. Chen et al. (2004) find support for this statement regarding SFAS 142 and Iatridis et al. (2006) for regulation in the UK. However, Barksjö and Paananen (2006) find however no evidence for this statement regarding IFRS in Sweden. The second hypothesis therefore is:

H2: The goodwill impairment expense is timelier than the goodwill amortization expense.

Table 4: Regression Estimation of the research variables for 2000-2004

$$MVE_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 NI_{it} + \beta_3 Amort_{it} + \varepsilon_{it}$$

	N	Constant	BVE	NI	AMORT
2000	264	28,012	-,076	,009	-1,843
p-value		,321	,833	,462	,948
t statistic		,994	-,210	,737	-,065
2001	264	,500	-,002	-,002	,016
p-value		,018	,677	,000	,017
t statistic		2,373	-,417	-5,236	2,410
2002	264	-1,101	,132	,016	,001
p-value		,008	,000	,000	,185
t statistic		-2,678	18,501	4,438	1,330
2003	264	,034	,000	,000	,051
p-value		,752	,909	,523	,000
t statistic		,316	,115	,639	27,106
2004	264	-1.657	.177	.018	.016
p-value		.000	.000	.000	.352
t statistic		-3.799	30.637	5.299	.933
Pooled	1320	5,99	0.1788	0.0054	0.22
p-value		0.343	0.628	0.096	0.990
t statistic		0.948	0.484	1.667	0.12

Model Summary				
2000				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	,048[a]	,002	-,009	438,09114
a. Predictors: (Constant), Goodwill_Amort_Imp_defl, NI_defl, BVE_defl				

2001				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	,339[a]	,115	,105	3,17748
a. Predictors: (Constant), Goodwill_Amort_Imp_defl, NI_defl, BVE_defl				
2002				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	,771[a]	,594	,589	6,39601
a. Predictors: (Constant), Goodwill_Amort_Imp_defl, NI_defl, BVE_defl				
2003				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	,866[a]	,750	,747	1,71601
a. Predictors: (Constant), Goodwill_Amort_Imp_defl, BVE_defl, NI_defl				
2004				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	,896[a]	,802	,800	6,86510
a. Predictors: (Constant), Goodwill_Amort_Imp_defl, BVE_defl, NI_defl				

For the period 2000-2004 there were 1.320 firm-years with goodwill amortization expense. The results in Table 4 show that the relation between BVE, NI and Amortization was not significant regarding the amortization expense on individual years.

Table 5: Regression Estimation of the research variables for 2005-2010

$$\mathbf{MVE_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 NI_{it} + \beta_3 Imp_{it} + \varepsilon_{it}}$$

	N	**Constant**	**BVE**	**NI**	**IMP**
2005	264	-11,986	,093	1,632	-1,214
p-value		,007	,105	,000	,000
t statistic		-2,710	1,626	97,135	-6,854

2006	264	,247	-,001	,010	-,021
p-value		,358	,783	,000	-,399
t statistic		,921	-,276	17,529	,845
2007	264	-1,866	,163	-,004	-,024
p-value		,125	,000	,781	-,508
t statistic		-1,539	14,875	-,278	,663
2008	264	-,403	,078	-,056	-,016
p-value		,505	,000	,000	-,010
t statistic		-,667	13,418	-5,077	2,592
2009	264	-,102	,066	-,171	-,011
p-value		,890	,000	,000	-,542
t statistic		-,139	8,429	-9,604	,610
2010	264	,369	,000	,001	-,005
p-value		,012	,743	,155	-,476
t statistic		2,518	-,329	1,425	,714
Pooled	1584	-5.427	.070	.411	.222
p-value		0.192	.099	.000	0.012
t statistic		-1.306	1.652	23.135	2.525

Model Summary				
2005				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	,988[a]	,977	,976	69,44088
a. Predictors: (Constant), Imp_defl, BVE_defl, NI_defl				
2006				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	,740[a]	,547	,542	4,18682
a. Predictors: (Constant), Imp_defl, BVE_defl, NI_defl				

2007				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	,679[a]	,460	,454	18,83861
a. Predictors: (Constant), Imp_defl, NI_defl, BVE_defl				
2008				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	,661[a]	,437	,431	9,33994
a. Predictors: (Constant), Imp_defl, BVE_defl, NI_defl				
2009				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	,641[a]	,411	,404	11,53611
a. Predictors: (Constant), Imp_defl, NI_defl, BVE_defl				
2010				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	,100[a]	,010	-,001	2,26490
a. Predictors: (Constant), Imp_defl, NI_defl, BVE_defl				

For the period 2005-2011 there were 1.584 firm-years with goodwill impairment expense. The results in Table 5 show that the relation between BVE, NI and Impairment are significant regarding the impairment expense on individual years. The investors tend to be aware of the impairment expense.

Table 6: Regression Estimation of the research variables with time dummies for 2000-2004

$$MVE_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 NI_{it} + \beta_3 Amort_{it} + \beta_4 D_{it} + \varepsilon_{it}$$

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,814[a]	,663	,661	6,09240

a. Predictors: (Constant), Dummy_2004, BE_defl, NI_defl, Amort_defl, Dummy_2003, Dummy_2002, Dummy_2001

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,134	,397		,338	,735
	BE_defl	,007	,004	,034	2,026	,043
	NI_defl	,004	,000	,813	48,380	,000
	Amort_defl	,016	,030	,009	,529	,597
	Dummy_2001	-,090	,558	-,003	-,162	,871
	Dummy_2002	,731	,560	,028	1,305	,192
	Dummy_2003	-,016	,560	-,001	-,028	,978
	Dummy_2004	,048	,554	,002	,087	,931

a. Dependent Variable: MVE_defl

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	,267437	,185329	1202,000	1,443	,149	-,096167	,631042
BE_defl	,007210	,003651	1202	1,975	,048	4,794185E-5	,014373
NI_defl	,004382	9,045878E-5	1202	48,446	,000	,004205	,004560
Amort_defl	,017470	,029945	1202	,583	,560	-,041280	,076220

a. Dependent Variable: MVE_defl.

Regarding the (3) model, the amortization expense is not significant for the time period 2000-2004. For the reference period 2000 Dummy is not included.

Table 7: Regression Estimation of the research variables with time dummies for 2005-2010

$$\mathbf{MVE_{it} = \beta_0 + \beta_1 BVE_{it} + \beta_2 NI_{it} + \beta_3 Imp_{it} + \beta_4 D_{it} + \varepsilon_{it}}$$

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,756[a]	,571	,569	2,09020

a. Predictors: (Constant), Dummy_2010, BVE_defl, Imp, NI_defl, Dummy_2007, Dummy_2008, Dummy_2009, Dummy2006

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,222	,134		1,661	,097
	BVE_defl	,002	,002	,013	,773	,440
	NI_defl	,016	,000	,733	42,709	,000
	Imp_defl	-,037	,006	-,113	-6,561	,000
	Dummy_2006	-,041	,187	-,005	-,216	,829
	Dummy_2007	,266	,187	,031	1,417	,157
	Dummy_2008	-,181	,188	-,021	-,965	,335
	Dummy_2009	-,009	,187	-,001	-,050	,960
	Dummy_2010	-,015	,188	-,002	-,079	,937

a. Dependent Variable: MVE_defl

Estimates of Fixed Effects[a]

Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
BVE_defl	,001975	,001948	1485	1,014	,311	-,001845	,005795
NI_defl	,015558	,000364	1485	42,694	,000	,014843	,016273
Imp_defl	-,037446	,005590	1485	-6,698	,000	-,048412	-,026481
Dummy_2006	,174685	,135420	1485 ,00	1,290	,197	-,090949	,440320
Dummy_2007	,482987	,134230	1485	3,598	,000	,219686	,746288
Dummy_2008	,036605	,134417	1485	,272	,785	-,227063	,300273
Dummy_2009	,207207	,134149	1485	1,545	,123	-,055936	,470349
Dummy_2010	,201709	,136009	1485	1,483	,138	-,065082	,468500

a. Dependent Variable: MVE_defl.

Fixed-effects factors are generally thought of as variables whose values of interest are all represented in the data file (we do not have a sample).

This table, provides estimates of the fixed model effects and tests of their significance. Since there is not an intercept term, the estimates for the other years (except 2005), contrast the effects of the first reference year. Here, only the effect for 2007 is significantly different from the year 2005. The estimates of the effects suggest (for variables NI_defl and Imp_defl) that the results are significant for 2007 (before the crisis), for it is associated with higher NI's and negative GW.

Regarding the (5) model, the impairment expense is significant for the time period 2005-2010. For the reference period 2005 Dummy is not included. The impairment variable has been multiplied with -1.

Interpreting the results of the regression model is observed that Impairment are statistically significant ($p < 0.001$) holding a negative sign indicating that an increase on net income and goodwill reduction amount leads also to an decrtease on market value and vice versa. Contrary, it is observed that both constants not affected statistically significant in based on the results of the regression model ($p>0.05$).

CONLUSIONS

Accounting for goodwill has been a controversial issue amongst researchers and academics, as well as for accounting standards setting professional bodies, given the difficulties concerning its definition, measurement and subsequent evaluation. This debate mainly lies on the contradictory views as regards to which accounting regime better reflects goodwill underlying economic characteristics and value. The introduction of IAS and especially the mandatory adoption of IFRS 3 (Business Combinations) in 2005 for European listed companies was the major step for the harmonization of the accounting methods for assessing goodwill, as under IFRS firms now test for its impairment and write off impairment losses against income, replacing the former amortization regime. Accounting standards setting bodies claim that the impairment regime better reflects the goodwill economic value, a claim that is also supported by the empirical findings of relevant research literature conducted on this controversial issue, although there are also contradictory findings.

The aim of this thesis was to investigate the usefulness of goodwill subsequent accounting treatment methods used in order to receive information about the market value of companies taking into account that according to IFRS goodwill accounting treatment changed in 2005 and the reduction in goodwill value is provided through goodwill impairment tests replacing the goodwill amortization regime. According to research findings, the result showed mixed evidence of whether the impairment regime is more relevant than the amortization one. In particular, it was found that both accounting treatment methods are value relevant, as it was proven that changes of impairment and amortization values are related to respective changes in the firms' market value and in the same direction. These findings in consistent with previous empirical evidence suggesting that there is a significant link between goodwill and stock prices, highlighting goodwill value relevance (Jennings et al, 1996; Henning et al, 2000; Ahmed & Guler, 2007; Jifri & Citron, 2009; Aharony et al, 2010).

As regards to which accounting regime reflects better the underlying value of goodwill, research findings provided mixed results. More specifically, it was documented that the amortization method succeeds to explain more satisfactory the volatility of the market value in comparison to the impairment regime. Hence, it can be suggested that the goodwill amortization method is a better determinant of the volatility of the market

information provided by companies, a finding that contrasts the claim that the impairment-only regime is more value relevant (Horton & Serafeim, 2010; Aharony et al, 2010). Alternatively, research findings provided in this thesis come to agreement with claims that the impairment of goodwill is actually less value relevant that the amortization one (Van Hulzen et al, 2011), the adoption of IFRS did not lead to better accounting quality regarding to goodwill accounting treatment (Barksjo & Paananen, 2006) and the shift to the IFRS regime had no impact on the value relevance of identifiable intangible assets (Oliveira et al, 2010).

On the other hand, it was found that the changes are impairment amounts are correlated negatively and with bigger changes in the firms' market value in comparison with the amortization ones that affect firms' market value positively, taking into account the coefficient values provided by respective regression models. These findings are partly consistent with previous empirical evidence suggesting that the market reaction to the information contained in the IFRS regime of the impairment-only approach is higher (Horton & Serafeim, 2010), thus that the impairment-only method is more value relevant that the amortization one (Chalmers et al, 2008) and improves the quality of the accounting information provided to investors (Lapoint et al, 2009). In fact, the main argument for the implementation of the impairment-only approach that the traditional amortization practice does not reflect firms' economic reality is a highly controversial issue.

All in all, this research provided mixed results regarding which accounting regime reflects better the underlying value of goodwill, as it was not well documented that the impairment expense on goodwill is more relevant than the amortization one, as claimed by accounting standards setting bodies. One the other hand, the value relevance of goodwill was confirmed in either case, showing that goodwill is indeed reflected in the changes observed in the market value and respectively in investors' decisions. It can be, thus suggested that although investors take into account the accounting information provided by goodwill, they find impairment regime more useful in their valuation of stock prices and therefore for their decision making process, a fact that can partly explained by the fair value nature of the impairment expense.

In addition, the mixed results provided in this research can be attributed to several limitations and mainly to the composition of the particular sample used, containing

firms from German, given the fact that increase of goodwill value relevance in Germany is bigger for those where goodwill accounting treatment was suchlike before 2005 the one provided by IFRS. Indeed, it has been proven that the increase in the value relevance of goodwill is smaller for countries where the already existing regime was similar to the one of IFRS, such as UK, and bigger for countries of different regimes about the accounting treatment of goodwill, such as Germany (Aharony et al, 2010). Another limitation that needs to be pointed out is that of the period time examined in this research, as there is only a time-period of 5 years after the IFRS implementation for German listed companies, noting that during the first years of the impairment-only approach implementation, firms probably are less familiar to this method, while the same stands for investors. Consequently, future research should test for the value relevance of goodwill under the impairment-only and amortization regime using a larger sample of firms of all European countries and for a wider time period, while investigating for differences stemming from different accounting regimes before the IFRS adoption.

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